

# NEW ZEALAND ENGINEERS, MIDDLE EAST

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## *About the electronic version*

New Zealand Engineers, Middle East

Author: [Cody, J. F.](#)

Creation of machine-readable version: [TechBooks, Inc.](#)

Creation of digital images: [TechBooks, Inc.](#)

Conversion to TEI.2-conformant markup: [TechBooks, Inc.](#)

New Zealand Electronic Text Centre, 2004

Wellington, New Zealand

Extent: ca. 2400 kilobytes

Illustrations have been included from the original source.

## ***About the print version***

New Zealand Engineers, Middle East

Author: Cody, J. F.

War History Branch, Department Of Internal Affairs, 1961  
Wellington, New Zealand

Source copy consulted: Defence Force Library, New Zealand

Official History of New Zealand in the Second World War 1939–45

## ***Encoding***

Prepared for the New Zealand Electronic Text Centre as part of the Official War History project.

All unambiguous end-of-line hyphens have been removed, and the trailing part of a word has been joined to the preceding line. Every effort has been made to preserve the Māori macron using unicode.

Some keywords in the header are a local Electronic Text Centre scheme to aid in establishing analytical groupings.

## ***Revisions to the electronic version***

15 November 2004

Jamie Norrish

Added name markup for many names in the body of the text.

31 August 2004

Jamie Norrish

Added link markup for project in TEI header.

4 June 2004

Jamie Norrish

Corrected detail of source copy consulted. Split title into title and series title.

12 February 2004

Jamie Norrish

Added cover images section and declarations.

February 2004

Rob George

Added figure descriptions

5 January 2004

Jamie Norrish

Added TEI header

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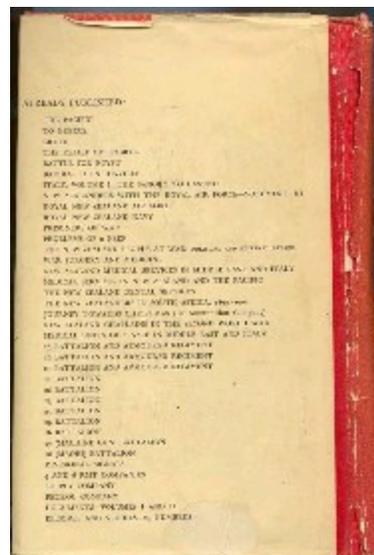
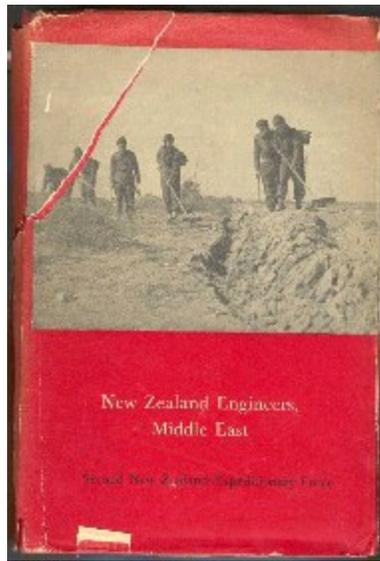
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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## [FRONTISPIECE]



New Zealand Engineers start work on TIKI bridge, the second Bailey bridge over the Sangro

**New Zealand Engineers start work on TIKI bridge, the second Bailey bridge over the Sangro**

# NEW ZEALAND ENGINEERS, MIDDLE EAST

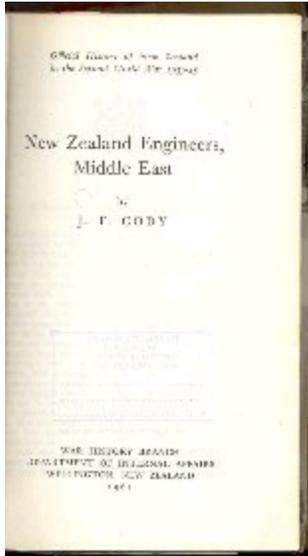
## NEW ZEALAND ENGINEERS, MIDDLE EAST

### *New Zealand Engineers, Middle East*

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

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Official History of New Zealand in the Second World War 1939–45  
New Zealand Engineers, Middle East

J. F. CODY

WAR HISTORY BRANCH

DEPARTMENT OF INTERNAL AFFAIRS WELLINGTON, NEW ZEALAND 1961 set up,  
printed and bound in new zealand  
by  
coulls somerville wilkie ltd.  
dunedin

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## FOREWORD

### *Foreword*



windsor castle

By Lieutenant-General the Lord Freyberg, vc, gcmg, kcb, kbe, dso

I take it as a great compliment to be asked to contribute a foreword to the History of the New Zealand Engineers in the [Middle East](#). Throughout the 1939–45 war the Engineers served in the forefront of the battle with the 2nd New Zealand Division. They saw the recognition of their new value in war through the development of minefields and the necessity for acquiring skills in, first, the laying of our own and then the lifting of the enemy protective minefields. Readers of this history will note how the sappers' new duties took them into the most forward of the fighting throughout the campaigns in North Africa.

When the Division moved to [Italy](#) the role of the engineers grew even more important, because in that hilly country roads and bridges were vital to a mechanised force such as 2 NZ Division. This campaign made great demands on the sappers, for the success of operations depended largely upon their ability to build bridges quickly, frequently under fire, to clear minefields and to maintain roads under all conditions.

The non-divisional engineers, working away from the Division, were little heard of; it may come as a surprise therefore to the New Zealand public to learn that the non-divisional sappers built and operated sawmills in England, North Africa and [Italy](#), and produced tallies unsurpassed by any other Forestry Groups; and that they formed and built a railway track from [Similla](#), near Mersa Matruh, to the outskirts of

Tobruk, a total of 275 miles, 250 of which were laid and completed in 265 days—another outstanding performance in military engineering. For many months New Zealand train crews drove across this Desert Extension railway at night without lights, and defied the enemy air forces' not inconsiderable efforts to prevent them.

In addition, harbours at [Aqaba](#), [Safaga](#), and Adabiya on the [Red Sea](#) were largely built through the work and supervision of the non-divisional engineers. In the [Middle East](#) from the Turkish frontier to the [Sudan](#) and from [Safaga](#) to [Algiers](#), there are few names on the maps that stir no memories for the New Zealand non-divisional sappers.

I hope this history will be widely read.

A handwritten signature in black ink that reads "Bernard Fryberg". The signature is written in a cursive style and is underlined with a single horizontal line.

Deputy Constable and Lieutenant Governor,

Windsor Castle 1 March 1961

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## PREFACE

### *Preface*

When the late [Sir Howard Kippenberger](#), upon my handing in the final draft of 28 (Maori) Battalion, suggested that I might care to attempt the history of the New Zealand Engineers in the [Middle East](#), I must confess that my first reaction was a definite negative. I did not like engineers—few infantry in the First World War did. All I ever saw of the sapper arm was an individual, well protected against the weather, who appeared when an infantry working party arrived at the designated rendezvous. He would indicate an enormous amount of work—digging a trench, building a strongpoint, or laying a cable—and intimate that when we had finished we could go back to our billets. He would then disappear while we worked in the cold, muddy wetness of [Flanders](#).

However, upon reflection, I decided that the history would be a simple and straightforward account of road work and the like and accepted [Sir Howard's](#) offer. Nobody told me that World War II engineers could be found at any given period spread between England and [Iraq](#), and from the Turkish border to Central Africa. As the story unfolded so did my admiration for these men increase.

The numerous units involved and the variety of work they performed—the construction and operation of railways, the milling of timber, the construction of bridges, airfields and harbours, the supply of water to the Eighth Army via pipelines and barges, as well as exploits with mines and bulldozers—have created an unavoidably disjointed volume. This has, somewhat inadequately I fear, been countered by bringing each chapter up to the same point in time.

To do the many sappers of high and low degree who have helped me by loan of diaries, answers to letters and by reading draft copies the simple courtesy of a personal acknowledgment would extend this preface far beyond the permitted length. I acknowledge my indebtedness to them. I also thank Major Nevins and Lieutenant-Colonel Knapp for the valuable appendices they have contributed. And without the unfailing assistance of the [War History Branch](#) officers, the CRE

(Brigadier Hanson) and the former Chief Engineer, New Zealand Army (Lieutenant-Colonel Currie), I would never have been able to complete the job at all. My thanks are also due to the Cartographic Branch of the Lands and Survey Department, which drew the maps and sketches, and to Mr. F. A. Davey for his index.

J. F. Cody

WELLINGTON September 1961

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### *ERRATUM*

Page 313, note 33, biographical footnote Maj H. F. Hamilton, should read Lt-Col P. H. G. Hamilton (see p. 460, note 23).

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

# CHAPTER 1 – ‘WITH THE RANK AND PAY OF A SAPPER’

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## [SECTION]

ON 12 September 1939 volunteers were invited to enlist in a special military force for service within or beyond New Zealand. Throughout the three weeks prior to mobilisation, many thousands of recruits, with an eye to the age limits—between 21 and 35—and the kind of industry not classed as essential, were forgetful about their years and mendacious concerning their occupations. <sup>1</sup>

At some time in the same three weeks they were medically examined, during which operation they produced a 'specimen'; stood anxiously while the doctor listened to pounding hearts; strained to hear watches ticking at varying distances from their ears; deciphered different sized letters and identified colours on a chart; said 'ninety-nine' very manfully.

The Special Force—an infantry division—was to be raised in three echelons, each an infantry brigade with a proportion of supporting arms and divisional troops of roughly six and a half thousand men. The Engineer component of the division was a Headquarters Divisional Engineers, a Field Park Company, three Field Companies, a [Base Post Office](#) and a Divisional Postal Unit. This history will, in addition, follow the fortunes of Forestry, Railway, Army Troops, and other non-divisional units.

The Headquarters of a Divisional Engineers (6 officers, an attached medical officer and 31 other ranks) is the focal point in the necessarily scattered engineer organisation, the Commander of which is known by the British title of CRE (Commander Royal Engineers). The CRE is the Divisional Commander's adviser on every aspect of military engineering and is responsible for the general direction and control of engineering tasks. He is also responsible for everything else that happens, does not happen, or ought to happen to the Divisional Engineers.

A Field Park Company (3 officers and 153 other ranks) consisted of a Headquarters, a Workshop section, including a lighting set for [Divisional Headquarters](#); a Bridging section holding equipment for immediate use; a Field Stores section holding reserve stores, anti-tank mines and the divisional tool reserve. The job of Workshop Section was to keep equipment in good order, repair it, modify

it, make it or otherwise acquire it. A Light Aid Detachment of Electrical and Mechanical Engineers, comprising 1 officer and 12 other ranks, was generally attached.

A Field Company (5 officers and 237 other ranks) was organised into a headquarters and three working sections. Each company, in the field, was normally in support of an infantry brigade and carried a comprehensive range of explosives, detonators and fuses. From a civilian point of view, a Field Park Company was the retailer and a Field Company the consumer of engineering stores.

The Postal units were much smaller, but to the rest of the Division were of extreme importance because they delivered the parcels, papers and letters from home. The function of the New Zealand [Base Post Office](#) (1 officer and 11 other ranks) was to receive the mails, sort them to units and arrange distribution. [Base Post Office](#) maintained an address history card for every man and woman in [2 NZEF](#), and these cards were kept up to date from units' daily statements of marchings in and out. In addition to the handling of mail, it was the duty of [Base Post Office](#) to set up Field Post Offices at [Divisional Headquarters](#), base camps, hospitals, clubs and line-of-communication units as far forward as Railhead. The establishment, like those of other engineer units, was altered from time to time. At its peak the [Postal Service](#) had a strength of about 200 all ranks.

The Divisional Postal Unit (1 officer and 24 other ranks) operated four Field Post Offices, one with each of the three brigades and one with Divisional Headquarters. In addition an odd man or so was stationed at Divisional Supply Point and forward railhead.

The Engineer units raised with the First Echelon were Headquarters Divisional Engineers, 5 Field Park Company, 6 Field Company, NZ [Base Post Office](#), and the Divisional Postal Unit.

The main body detrained at [Hopu Hopu](#) in the cold rainy darkness on the evening of 5 October 1939, the birth day of their units. They stood in forlorn groups while lanterns bobbed around in the blackness and voices called for different units to come that way. Soon they were stumbling about with arms full of blankets, a palliasse and a groundsheet. Somebody guided them to triangular white objects

which proved to be tents. The loads were deposited and the bearers herded towards a place where they drank tea and ate thick slices of bread and butter. Then they were taken back to the tents, told what the tin at the end of the row was for, made up their beds and turned in. Most of the tents leaked.

It took a little time to get used to the Alice in Wonderland life in the Army. Instead of waking to an organised world of breakfast followed by the train, tram, car, 'bike' or maybe a walk to work, they jockeyed for places at the ablution benches, after which they straggled around endlessly at the behest of some person with stripes on his arm or perhaps a star on his shoulder.

By the time the incomprehensible chaos had clarified into the suggestion of a system the sappers in embryo had acquired a serge uniform (First World War pattern) and working denims, a rifle and sundry pieces of webbing that were joined into some sort of harness with fixtures for holding things like bayonets and ammunition, water bottles and lunches.

After a while they did not straggle any more; they stumbled around in three lines and tried not to kick the man in front or be kicked by the one behind; finally they marched around. (Swing those arms! Left! Right! Left! Pick it UP! Pick it UP!')

Selected volunteers who had had some training in Territorial units had preceded the main body and undergone an intensive refresher course in order to take the place of non-existent instructors, <sup>2</sup> for the New Zealand Regular Force was not geared to mobilisation on such a scale. 'Stock' Baigent, <sup>3</sup> a Regular NCO and later Headquarters RSM, had conducted the course, assisted by the officers.

By night the instructors swotted up their lessons and by day the recruits imbibed the result ('This is a Lewis gun. This is the butt and this is the barrel') and learned to dissect firearms, to move a rifle from one position to another at the same speed (ONE two three! ONE two three!) and in the same number of moves. When their basic soldier training was over they started to learn the trade of a sapper and something of the functions of the different engineer units. They built bridges on the Waikato River, did quarry work with compressors and rock drills and made satisfying bangs with explosives.

The tour de force of 5 Field Park Company was the construction and operation of

a 'flying fox'. This involved sending a party across the [Waikato](#) in a boat with a light rope attached to a stout steel cable, which was pulled across and made as taut as possible. Landing ramps and stagings were set up on each bank and a raft built from army folding boat equipment. The raft was shackled on pulleys to the steel cable at such an angle that it was worked across the river by the force of the current. By reversing the angle of attachment the river was made to bring the raft back on the return trip.

Engineers as a race are very free and easy about rank and the deference due to superior officers. It was, however, quickly established that Colonel [Heath](#),<sup>4</sup> a retired RE officer with a bewildering array of campaign ribbons on his tunic, was CRE and that Captain [Sanders](#)<sup>5</sup> was his Adjutant, although just what the titles implied was not very clear—at first. Major [Rudd](#)<sup>6</sup> (OC 6 Field Company), likewise nicely garnished with First War ribbons, and Captain [Morrison](#)<sup>7</sup> (OC 5 Field Park Company), whose decorations were yet to come, were also identified as worthy of respectful obedience.

It was only natural that uniforms long held in store should smell of naphthalene and vary in shade, and that meals supplied from overtaxed cookhouses by underskilled cooks would not measure up to domestic standards; it was in fact these short-comings that were the origin of many of the early stories which helped to build traditions.

One such concerns a sapper in 6 Field Company who was disappointed both in his sartorial condition and in the restricted menu. He hadn't even volunteered, but had acted on a letter of instructions posted to another person of the same name but wrongly delivered. There was a Company parade, and as Major Rudd was making his inspection this sapper stood forward.

'Wanta talk to ya Major,' he said.

'Well Sapper, what's the trouble?'

'This uniform, it don't fit too good, and the tucker around here ain't so good either.'

'Well,' said the Major tactfully, 'can you come and see me on Tuesday? I'm

rather busy just now.'

'Dat'll be de bloody day. I might be busy meself on Toosdy.'

True or not, this story really branded 6 Field as a unit, and the expression 'dat'll be de bloody day' became the accepted answer to every situation.

In the first week of December the companies moved to [Waiouru](#) to a camp which at that time was as primitive as [Hopu Hopu](#). They did not stay there long for the original intention of concentrating all the [North Island](#) units in a locality with scope for brigade exercises was frustrated by a message from the [United Kingdom](#) that the sailing date, previously fixed for 1 March, had been advanced to 6 January.<sup>8</sup> This of course was a Cabinet secret, but there was a rising tension occasioned by the sudden and secret conferences from which the participants emerged looking smug and mysterious. An advance party including Lieutenants [Woolcott](#)<sup>9</sup> and [Kelsall](#)<sup>10</sup> vanished overnight and rumours began to chase each other around [Waiouru](#): the First Echelon was going soon, next week, immediately to [Singapore](#), to England, to Egypt, to [France](#), to garrison duty in New Zealand.

In France the state of 'phoney war' existed, so when the troops were deposited at [Papakura](#) the 'I told you so's' of the garrison-duty faction were frequent and emphatic. [Papakura](#) was a newly constructed hutted camp, but the ensuing four days were so packed with preparations that the fact was hardly noticed.

Before moving out on final leave the troops were warned that they had been declared on active service; they were now real soldiers under the Army Act, and military misdemeanours hitherto considered venial and vestiges of civilian independence were military mortal sins with punishments to match. Everybody was suitably impressed.

The days following the return from leave, in the case of those who had the farthest to go, 30 December, were very full. There was a farewell parade in the Auckland Domain on 3 January, with speeches followed by lunch, followed in turn by a march across Grafton Bridge, through Karangahape Road, [Queen Street](#), Customs Street and thence to the railway station. It is not unpleasant to be clapped and cheered by a city crowd, particularly when the casualty lists and the boy with the

telegram wherein 'the Government regrets to announce ...' are something in the future. The return to camp was not the end of the emotional spree—it was Visitors' Day and the last one. Those who had friends or relations walked or stood about in little groups where there was talk of inconsequential matters followed by uncomfortable silences; it was a relief when the camp gates closed on the last of the visitors. The railway siding was not far away. ('Stand by your kits!') Units moved off according to a timetable ('In three ranks—fall in!'), were entrained and settled down for the all-night trip to [Wellington](#).

The train that had stopped at sundry stations which the grapevine had filled with spectators was incommunicado at [Wellington](#). People who had waited for hours were supposed not to know that the carriages with shuttered windows contained their men folk. Opinions on both sides of the shutters were unanimous and there should have been some burning ears in high places.

The Engineers went aboard the [Strathaird](#) with expectations of crowded quarters and hammocks slung in the cargo hatches in the style of the First World War. They had been told of horse dormitories on the promenade decks while troops slept in coal bunkers, and so were prepared for anything except what was waiting. Sergeant [Jay](#) <sup>11</sup> wrote:

'We were lucky in our transport, the [Strathaird](#). We all had cabins and bunks, we sergeants even bedroom stewards and our mess was the 1st class smoking lounge with bar and stewards. Pure luxury! The men had quite good messing arrangements too.'

In the afternoon (5 January) the [Strathaird](#) and her convoy companions Orion, Empress of [Canada](#) and [Rangitata](#) moved out into the stream; at seven the next morning HMS [Ramillies](#) headed the line of transports which sailed out of [Wellington](#) harbour and rendezvoused with the [Dunera](#) and [Sobieski](#) from [Lyttelton](#) under escort by HMS Leander.

Senior appointments in the Engineer units were:

Headquarters Divisional Engineers

Lt- [Col F. P. Heath](#), CRE

Capt G. P. Sanders, Adjutant

5 Field Park Company

Capt W. G. Morrison, OC

Lt R. C. Pemberton, second-in-command

6 Field Company

Maj L. F. Rudd, OC

Lt H. C. S. Woolcott, second-in-command <sup>12</sup>

Attached:

Capt M. Williams, MO

Lt G. D. Pollock, OC 10 LAD

Base Post Office

Capt T. O. Lambie

Divisional Postal Unit

Lt J. S. Shelker

The calmness of the Tasman and the consequent voracity of the sappers' appetites were countered by a series of inoculations and by vaccination. The result was that the picking up of an Australian convoy and glimpses of barren islands in [Bass Strait](#) caused little comment; it was even something of an effort to wonder how [Auckland](#) could have produced a team to beat [Canterbury](#) in the final Plunket Shield match by an innings and forty runs.

By the time [Fremantle](#) was reached (18 January) the vaccination cases were on the mend, but in any event the impact of Australian hospitality would have overwhelmed the toughest troops and it was days before the sappers could contemplate the cavorting flying fish with any concentration. Sapper 'Porky' [Neale](#) <sup>13</sup>

recovered in time to win the heavyweight division of a boxing tournament.

[Colombo](#), the first glimpse of the East, was reached on 30 January. By then it was hot, really hot, but on shore everything was excitingly different: there were the rickshaws, the snake charmers, the money changers, the beggars, the Buddhist temples, the modern shops. Some of the sappers visited the temples; most of them visited the pubs. A few advanced their engineering education by taking over and driving the trams through the teeming streets. But nobody got into real trouble and the convoy sailed the next day.

The Red Sea was not what it was cracked up to be; it was as hot as the hobs of Hell but it was not red. By now the officially announced destination was Egypt, the country where the fathers of many in the convoy had finished their training prior to [Gallipoli](#) and [France](#).

The convoy gasped through the [Red Sea](#), pulled in to the Gulf of [Suez](#) and anchored off [Port Tewfik](#) on 12 February, the same day that 7 Field Company marched in to [Papakura](#). [General Freyberg](#) <sup>14</sup> and the Rt. Hon. Anthony Eden came on board and welcomed the troops. Early next morning the sappers were lightered ashore and entrained for [Maadi](#), near [Cairo](#).

They were to find, like their forebears did, and as Lance-Corporal Hec [McVeagh](#) <sup>15</sup> was to write in a letter home:

'As far as Egypt goes there has been little substantial change in the place since those far off days when Young Moses was bawling his head off in the bulrushes; when old man Herod was voted Public Enemy No. 1 at the annual general meeting of the Plunket Society; and Cleopatra was one of the bright young things about town whose telephone number was the common property of Julius Caesar, Mark Anthony and the rest of the boys.'

First impressions were that Egyptians wore dirty white nightshirts and little rimless red hats; women were shapeless bundles tied in the middle; small children dispensed with clothing.

The painfully un-upholstered third-class carriages contained more than a suggestion of the smells, the all-pervading smells, some of them secondhand at the

time of the Prophet, characteristic of any Eastern country with elementary sanitation.

That trip through cultivations where buildings, animals and costumes gave validity to half-forgotten Sunday School cards, the ones with a text on one side and a picture on the other, was engrossingly interesting; it led through stretches of sandy waste needing only a pyramid and a couple of camels to fit the troops' preconceived notion of a desert; past railway stations with such names as El Zagazig and Mansoura; through the Dead City on the outskirts of [Cairo](#).

The train stopped in the late afternoon at a level crossing on the [Abbassia- Tura](#) line; the sappers collected their gear and marched a dusty mile and a half; [General Freyberg](#), waiting on the roadside, took a rather encumbered salute.

[Maadi Camp](#), named after the nearby outer suburb of [Cairo](#), itself some eight miles distant, was built on a plateau overlooking the Nile Valley. Tents of a reddish brown tint that merged into an organic unity with the desert monotone stretched apparently into infinity. In actual fact there were seven miles of tarmac in [Maadi Camp](#).

Engineer Headquarters and both Postal Units were located with [Divisional Headquarters](#) on a slight mound known then as 'the hill'; it was later known to all and sundry as 'Bludgers' Hill'.

[Base Post Office](#) had operated in the waiting room of the [Strathaird](#) from 7 January to 13 February, but the quarters allotted in British [Base Post Office](#) No. 4 in [Cairo](#) were not immediately available so the Divisional Unit set up an office the following day in the tent of its Commanding Officer at [Maadi Camp](#). [Base Post Office](#) opened in [Cairo](#) on 15 March and Divisional Postal Unit reverted to its original role.

Fifth Field Park and 6 Field Company were quartered in less aristocratic Russell Terrace nearby. The advance party which had vanished so mysteriously from [Waiouru](#) was there to help with the acquisition of low plank beds and palliasses. They were old hands and comported themselves as such, with just a touch of condescension and with speech flavoured with an odd Arabic word. They told scarcely credible tales of [Cairo](#) and its attractions.

After the initial settling in, leave to [Cairo](#) was on a generous scale and almost

everybody could go to town for an evening as often as he could afford, which, on a pound a week, was once a week, usually on Friday or Saturday. There were not many troops about and prices for soldierly necessities, food, beer and transport were very reasonable. They did not stay long that way.

Movement in a new country is always interesting, even if it only means going from one place which is a sandy eyesore to another which is equally sandy and hard on the eyes. And often you passed through places you didn't know were there until you checked up on the map.

Engineers are fortunate that training, for them, need not be apparently purposeless exercises carried out over and over again just by way of rehearsal for some hypothetical situation which might never arise; on the contrary their military education was work, useful in itself and involving real situations. So, because of the serious shortage of engineers in the [Middle East Command](#), the New Zealand sappers were widely spread and engaged in a multitude of tasks ranging from roading, drainage and building projects to courses at Schools of Instruction and attachments to Royal Engineers companies.

A number found themselves attached, without their consent, to the [Provost Corps](#) for varying periods. The reason was generally a variation of the theme: 'WOAS being AWOL; out of bounds; improperly dressed; not in possession of AB 64 and giving false particulars to an MP.'

Fifth Field Park Company landed the most important job of the period, or at least the job that gave most pleasure to most people—a swimming bath was to be built for the troops in [Maadi Camp](#). The original site selected was, with some lack of imagination, right out in the open desert, but through the good offices of Mr Tom Dale of the Delta Land Development Company and the co-operation of the Maadi Boy Scouts, who gave up possession of a shady grove of grass and palm trees between the railway and the camp, a more fitting situation was obtained.

Sapper [Yates](#)<sup>16</sup> was detailed as architect for the project, which was undertaken by a civilian contractor employing native labour. When completed the [Maadi](#) baths were 30 metres by 12 metres and from one to two metres in depth, with a tiled surround and its own chlorination plant.

[General Freyberg](#) opened a carnival on 5 April by taking the first dive and swimming a length. The General was no mean swimmer in his day (he had only just failed to swim the Channel) and it was not courtesy that kept the ADCs thrashing along behind their superior officer.

Four days later the quiescent war in [Europe](#) exploded. Denmark was overrun without warning ('Naturally we will respect the rights of small neutral States') and Germans landed in [Norway](#) without proper notice.

Fighting between British, French and German forces in [Norway](#) occupied the headlines until 10 May when [Holland](#), [Belgium](#) and Luxembourg were invaded; the Dutch Army capitulated on 15 May and the Belgians followed on the night 27–28 May.

The evacuation from [Dunkirk](#) continued until the night 2–3 June, by which date the French were staggering under the German armoured blows which culminated in the occupation of [Paris](#) and finally, on 17 June, in the fall of [France](#).

After Dunkirk, when, to Continental eyes, England did 'lie at the proud foot of a conqueror', [Mussolini](#), anxious to strike a blow now that the fight was practically over, declared war on England and [France](#).

II Duce would not have been pleased at the effect his declaration had on the First Echelon. The news was released in the evening when all the places of entertainment, the [NAAFI](#), the [Maadi Tent](#), the [YMCA](#) and Shafto's picture theatre were crowded. Instead of dismay and consternation at the prospect of another enemy, the announcement was received with thunderous cheers. North Africa was now in the war for there were Italians in North Africa—a most satisfying prospect.

Despite the manning of anti-aircraft posts and the issuing of gas masks, life among the First Echelon engineers went on much the same for the time being; their next surprise, a nasty one, arrived on 21 June. <sup>17</sup>

'We heard today,' Lance-Corporal McVeagh wrote in a letter home, 'that the Second Echelon arrived in England and golly! our boys are wild. It was broadcast at 3.15 p.m. Egyptian time and the temperature was then 112 in the shade. They seemed to get a wonderful reception, with bands playing and crowds cheering etc. I

could not but compare it with the reception we had here, which consisted of a few black dirty smelly Wogs holding out their filthy hands and yelling "Give it Backsheesh."

The Italian declaration of war had presented the [Middle East Command](#) with a battleground and a problem; the former was a desert running 2000 miles west to [Tunisia](#) and 1000 miles south from the Mediterranean Sea; the latter, how with only 36,000 ill-equipped troops to prevent 215,000 Italians from overrunning Egypt. We are not concerned at the moment with another slight headache for the [Middle East Command](#)—there were 200,000 more Italians in Italian East Africa.

Geographically the North African desert may be divided into several regions: drifting sand seas, thousands of square miles of shingle, more thousands of square miles of hard rock covered by a few inches of sand, acres of low-growing camel scrub which exists apparently without water, and the coastal strip where in the winter sufficient rain falls to provide the Arab nomads with corn and spring grazing.

There were high-ranking officers who had visualised the [Western Desert](#) becoming a major battlefield, so while the politicians were making frequent and ineffective gestures to [Italy](#), Lieutenant-General H. M. Wilson, <sup>18</sup> GOC British Troops in Egypt, asked for authority to see if the establishment of a substantial water system for the [Western Desert](#) by way of a pipeline from the River Nile was practicable.

Sanction was forthcoming but the General was left to think up what he was going to use for pipe as nothing of the kind was available in England. This difficulty was overcome by requisitioning sufficient stores, mostly second- or third-hand, from the [Iraq- Haifa](#) oil pipeline to build a 60-mile-long water pipeline from [Alexandria](#) to Bir el Khassa. Although the pipes had been discarded as useless and were of differing sizes, the experiment was a success and simplified the water problems of the troops concentrated at [Amiriya](#) and [Burg el Arab](#).

Early in 1940 it was decided to carry the line westward to [Mersa Matruh](#), the terminus of the Egyptian State Railway system, about 200 miles west of [Alexandria](#) and 120 from the Egypt- [Libya](#) border. The railway, like the pipeline, was built from bits and pieces, at least westwards from [Fuka](#), which had been the railhead until the

Italian aggression in [Abyssinia](#). That pipeline and that railway line became the particular care of New Zealand sappers for the whole period during which North Africa was a battleground.

The water line was constructed in a series of separate sections, emptying into reservoirs from which the water was siphoned to be pumped forward to other reservoirs; the distance between the pumping stations was dictated by the size of the pumping sets and the pressure the pipes would stand.

Provision was also made to connect up with any artesian water located, as for instance at [Fuka](#), while west of [Matruh](#) the Royal Engineers discovered a wonderful network of aqueducts and cisterns used by the Romans when North Africa was part of their Empire. The discovery and renovation of these aqueducts and cisterns after a couple of thousand years of neglect is one of the romances of the Libyan campaigns. Roman geologists discovered that winter rain falling on the higher ground inland seeped through the limestone to the lower levels on the coast. This usually formed a layer of fresh water one to two feet deep lying directly on salt water near sea level. The shallow depth of fresh water precluded the sinking of wells and the problem was to draw off or separate the fresh water.

The difficulty was ingeniously overcome by the construction of a network of stone-lined aqueducts cut into the shallow upper layer of porous rock. Into these aqueducts, about 6 feet deep and 4 feet wide, the water trickled and ran down to cisterns nearer the shore. Royal Engineers cleared and repaired the aqueducts so that they provided a substantial quantity of the water for the forces about [Mersa Matruh](#), or since we are speaking of Roman times, [Paraetonium](#).

In addition to this underground network, the whole coastal belt is dotted with Roman rock cisterns. They were excavated in the surface rock at points where the rainfall could be collected. These wells, *birs* in modern Arabic, are up to 20 feet deep and 75 by 75 feet in area. Some are still in use.

The British strategy was to await the enemy at [Mersa Matruh](#), while his coming would be attended by 7 Armoured Division less one brigade. It was to assist 7 Armoured Division—the original and authentic 'Desert Rats'<sup>19</sup>—that the New Zealand Engineers were given a job more directly connected with war than the camp

installations that so far had been their main preoccupation.

[Middle East Command](#) wanted 500 dummy trucks and 300 dummy tanks for deception purposes and it wanted them in a hurry. Colonel Heath was told on 17 June that the order must be filled by the 24th and to get busy. Fifth Field Park was ordered to organise the stores and build the trucks, while 6 Field took care of the tanks. Within the hour lorries were heading for [Cairo](#), [Alexandria](#) and [Suez](#) to pick up material, while Captain Morrison and Lieutenant [Bucknell](#) <sup>20</sup> did some hard thinking. There were only three days left by the time the prototypes had been built, saw benches erected and the components spread along the assembly line. Four hundred men were borrowed from the infantry and artillery and mass production started. The flow of components was co-ordinated by Sergeant [Lineham](#) <sup>21</sup> and as each unit was completed Corporal [Brittenden](#) <sup>22</sup> gave it a shot of camouflage paint from a homemade outfit mounted on a compressor truck.

The finished articles, which used up twenty miles of timber battens and ten acres of hessian, were knocked down for transport and the last units delivered to the railway people within half an hour of the deadline. Captain Morrison remarked in his report that the only major difficulty was the recovery of hundreds of hammers and saws from the infantry and artillery helpers.

The dummies were used to good purpose, for General Wavell in his despatch on the early operations in the desert up to November 1940 mentions the smallness of the force falling back from the frontier in the face of Italian superiority in men and material and concludes: 'Nevertheless this small force continued to inflict heavy casualties on the enemy with practically no loss to itself, and to hold in check a force of four or five divisions for a further six weeks. A skilful use was made of dummy tanks to deceive the enemy.'

July saw the end of scattered training jobs and the start of real military engineering work. Sixth Field Company left [Maadi](#) in August for a beach near [Alexandria](#), where it was to help in the construction of a brigade defensive position under the command of the Area CRE, Lieutenant-Colonel Boddington, RE. By then Colonel Heath had relinquished command on transfer to the British Army, and Major Rudd had taken over until the arrival from England of [Major Clifton](#). <sup>23</sup>

Part of the task entailed the building of 196 concrete pillboxes and 140 dugouts, with connecting roads and water supply. It was hard work in the heat of an Egyptian summer but the beach was handy, each section had a wet canteen and leave to [Alexandria](#) was liberal; in times to come that spell at the beach was part of the 'good old days'.

Fifth Field Park was soon to follow 6 Field out of the [Maadi](#) nursery. On 4 September the convoy took the road to [Alexandria](#) as far as [Ikingi Maryut](#), where it turned into the [Western Desert](#). There was magic in the name ' [Western Desert](#)' to the [Maadi](#) based engineers. The enemy was out there in the 'blue' not a hundred miles from [Mersa Matruh](#). Certainly sections had been stationed for short periods at [Matruh](#) before the Italians had broken loose, but that was different.

The Company made its camp two miles from [Baggush](#) and two miles from the railhead at [Sidi Haneish](#) in a spot which might be anybody's dream—before he sampled the real thing—of a genuine desert setting. Not even Hollywood at its brightest could have improved on it. [Burbeita](#) was an oasis, a real oasis, a small oasis with date palms and grass, surrounded by gleaming white sand. A hundred yards away was a perfect little bay full of very blue [Mediterranean](#), lacking only a pleasure yacht, a beautiful heroine and a husky villain.

The sappers dug into the sandhills and made ready for work. Colonel Boddington, who apparently roamed at will over North Africa, was CRE Lines of Communication and commanded both 5 Field Park and 6 Field Company. He seemed to have the ability to be in two areas at the same time, and that in spite of being large enough for two ordinary men. He was an old hand in the [Middle East](#) and knew all the tricks and short-cuts. He seemed to like New Zealanders with their ability to cut corners. They liked him because he knew his stuff and behind his back they called him Bodd. Somebody burst into verse:

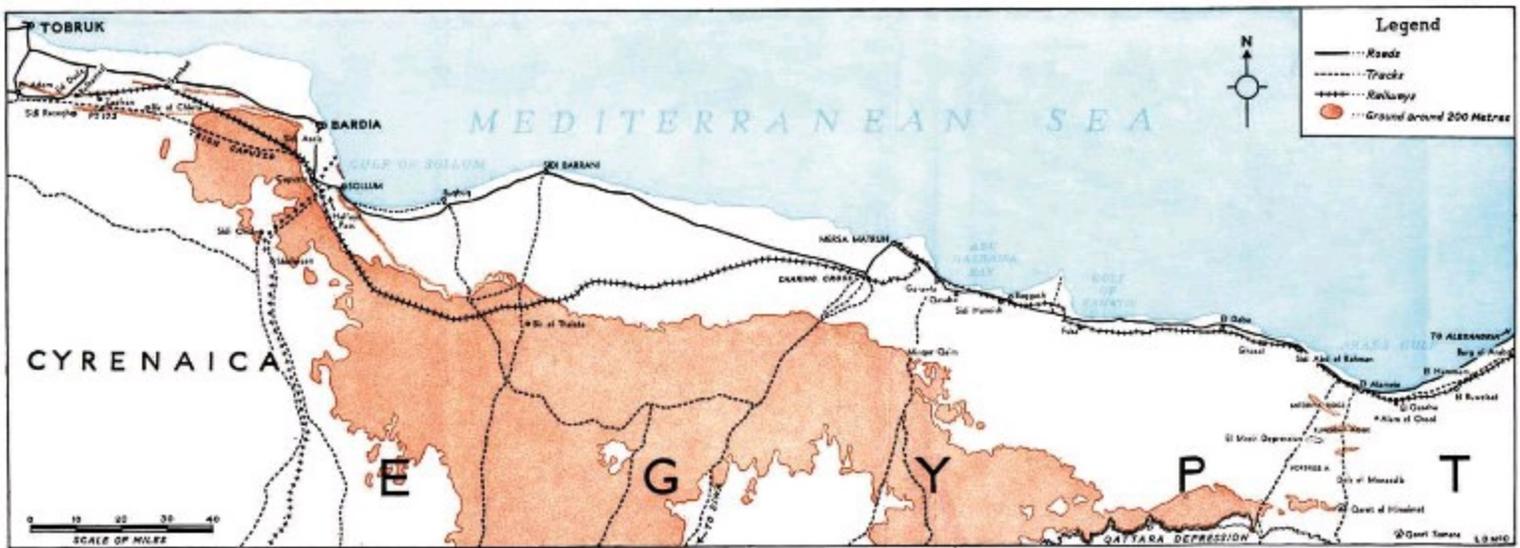
It has always struck me as odd  
That this eminent Colonel called Bodd  
Should spell, if you please,  
His name with two d's  
When one is sufficient for God.

'Bodd' saw to it that Field Park did not lack occupation—Stores Section (Sergeant Len Morris<sup>24</sup>) was put to administering the engineers' stores at Sidi Haneish siding, a job that involved receipt and distribution of everything needed for the perimeter defences of Baggush, including the water supplies for the forces snapping at the cautious Italians.

Workshops Section (Sergeant de Cavalho<sup>25</sup>) was kept flat out on jobs for the First Echelon infantry battalions and Headquarters 13 Corps. Bridging Section (Sergeant Bill Hanley<sup>26</sup>) had no specific employment but its vehicles were used as pool transport, which included the sought after running of errands to Cairo and Alexandria. There were other tasks with compressors and explosives helping the infantry on hard rock areas, and there was also a small team who went about with Corporal Ted Madigan<sup>27</sup> defusing unexploded Italian bombs. It was about this time that the enemy began to drop a particularly dangerous anti-personnel booby trap, known from its shape and size as a Thermos bomb. These apparent thermos flasks were fitted with a delayed action device that withstood the impact of being strewn over the desert from aircraft. But once primed the slightest movement would explode them and they had a wide danger area.<sup>28</sup>

Sapper 'All Irish' Kelly<sup>29</sup> found a couple of dozen thermos flasks scattered around his quarters one morning and handed one in to the office where Lieutenant Thomson<sup>30</sup> and Sergeant Morris were discussing the day's work. They did not stay long; in fact they did not stay at all but took off like jet-propelled missiles. Madigan and Major 'Waddy' Wadison, RE, took Kelly's trophy to pieces not knowing it was a dud, and proceeding empirically, solved the problem of how it worked and how to deal with the others. As for 'All Irish', he was inundated with requests to go shares in a Tatt's ticket.

Corporal Madigan was very possessive about any bombs that fell in what he regarded as his territory but he had an enemy, an RE who was also fascinated by anything that made a loud bang. On one occasion they both pounced on a nice new model and a heated argument about who saw it first had to be settled by Captain Morrison. He made it a draw, whereupon both experts played happily together and dismantled their toy in unison.



Madigan was awarded a Military Medal in recognition of his bomb disposal activities. The citation ran:

'This NCO over a period from September 1940 to February 1941 destroyed or made safe upwards of 500 enemy "thermos" bombs and other bombs. His work was of a specially trying and dangerous character and his unremitting care and zeal ensured that his party did this work in the [Western Desert](#) and [Libya](#) without a single casualty.'

There was hard work and plenty of it, but there were compensations; the evenings were free and the Company's wet canteen was as wet as the best and wetter than most. The rule was that a sapper could drink as much as he could pay for providing he was capable of carrying out his duty whenever called upon. Sapper Noel [Finney](#)<sup>31</sup> operated the canteen, which never went quite dry in spite of serious and protracted droughts. He even solved an acute financial crisis when there was a shortage of small change. The customers had been paid in notes for which change could not be given, but Finney issued his own paper money, redeemable at par in Finney's bar. 'Finney Felouse' as it came to be called, backed by his extensive range of liquid goods, restored fluidity to business transactions.

It should be mentioned at this point that another Engineer unit was in the process of being formed for the purpose of servicing the base establishment that was being evolved for [2 NZEF](#). It was known variously as No. 1 Works Section and 25 Field Company<sup>32</sup> and came, officially, into being in December 1940, although it had in effect been formed by Captain Morrison and a few sappers soon after their arrival

in Egypt.

The Officer Commanding No. 1 Works Section was also the Garrison Engineer. There were upwards of 200 permanent workers and, on occasions, as many as 3000 natives under the control of the Garrison Engineer, whose appointment was a dual one: he was responsible to BTE (British Troops in Egypt) for all works and to 2 NZEF for army personnel. The natives were on the BTE side.

As Lieutenant Bucknell, for some time OC No. 1 Works Section, writes:

'It was all very involved. The GE administered an area extending from the outskirts of [Cairo](#) to a line about 10 miles from the [Red Sea](#), being an area of about 400 square miles. All army construction work within this area was his responsibility, also all water supply, roading and electrical installations. Main constructions were Maadi NZ Camp, Maadi Middle East Camp (British). Other smaller establishments were at [Cairo](#) AA Camp, desert tank ranges, South African Camp at Wadi Ramleh and Indian Camp at [Maadi](#).

'Installations included water pumping plant at [Maadi](#) delivering up to 1700 tons of water per day, a number of emergency water pumping plants spread over a wide area, two main reservoirs [of] 600 tons each, all water supply reticulation, a large number of smaller reservoirs, electrical power station, sullage water disposal by evaporation areas developed as gardens. The GE Staff consisted of the Works Section (25 Field Company) and a number of Egyptian clerical and technical personnel, about seven or eight. The GE had a very considerable authority on the BTE side, but on the NZ side his authority was limited to his command. Attachments from other formations were frequently present, as for instance, South African survey unit, British Army personnel, Indian troops etc.'

Before the First Echelon had left New Zealand, officers and prospective NCOs of 7 Field Company were training at [Narrow Neck Camp](#) near [Auckland](#); they moved to [Papakura](#) on 5 January, the day after 5 Field Park and 6 Field departed for [Wellington](#) to embark. A week later the main body marched in, callow but eager to commence the practice of martial life.

Major Hanson, MM, <sup>33</sup> who commanded 7 Field Company, wore a row of ribbons, the first of which signified to the cognoscenti that he had begun his military career in

the ranks, for the MM is not an officer's decoration. That, of course, was a good thing and his technical qualifications were unassailable, but what, to the sappers, clinched his fitness for command was the fact that in 1 NZEF he had been a member of the 1919 Army rugby team which had won the Empire tournament.

Some weeks prior to the mobilisation of 7 Field Company, the Secretary of State for Dominion Affairs had cabled to the Governor-General of New Zealand to the effect that a very pressing need had arisen for the immediate provision of transportation and forestry companies, and what could the [New Zealand Government](#) do about it—or words having that meaning.

The reply was that approval had been given by His Majesty's Government in New Zealand to the raising of a Forestry Company (6 officers and 147 other ranks), a Headquarters Railway Construction and Maintenance Group (3 officers and 22 other ranks), Railway Survey Company (7 officers and 66 other ranks) and a Railway Construction Company (6 officers and 273 other ranks).

An appeal for logging and sawmilling workers to form a forestry company was open for twelve days and produced 600 applications for enlistment. The selected men on 14 February entered [Papakura Camp](#), where Captain [Elliott](#)<sup>34</sup> was waiting to receive 11 Forestry Company, the first of its kind in the New Zealand armed forces.

The railway construction men were sought for in the Railway and Public Works Departments. Both Departments circularised their employees and four times the wanted number enlisted forthwith. The new engineer units were entitled 9 Railway Survey Company, NZE (Major [Packwood](#)<sup>35</sup>), 10 Railway Construction Company, NZE (Major [Rabone](#)<sup>36</sup>), and Headquarters Railway Construction and Maintenance Group (Lieutenant-Colonel Anderson, MC, Croix de Guerre<sup>37</sup>). His adjutant, Captain John Brooke-White,<sup>38</sup> was the only Regular in the unit.

The railway units entered [Burnham Camp](#) and went through the same basic training as the other inmates; then came final leave and farewell marches through [Auckland](#) and [Christchurch](#). Seventh Field Company then took train to [Wellington](#) and boarded the [Aquitania](#) while the Forestry and Railway Groups embarked on the [Andes](#) at [Lyttelton](#).

The Second Echelon sailed for Egypt on 2 May 1940; in Egypt the First Echelon was being blasphemously eloquent about dust-storms. It had got accustomed to the prevailing northerly winds which enable the Egyptian river boats to sail upstream against the sluggish Nile current, but it was then early summer and the season of the khamseen, when the sky turned dark with swirling sands from the inland deserts. The sky over France was also dark—dark with the wings of the Luftwaffe as the Blitzkrieg got under way.

The engineers found the after effects of West Australian hospitality as exhausting as did the First Echelon and later visitors, but the German thunderbolts striking Holland, Belgium and Luxembourg offered food for thought. Of course the invasion of France would be soon turned back because the Maginot Line made it quite impossible for the attack to succeed. Everybody knew that!

The sappers were contemplating how they would put in their time at Ceylon and were waiting for the counter-stroke that would throw the Herrenvolk out of France when the convoy changed direction. Authority was blandly ignorant, but Ceylon was dropped as a subject for conversation and Capetown took its place.

It was Capetown all right, a Capetown taken completely by surprise but a Capetown that quickly mobilised its resources of hospitality. Three hectic days, which out-Fremantled Fremantle, left the Capetown pubs almost dry and the Capetown police profoundly grateful that 31 May had seen the visitors depart.

The next stop, a short one to take on water and fuel, was at Freetown. Less than a day was occupied thus and there was no leave, but it was a malaria stricken place and few were sorry to get to sea again. Two days later, 10 June, Mussolini's declaration of war explained the diversion of the convoy from the narrow seas where Italian submarines might be lurking into the broad Atlantic, where the Germans were most surely operating but where there was room to manoeuvre.

The risk of drowning either in the Red Sea or the Atlantic Ocean had been decided in favour of the latter, but the engineers were to be drowned in neither. Floating wreckage, however, did not make for over-confidence.

Their first glimpse of war at sea was of a tanker with its bow pointing skywards

and its stern aground in the shallow Irish Sea and the ship blazing like a gigantic blowlamp in the middle of a mile square of black oil.

The convoy entered the Firth of Clyde on 16 June. [Gourock](#) is a little port and the sappers watched the mists rising and falling on the Scottish hills until the 19th, when they got solid land under their feet again. In the meantime the news was released that [France](#) had fallen and that the [Niagara](#) had been sunk off the New Zealand coast. The troops were getting close to the war and the war was getting close to New Zealand.

The Railway and Forestry Groups took train in the afternoon and, after passing through Greenock, Paisley and [Glasgow](#), stopped for tea at Edinburgh. At York they had their first air-raid warning, then breakfast at [Leicester](#) and on through Reading to [Woolmer](#), in Hampshire and about 18 miles from [Aldershot](#).

The newcomers very quickly realised that they were in a war area. Routine Orders prescribed the carrying of steel helmets and anti-gas respirators when not actually on a drill parade; insisted that vehicles left unattended for more than five minutes must be immobilised by the removal of the distributor, etc.; urged the men to recognise the difference between the white puff of a bursting anti-aircraft shell and an opening parachute. This was followed by a cryptic note to the effect that: 'The value of controlled fire against aircraft flying at less than 500 feet has been proved in [France](#)'; and of course the old, old reminder of how a war might be lost:

'Cases have been reported of members of this unit having failed to salute officers of the British and other Dominion forces. Other ranks will pay courtesies to those officers in the same way as the other ranks of the British Etc., forces do to the officers of this unit.'

The original destination of both the Railway Group and the Forestry Company had been the British zone in [France](#); they were to have gone on to Marseilles after the Second Echelon had disembarked in Egypt, but events had marched too quickly and there was no future for Allied forces in [France](#) at that juncture.

A grave shortage of technical troops had made the British War Office decide to get the railway units to Egypt as soon as possible; the Forestry Company was to join similar Australian, Canadian and British units in the South of England.

The men were met at [Woolmer](#) by Colonel Anderson and the advanced guard that had preceded them and had prepared their camp—tents spread under the trees of a pine-clad slope.

Lieutenant [Marchbanks](#) <sup>39</sup> recalls the scene:

'We were camped in the park of [Lord Woolmer's](#) home. This was a temporary camp set up to take RE transportation troops who had got out of [France](#) and [Norway](#) and before we left held 5,000 men. These men generally had only the gear they stood up in but in spite of this, the overcrowding and poor cookhouses etc were very cheerful. It was our first glimpse of how the Tommies could "take it".'

A few days' leave, spent mostly in [London](#), a few more days settling in and then, under command of the Royal Engineer Railway Training Centre, [Longmoor](#), the sappers began training. It was almost exclusively route-marching, fieldcraft and anti-gas instruction, for the very good reason that no training gear was available.

Tenth Construction Company did get in a little platelaying and 9 Survey Company surveyed a line from [Woolmer](#) to Longmoor; but it was more by way of a diversion than serious work.

There were, of course, visits by high dignitaries, commencing with the New Zealand High Commissioner and culminating on 6 July in an inspection by His Majesty the King and [General Freyberg](#). Very soon afterwards orders came to be ready to embark on or before the end of the month.

The troops, according to British Army practice, departed on a week's embarkation leave, after which began the collection of mobilisation equipment and preparation for another sea voyage. On 3 August the Railway Groups entrained at [Woolmer](#), en route north again to [Gourock](#), where they went aboard the *Franconia* disguised as HMT 8.

The Second Echelon Postal Unit, one officer and five other ranks who were intended to reinforce the New Zealand [Base Post Office](#) in [Cairo](#), but who instead now found themselves in England, accompanied 5 Brigade to the [Aldershot](#) area, where Lieutenant [Knapp](#) <sup>40</sup> organised an impromptu [Base Post Office](#) in the stables

of Mytchett Place. The Dunkirk evacuation was still first priority and nobody seemed to worry whether the Postal Unit functioned or not, so Knapp borrowed some equipment from the British Post Office and set up the first independent New Zealand [Base Post Office](#) to operate in England.

Mytchett Place, one of the stately homes of England, set in a large park behind an ornamental lake, had been taken over as New Zealand Headquarters, and somebody thought that the Postal Unit made the place look untidy. It was removed to a less prominent position in a tent and later again to a small church hall.

In general, while the Second Echelon was in the [United Kingdom](#), mails were collected from [Base Post Office](#) (stables, tent, hall) by units. Ordinary letters—there was then no airmail to New Zealand—were accepted postage free, made up for New Zealand and handed over to the British Post Office.

Incidentally the troops in England enjoyed free postage home before the First Echelon did in Egypt, where difficulties with the civil postal authorities took time to resolve. It looked like something for nothing to the wily oriental gentlemen <sup>41</sup> who believed in being on the receiving and not the giving end.

Seventh Field Company marched into [Rushmoor Camp](#) adjoining the Tattoo Grounds near [Aldershot](#), where tents had been erected and a hot meal prepared by a Royal Engineer company which was camped alongside it. The difference between British and New Zealand ration scales became apparent when the tea supply dried up within twenty-four hours.

The same programme of inspections and leave followed, then the sappers went to work on the erection of amenities in the other New Zealand camps—roading, pipelines, drainage, sewage disposal, and shower huts. Very soon indeed a question similar to that of the ration scale cropped up. The British Army has a scale of stores for every imaginable contingency, but the RE authorities were thoroughly 'rocked' by the demands of enthusiastic Kiwi sappers anxious to show how a cookhouse or an ablution stand could be produced at short notice—especially when the equipment scale did not provide for it.

The partly trained Second Echelon, which had missed its intended proving ground by some thousands of miles, was absorbed into the British defence scheme

and organised into a small division. This necessitated the forming of a Field Park Company less the Bridging Section, which was done by using the sapper reinforcements for the 5th, 6th and 7th Companies who were also in England.

General training began as soon as the camp installations were completed; rifle practices were taken up with enthusiasm, antigas and respirator drill with resignation, map reading and convoy work with very mixed feelings. To really appreciate the troubles of convoy operations these must be done in an English county where the lanes, designed for one-way horse traffic, wind, curve and twist in all directions. And of course the lanes are enclosed by hedges or trees, thus effectively hiding all landmarks and facilitating the escape of the vehicle ahead. Finally, the removal of signposts, the blank look of well trained country folk when asked how far the village of so and so is from the spot you are bushed in, and the fact that church spires were often low towers hidden by vegetation made map reading a major accomplishment. How much luckier were the First Echelon whose maps were of just plain desert!

July and August were taken up with these manoeuvres in mobility as well as in training with the rest of the Echelon. Across the Channel [Hitler](#) made a triumphant return to [Berlin](#) (6 July) and indicated that he would like his last enemy cleaned up as soon as convenient to his [Wehrmacht](#).

The Battle for [Britain](#) commenced on 10 July with daylight air attacks mounting in intensity and in losses until the end of August. By then the invasion was expected daily and on 6 September 2 NZ ( [UK](#) ) Division, judged fit for first-line duty, left for the danger area, between [Maidstone](#) and [Dover](#).

The division was deployed in a counter-attack role with detachments from 7 Field Company working with each brigade. Engineer Headquarters was in the cricket pavilion at Mote Park, [Maidstone](#).

Sapper work in this period varied from restoring blackout screens to metalling roads and repairing electric light plants, but it was also the responsibility of Engineer Headquarters to arrange water points for every unit in the area. Overhead the Battle of [Britain](#) was being fought by day and by night; jettisoned bombs fell in paddocks and villages; smoking planes hurtled earthwards. One energetic sapper, keen to

capture a German parachuting to safety, was partially rewarded when in the same day he collected a British pilot and two Free Frenchmen.

It was in these pregnant weeks that the troops saw something of the character that makes the English a difficult race to subdue. An RE group operating in the vicinity had defused over 2000 enemy time bombs when there was no way of telling if such bombs were going to explode in five seconds or five hours. The Tommy engineers were taking those risks without a shudder but were complaining bitterly that two days' leave due to them had not been approved.

Meanwhile the invasion had, on [Hitler's](#) orders, been postponed for the time being. The RAF had not been shot out of the sky according to plan ..., and then there was the [Royal Navy](#) to be considered. That 30-mile-wide [English Channel](#) was just 30 miles too wide.

Early in November 7 Field Company returned to the Alder-shot Command and went into winter quarters at [Crandall](#), an ancient village about eight miles from Rushmoor, where Crandall Lodge, ten Nissen huts and the village hall were taken over. Weekly dances, complete with refreshments and orchestra, were organised. Partners were obtained by ringing the local ATS headquarters and inviting a company to the dance. Everything was fine until somebody thought a change would be a good thing and sent an invitation to a nurses' home; the organisers had forgotten that the usual ATS invitation had gone out, with the unhappy result that most sappers had two partners—a most embarrassing situation.

There was work in plenty. Every New Zealand unit in England wanted one or more huts built and there were draining, roading and metalling problems occasioned by army traffic over roads around billets that had been ancestral homes, and where so far the heaviest vehicle to use them had been the baker's van.

A fundamental principle of Engineer training is initiative and enterprise; a sapper must never be stuck for lack of tools or material—the material or substitute must be found and a suitable tool improvised. Major Hanson's lectures on the subject were frequent and not in vain, as he found when his car broke an axle. Neither soft words nor official requisitions could produce an axle but the Major asked no questions when his car was miraculously restored to him.

An observant sapper took a kit of tools and a Canadian accent and rode off to where he had noticed a Canadian army car laid aside with some minor complaint. A sentry strolled over before the axle removal was complete, but the sapper's accent was near enough and the operation went according to plan.

It was known by the middle of November that the Engineers were leaving England for a destination which, though officially unknown, could not be anywhere but Egypt. The crating of tools, the packing of equipment and the preparation of vehicles for shipment was a long job, for a considerable amount of gear had been taken on issue over the period. There was also a quantity of explosives which the ad hoc field park company had received, and which the authorities had failed to recall, that had to be suitably labelled and safely hidden.

The Company went on embarkation leave, was not impressed with the snow of an English White Christmas but performed a feat that is, in all probability, still spoken of with awed admiration by the landlord of the Plume and Feathers. Lieutenant [Wildey](#)<sup>42</sup> reminisces:

'7 Field Company excelled themselves and became a bit out of hand in the festivities and drank the Plume and Feathers dry. The CO was very annoyed because the NCOs were not of much help. Anyway in the middle of the night the landlord arrived at the Mess asking to see Major Hanson. He explained to him the wonderful feat that had been performed that night—the Inn had been drunk dry for the first time since it had been built which was shortly after the time of the Armada.'

Mine Host requested the loan of transport to go and collect more ale but Major Hanson's refusal was firm and not suitable for publication. Furthermore, the Plume and Feathers was put out of bounds. On 3 January 1941 the sappers marched away from their friendly village, entrained for Liverpool, and on arrival embarked on transport J 23.

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<sup>1</sup> On 11 Apr 1940 the age limit was raised to forty years, and in the case of men with special knowledge in specialist units there was no fixed limit.

<sup>2</sup> On 3 Sep 1939 the New Zealand Regular Force had four officers and three NCOs to look after the training and administration of the Territorial Force

Engineers as well as the Works Services of the Army. They were: [Capt J. Brooke-White](#), M Sc., BE, AMICE, NZSC, Staff Officer Engineers at Army HQ; [Capt G. P. Sanders](#), AMICE, NZSC, Adjutant, 1 Field Company, NZE, and District Engineer Works Officer, Northern Military District; [Lt A. R. Currie](#), BE, NZSC, Adjutant, 3 Field Company, NZE, and District Engineer Works Officer, Southern Military District; [Lt P. G. Monk](#), NZSC, Adjutant, 2 Field Company, NZE; [S-Sgt M. G. Fowler](#), NZPS, Permanent Staff instructor, 3 Fd Coy; [S-Sgt L. R. Baigent](#), NZPS, Permanent Staff instructor, 2 Fd Coy; [Sgt W. R. Kennedy](#), NZPS, Permanent Staff instructor, 1 Fd Coy; Of these, Captains Brooke-White and Sanders and Lt Currie were the only professionally trained Engineers in the Regular Force.

<sup>3</sup> [Maj L. R. Baigent](#), MBE; [Levin](#); born Wakefield, 23 Nov 1906; Regular soldier, p.w. 25 May 1941; wounded ( [Germany](#)) 9 Apr 1945.

<sup>4</sup> [Col F. P. Heath](#); Kenya; born [USA](#) 8 Apr 1889; Regular soldier; CRE NZ Div Sep 1939-Aug 1940.

<sup>5</sup> [Col G. P. Sanders](#), DSO, m.i.d.; [Auckland](#); born England, 2 Sep 1908; Regular soldier; BM [4 Bde](#) 1940–41; GSO II NZ Div Apr-Dec 1941; CO [26 Bn](#) Jun-Jul 1944; 27 (MG) Bn Nov 1944-Oct 1945; 27 Bn ( [Japan](#)) Oct 1945-May 1946; Director of Training, Army HQ, 1949–53; Commander, [Fiji Military Forces](#), 1956–58.

<sup>6</sup> [Col L. F. Rudd](#), DSO, OBE, ED, m.i.d.; [Auckland](#); born [Christchurch](#), 13 Jan 1898; barrister and solicitor; [1 NZEF](#) 1917–19; wounded and p.w. Apr 1918; OC [6 Fd Coy](#) 1939–41; Military Secretary, [2 NZEF](#), Jul 1941-Mar 1944; comd [2 NZEF Reception Group](#) ( [UK](#)) Aug-Oct 1944; British legal mission to [Greece](#), 1945.

<sup>7</sup> [Lt-Col W. G. Morrison](#), OBE, ED, m.i.d.; [Wellington](#); born Waimate, 12 Mar 1903; civil engineer; OC [5 Fd Pk Coy](#) Oct 1939-Jul 1941; transferred to RE 1942–46; CRE RNZE 1948–1953.

<sup>8</sup> Documents, Vol I., Nos. 57 and 63.

<sup>9</sup> [Maj H. C. S. Woolcott](#); born [Auckland](#), 29 May 1909; civil engineer; OC [6 Fd Coy](#) 1941–42; wounded 1 Dec 1941; died of wounds 24 Oct 1942.

<sup>10</sup> Capt D. V. C. Kelsall, m.i.d.; London; born Taihape, 13 Dec 1913; civil engineering student; p.w. 9 May 1941.

<sup>11</sup> Sgt J. I. Jay; Reporoa; born NZ 12 Sep 1911; clerk; p.w. Apr 1941.

<sup>12</sup> Left with advance party.

<sup>13</sup> Spr H. E. Neale; Waiatarua, Auckland; born Waihi, 28 Feb 1911; butcher.

<sup>14</sup> Lt-Gen Lord Freyberg, VC, GCMG, KCB, KBE, DSO and 3 bars, m.i.d., Order of Valour and MC (Greek); born Richmond, Surrey, 21 Mar 1889; CO Hood Bn 1914–16; commanded 173 Bde, 58 Div, and 88 Bde, 29 Div, 1917–18; GOC 2 NZEF Nov 1939–Nov 1945; twice wounded; Governor-General of New Zealand Jun 1946–Aug 1952.

<sup>15</sup> WO I H. E. McVeagh; Wellington; born Cambridge, 27 May 1917; clerk.

<sup>16</sup> Spr W. A. Yates; born Dunedin, 17 Sep 1903; architect; died Wellington, 22 May 1960.

<sup>17</sup> The Second Echelon anchored in the Firth of Clyde on 16 June but for security reasons the news was not released immediately.

<sup>18</sup> The same Colonel 'Jumbo' Wilson who was GSO I to the New Zealand Division in France in the 1914–18 war.

<sup>19</sup> The desert rat or jerboa is not unlike a diminutive kangaroo.

<sup>20</sup> Capt G. W. Bucknell, m.i.d.; Christchurch; born NZ 25 Jun 1903; architect.

<sup>21</sup> Sgt A. E. H. Lineham; Auckland; born Kaiha, North Auckland, 28 Nov 1915; duplicator operator.

<sup>22</sup> Maj J. A. M. Brittenden; Wellington; born Tinwald, 28 Mar 1914; artist; wounded 5 Jul 1942.

<sup>23</sup> Brig G. H. Clifton, DSO and 2 bars, MC, m.i.d.; Porangahau; born Greenmeadows, 18 Sep 1898; Regular soldier; served North-West Frontier 1919–21 (MC, Waziristan); BM 5 Bde 1940; CRE NZ Div 1940–41; Chief Engineer 30 Corps, 1941–42; comd 6 Bde Feb-Sep 1942; p.w. 4 Sep 1942; escaped, Germany, Mar 1945; Commander, Northern Military District, 1952–53.

<sup>24</sup> Sgt L. C. Morris, m.i.d.; Auckland; born Masterton, 9 Aug 1905; carpenter; wounded 14 Aug 1942.

<sup>25</sup> Sgt J. E. de Cavalho (now Thompson); born USA 18 Jun 1911; refrigeration engineer.

<sup>26</sup> Sgt W. Hanley, m.i.d.; born Glasgow, 16 Dec 1908; ship repairer.

<sup>27</sup> Cpl E. K. Madigan, MM; born NZ 17 Jun 1912; bridge builder; p.w. 1 Jun 1941.

<sup>28</sup> The Italian 4 AR (Thermos) bomb was essentially an anti-personnel weapon and was given the soubriquet 'Thermos' on account of its more than superficial resemblance to a thermos flask. The bomb body was made of 1/2 in. steel, painted buff or green to make it inconspicuous on the ground. Its overall length was 12.3 in. and weight 3.9 kilograms. A safety pin removed when the bomb was dropped permitted the arming of the fuse by the release of secondary safety devices when the bomb struck the ground. The armed fuse was extremely sensitive to a jerk or jolt and the bomb was lethal at 100 feet.

<sup>29</sup> Spr J. E. Kelly; born Ulster, 15 Apr 1906; PWD employee; p.w. Apr 1941.

<sup>30</sup> Capt D. G. Thomson, ED and bar; Ngatea; born Stratford, 2 Jun 1917; chainman; p.w. 28 Nov 1941.

<sup>31</sup> Spr N. Finney; Amberley; born Christchurch, 10 Jul 1918; warehouseman.

<sup>32</sup> The title 25 Field Company did not actually come into use until 1942, when as a deception plan base units were given divisional signs and serial numbers which identified them as divisional units. No. 1 Works Section, [Maadi Camp](#), became 25 (NZ) Field Company, NZE, 6 NZ Division. The sign of the imaginary 6 Division was a Kiwi. It was intended to deceive enemy Intelligence as to the number of divisions in Egypt during the critical period dealt with in

## Chapter 10.

<sup>33</sup> Brig F. M. H. Hanson, CMG, DSO and bar, OBE, MM, ED, m.i.d.; Wellington; born Levin, 1896; resident engineer, Main Highways Board; Wellington Regt in First World War; OC 7 Fd Coy Jan 1940-Sept 1941; CRE 2 NZ Div May 1941, Oct 1941-Apr 1944, Nov 1944-Jan 1946; Chief Engineer, 2 NZEF, 1943-46; three times wounded; Commissioner of Works.

<sup>34</sup> Lt-Col J. G. Elliott; England; born NZ 8 Jan 1899; company manager; CO Forestry Gp Nov 1940-Jul 1943.

<sup>35</sup> Col R. H. Packwood, OBE; Auckland; born Kaiapoi, 11 Apr 1892; district engineer, Public Works Dept; OC 9 Ry Svy Coy 1940-41; Asst Director of Works (Docks), GHQ MEF, 1941-43; Director of Planning, Engr-in-Chief's Branch, GHQ India, 1943-46.

<sup>36</sup> Lt-Col T. C. V. Rabone, m.i.d.; Auckland; born Blenheim 12 Sep 1891; civil engineer; OC 10 Ry Constr Coy Jan 1940-Nov 1941; OC Engr and Ordnance Trg Depot, Maadi, Nov 1941-Apr 1942; CRE Central Military District 1942-43.

<sup>37</sup> Lt-Col J. E. Anderson, OBE, MC and bar, Croix de Guerre; born NZ 7 Dec 1890; civil engineer; CO NZ Ry C and M Gp 1940-42; later served with Royal Engrs; died Wellington, 5 Nov 1945.

<sup>38</sup> Col J. Brooke-White, OBE; Wellington; born Wellington, 15 Jan 1909; Regular soldier; CRE 3 NZ Div 1944; OC 28 Assault Sqn ( Italy) 1945; AAG 2 NZEF 1945; wounded 30 Apr 1945.

<sup>39</sup> Maj D. S. G. Marchbanks, DSO, MBE, m.i.d.; Wellington; born Wellington, 30 Sep 1901; civil engineer; OC 10 Ry Constr Coy Nov 1941-Feb 1942; 19 A Tps Coy 1942-43; 8 Fd Coy 1943-44; Chief Engineer, Wellington Harbour Board.

<sup>40</sup> Lt-Col A. V. Knapp, MBE, m.i.d.; Wellington; born NZ 15 Jan 1900; civil servant; Assistant Director of Postal Services 1942-45.

<sup>41</sup> The term Wog which supplanted Gippo of the First World War is generally believed to be derived from the first letters of the appellation 'Wily Oriental Gentleman'. Another explanation is that it derives from the expression 'We Oriental Gentlemen' attributed to an Egyptian notable speaking at a banquet at [Cairo](#). But perhaps the most likely origin is a resurrected student term for an unidentified microbe on a slide.

<sup>42</sup> [Maj P. B. Wildey](#), m.i.d.; Dunedin; born Dunedin, 13 Oct 1913: mining student; OC Engr and Ordnance Trg Depot 1943.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 11 FORESTRY COMPANY

### *11 Forestry Company*

The men of 11 Forestry Company whom we left at [Woolmer](#) went up to [London](#) on a couple of days' leave before departing for work in England that the Germans had deprived them of in [France](#). The 'woodpeckers', as the railway sappers called them, were sorry to part with the 'worm disturbers', their term of friendly abuse, but were keen to get on the job. They left on 3 July for [Jarvis Brook](#), near Crowborough, East Sussex, settled into tents and sharpened their axes. The next morning work started on felling trees for road blocks and tank traps along one of the defence lines across the south of England. Anti-tank ditches covered by pillboxes had already been completed parallel to the coast and about 30–40 miles inland. It was the job of the Forestry Company to build road blocks and clear fields of fire, and for a month they were widely spread—places mentioned in reports include the Dorking- [London](#) road, East Grimstead and Tonbridge Wells. Word got around that the Kiwis were pretty good at clambering up trees and cutting them back, with the result that a section was lent to the [RAF](#) to top and fell trees around the approaches to airfields.

Early in August headquarters and half the company moved to [Cirencester](#) in Gloucestershire, where it was to remain for the following three years. The other half of the company under the command of Lieutenant [Collier](#)<sup>43</sup> remained at [Jarvis Brook](#) until October. Meanwhile the [Cirencester](#) detachment had taken over two mills, one in [Hailey Wood](#) and one in [Overley Wood](#), while the [Jarvis Brook](#) detachment carried on with defence works. If they had needed any spurring on, the sight of massed formations of German planes would have been sufficient inducement. They left on 5 October for [Calne](#), near [Chippenham](#) in [Wiltshire](#), where they were to build the first New Zealand designed sawmill in Bowood Park forest. This mill, which completed the three mills that the company was to operate, commenced cutting at the end of December. There were delays in the arrival of essential equipment which threw the works programme out of gear, but a reserve of logs was cut between delays. The other two mills had their share of trouble, for with the onfall of winter the roofless [Overley Wood](#) mill had trouble with saw belts until the omission was rectified. Faulty

pulleys kept [Hailey Wood](#) mill out of production for days on end awaiting replacements, and at both mills the prevailing wet weather slowed up the transport of logs from bush to bench through the logging units being rubber tyred instead of tracked.

A hint of the lack of equipment is evident from this passage from a letter written by Major Elliott:

'Conditions have been completely altered as you might imagine. All our equipment went to [France](#) and we arrived here just as [France](#) collapsed and we are left to operate on what remains in England. We became an offensive unit ready to take our place at any time in the defence of England. At this moment I have established our headquarters in a very comfortable country home, a hotel (Stratton Arms) in the outskirts of [Cirencester](#) and have with me about half the company. The other half is down in [Calne](#). We have had great difficulty in obtaining the type of equipment we are accustomed to using—axes, saws and the like. All manufacturers are so full of orders that deliveries are very slow.'

[Cirencester](#), a town of about 10,000 population, had a history that began when it was the junction of three Roman roads, and [Calne](#) village, pronounced 'Cam', had once prospered on wool but had fallen on evil days until a bacon curing firm made it their headquarters. The Company was billeted in the firm's hostel for small-goods workers.

With the knowledge of the early arrival of 14 Forestry Company ( [Captain Jones](#) <sup>44</sup>) and 15 Company (Captain [Biggs](#) <sup>45</sup>) the War Office requested the setting up of a Headquarters Forestry Group to control, as a self-contained unit, the three New Zealand companies. The establishment, based on English Forestry Groups, was a CRE and twenty other ranks, designed to supervise up to six sub-units and, equipped with sufficient vehicles, to be continually on the move from one area to another.

To this end Captain [Gamman](#) <sup>46</sup> became OC 11 Company with the rank of major, and Major Elliott, promoted lieutenant-colonel, set up his Group Headquarters at Castle Combe in Gloucestershire. Lieutenant A. M. Collier became Adjutant and Second-Lieutenant A. P. [Thomson](#) <sup>47</sup> Field Engineer and liaison officer. Lieutenant [Greer](#) <sup>48</sup> had accepted a transfer to an RE Company on 7 October, which left Major

Gamman short of four officers. Sergeants [Coogan](#),<sup>49</sup> [McKenzie](#),<sup>50</sup> [Porter](#)<sup>51</sup> and [Cook](#)<sup>52</sup> were accordingly promoted to commissioned rank to fill the vacancies.

The Company had been, and the Group continued to be, administered by [2 NZEF \(UK\)](#) (Brigadier [Park](#)<sup>53</sup>) but was also subject to control by Southern Command, Forestry Division of the War Office and the Ministry of Supply. All interested parties met at conferences from time to time. Such a conference was held at [Bristol](#) on 5 November 1940, when it was agreed that 11 Company would continue to operate two mills at [Cirencester](#) and one at [Bowood](#); 14 Company would make its headquarters at [Grittleton, Wiltshire](#), and 15 Company at [Langrish, near Petersfield, Hampshire](#).

The 14th and 15th Forestry Companies disembarked at [Gourock](#) on 7 November and entrained for their areas, where after a few days' leave they were to undergo a course of military training until 15 December and were then to be available for forestry work. Thereafter the Group would do ten days' training by companies every six months.

The disposition of 11 Company on 7 November was:

[Cirencester](#) 3 sections operating two mills, [Hailey Wood](#) and [Overley Wood](#).  
[Calne](#) 1 section building a third (NZ type) mill.  
[Benson](#) 1 section on loan to Air Ministry felling trees near approaches to landing grounds.  
[Grittleton](#) A detachment preparing billets for 14 Company.  
[Petersfield](#) A detachment preparing billets for 15 Company.

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<sup>43</sup> [Lt A. M. Collier](#); Tokaanu; born [Hamilton](#), 7 Jan 1912; sawmiller.

<sup>44</sup> [Capt O. Jones](#); born England, 26 Jan 1888; forester; died [Rotorua](#), 7 Feb 1955.

<sup>45</sup> [Maj C. Biggs](#); England; born England, 9 Jun 1890; Conservator of Forests, Nelson.

<sup>46</sup> [Maj G. A. Gamman](#); London; born [Wellington](#), 14 Mar 1904; sawmiller.

<sup>47</sup> Capt A. P. Thomson, m.i.d.; Rotorua; born Wellington, 2 Apr 1913; forest officer.

<sup>48</sup> Lt A. Greer; Auckland; born N. Ireland, 27 Mar 1907; mechanical engineer.

<sup>49</sup> Capt J. D. Coogan; born NZ 9 Feb 1906; timber worker.

<sup>50</sup> Lt L. J. McKenzie, m.i.d.; Gummies Bush, Invercargill; born Riverton, 31 Jul 1905; bushman.

<sup>51</sup> 2 Lt G. A. D. Porter; born NZ 27 Apr 1911; tractor driver.

<sup>52</sup> Capt W. L. Cook; Palmerston North; born England, 13 Jun 1919; audit clerk.

<sup>53</sup> Brig R. S. Park, CB, CBE; Auckland; born Dunedin, 18 Feb 1895; Regular soldier; NZ Fd Arty 1917–19 (Lt); NZ Military Liaison Officer, London, 1939–46; Commander, Northern Military District, 1947–50; Commander K Force (Korea), 1950–53.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## [SECTION]

The Third Echelon, of which 8 Field Company was a component, began training in New Zealand in May 1940. The Engineers' teething troubles were much the same as those of previous units except for an epidemic of influenza which interrupted the training.

The official intimation that the King of [Italy](#) would consider himself at war with Great Britain and [France](#) from midnight on 10 June 1940 provoked the reply, transmitted by the United States Ambassador in [Rome](#) to the Italian Government, that His Majesty's Government in New Zealand associated themselves in that matter with His Majesty's Government in the [United Kingdom](#) and with the Government of [France](#)—which was a long-winded way of saying we would be in too.

The excitement occasioned by the Italian declaration was increased by rumours. Eighth Field Company, and as many others as could be packed aboard, were said to be sailing almost immediately in the [Awatea](#), which was at that moment in port at [Wellington](#). Training, however, went on until Friday, 19 June, when the Company was paraded and informed that following representations from the War Office, Army Headquarters was applying the present strength of 8 Field to form two other units, 18 and 19 Army Troops Companies. They were to depart on final leave forthwith, and during their absence more men would be called up to bring the new companies up to establishment.

The transformation of 8 Field into two Army Troops Companies (18 under Major [Lincoln](#)<sup>1</sup> and 19 under Major [Langbein](#)<sup>2</sup>) was the result of a message to the United Kingdom Government to the effect that if the [New Zealand Government](#) could do anything more to disabuse the Italian Government of the idea that the war was all over bar the Victory Parade, the Imperial Government only had to mention it.

The Imperial Government did mention it: could the [New Zealand Government](#) consider providing, in addition to the Forestry, Railway Survey<sup>3</sup> and transportation units already being despatched, another Railway Construction, two Railway Operating and another two Forestry companies? The Army Council would also be

glad if the [New Zealand Government](#) would consider the provision of two Army Troops companies of Engineers.

The establishment of an Army Troops Company—288 all ranks—was higher than that of a Field Company and the organisation was different, with a Company Headquarters, which included a workshop, an electrical and mechanical section and four sections for general engineer work.

The function of an Army Troops Company is to carry out engineering projects along the lines of communication. It normally has no connection with divisional formations and is under command of CRE, Base, or CRE, L of C Sub-Area. The work is prosaic and there is no seeking 'the bubble reputation at the cannon's mouth'; no glory; just tradesmen and civil engineers in uniform.

It did not turn out that way with 19 Army Troops Company, but let us not anticipate.

Back from final leave and ready—as they thought—to sail to Vancouver, thence across [Canada](#) to Montreal and finally to England, the sappers found instead an extensive programme of instruction waiting them on the [Trentham](#) training circuits and in the [Trentham](#) lecture rooms.

The rumour of an early departure had been no rumour, but difficulties in providing an escort, plus the reluctance of the Government to sanction the voyage without one, ended in the cancellation of the project. A reappraisal of the situation resulted in the Imperial authorities suggesting, and the [New Zealand Government](#) agreeing, that 14 Forestry Company ( [Captain O. Jones](#)) and 15 Forestry Company (Captain C. Biggs) be sent to join 11 Forestry Company in England, and that Headquarters Railway Operating Group (Lieutenant-Colonel [Sage](#) <sup>4</sup>), 13 Railway Construction Company (Major R. T. [Smith](#) <sup>5</sup>), 16 Railway Operating Company (Major [Aickin](#) <sup>6</sup>), 17 Railway Operating Company (Major [Poole](#) <sup>7</sup>) and the Army Troops Companies go to the Egyptian theatre. Transportation units, to use the technical term, would be GHQ troops and would work under the direct supervision of the Director-General of Transportation, General Headquarters, [Middle East](#).

The intention at that date was to re-form 8 Field Company and despatch it as soon as possible so that each infantry brigade might have its correct engineer

complement. In the meantime, one of the Army Troops Companies, although not trained or organised for the role, was to be at the disposal of [General Freyberg](#) and attached to [2 New Zealand Division](#).

Fresh complications ensued with the end of the French resistance; the defence of the [Pacific](#) became the sole responsibility of the over-stretched British Navy and [Japan](#) began to make far-reaching demands. It was time for New Zealand to look to its outer defences along the line [Tonga](#), [Fiji](#), the [New Hebrides](#); 18 Army Troops Company was earmarked for essential preparatory work in [Fiji](#) and only the 19th sailed with the Railway and Forestry Groups in the Third Echelon.

They departed on 28 August 1940 and left 18 Army Troops Company gloomy in [Trentham](#); 6 Field Company was digging dugouts and building pillboxes at [Agamy Beach](#), [Alexandria](#); 5 Field Park was preparing to move to Railhead at [Sidi Haneish](#); 9 Survey, 10 Construction and Headquarters Railway Construction and Maintenance Group were stretching their legs in [Capetown](#) en route from England to Egypt; 11 Forestry was building road blocks in the south of England; 7 Field Company was working with the Second Echelon, now organised as 2 NZ ( [UK](#) ) Division and standing by to move into the danger area between [Maidstone](#) and [Dover](#).

With one third of the New Zealand Division in Egypt, one third in England and one third in New Zealand, the question of its ultimate concentration posed some problems. The immediate threat was to the [United Kingdom](#), the security of which was vital, but the shortness of the time left to the enemy before the winter storms made a water-borne invasion unlikely also made it impossible for the Third Echelon to reach England in time.

On the other hand, the retention of our position in the [Middle East](#) was also vital, for on it hinged the defence of the [Suez Canal](#), the oilfields of Iran and [Iraq](#) and the [Red Sea](#) lines of communication.

As to the Italian naval danger, two convoys had lately been passed through the [Red Sea](#) without loss. The Third Echelon therefore would go to Egypt and the Second would follow as soon as the German invasion threat was resolved.

Besides [Fremantle](#), the route to Egypt took in [Bombay](#), the first eastern city for

the great majority. For two days the sappers went sightseeing, by taxi or, according to the finances, on foot. Shawl and brassware souvenir vendors did a good trade, but the strangest bargain was made by a sapper who thought he was giving alms and found to his horror that he had purchased a baby. The mother was so insistent on handing over her unwanted and unwashed infant that it was necessary to make a hurried retreat to the safety of the dock picket line.

The Third Echelon engineers disembarked at [Port Tewfik](#) on 29 September, twelve days after 9 Railway Survey and 10 Railway Construction Companies had arrived in [Maadi](#) from England. The 'Glamour Boys' had pitched tents for the newcomers, collected their own equipment and departed into the 'blue' towards the work for which they had been sent from England.

Before the formal moves took place, however, a small party had been sent forward to [Daba](#). Corporal [Farrell](#),<sup>8</sup> who was in charge, wrote a racy description of their adventures. After describing how the driver taking them to the [Cairo](#) railway got lost and landed back in [Maadi](#) with his passengers, and how he himself was then supplied with a truck and a guide as far as the Pyramids so that he could not again get lost, because from there there was only one road, he continues:

'Just at dusk, weary, cramped and hungry, we ran into a large CCS and tried to persuade them to take us in as patients suffering from anxiety neurosis and inanition. They declined, politely but quite firmly but cheered us up by saying that the apparently mythical [Daba](#) was only four miles ahead.... our hearts leapt high within us when we perceived, standing in the middle of the road, a Kiwil Never was a member of the Div. Cav. as welcome as was this solitary representative of theirs at this hour. He led us to his orderly room, where a ring was put through to the only REs in the place and therefore the only British Army Engineers who could have had anything to do with the "running of trains". But no! When they were asked if they knew anything about some fellows who had come along to help them in the running of their trains they replied that they didn't; and furthermore they showed not the slightest anxiety to be saddled with the feeding of sixteen hungry Sappers from a strange land.

'The good old CO of the Div Cav was made of different stuff. He bellowed for his Quartermaster and demanded "beds for all who come". He bellowed to the cooks

"Bring wine for them and food". I think he'd have got us dancing girls if we'd asked for them. Well, we dined, we talked, we rested and we drank beer with our newfound friends, and then we staggered off to bed, good pals all, determined that henceforth the blasted railways could run themselves. We were going to be Cavalrymen.

'But it was not to be. A wave of inspiration had struck those Tommy engineers during the night and they rang some headquarters somewhere and had been struck with a squall of knowledge. Before dawn broke there was a suppliant knocking at our door and begging our attendance at their camp. Regretfully we said goodbye to the brilliant careers we had envisaged for ourselves as cavalrymen....

'The Tommies received us with open arms. The Major said, "By Jove, you've no idea how pleased we are to receive you fellas. You see, the position is that the Wogs are afraid of the bombing. They've refused to work today, and in a couple of days we're having a big conference here between representatives of the Egyptian Government and the Army, and then we'll be taking over the running of this line from [Daba](#) to [Matruh](#). Some Aussies are coming up too, and between you fellas and our fellas we'll have just about enough chaps to run this show. You just rest yourselves a couple of days and think the job over.'"

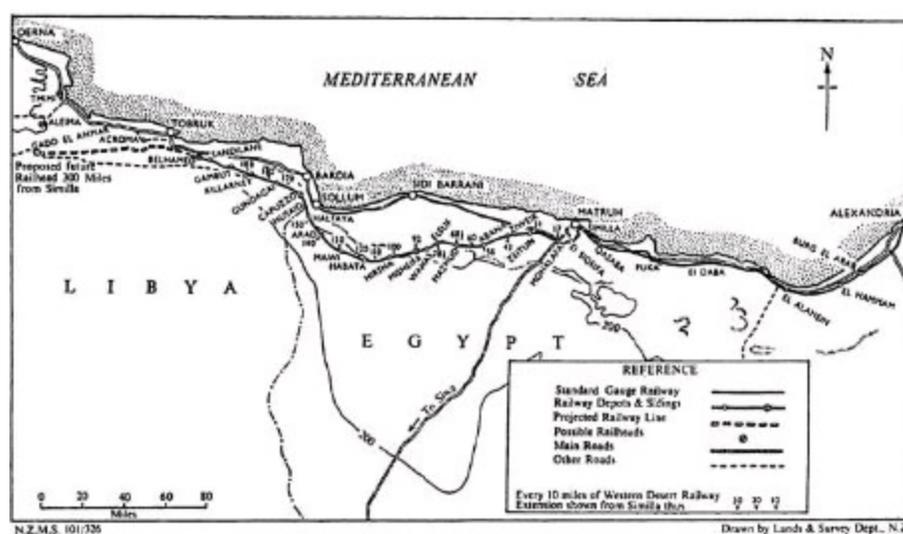
The sappers rested and thought, but the Egyptian Government did not hand over the line and the Wogs returned to the job. The party stayed near the military sidings in case the return was only temporary and waited until their unit arrived.

On 1 October Colonel Anderson's headquarters and 10 Railway Construction Company were settling in at Maaten [Burbeita](#), a couple of miles from [Baggush](#), while 9 Railway Survey Company was making itself comfortable at [Garawla](#), eight miles east. A previously detailed party from 9 Railway Survey Company commanded by Lieutenant D. S. G. Marchbanks (10 Railway Construction Company) left [Cairo](#) the same day to make an inspection of all railway bridges in the [Sudan](#) and survey sites for deviations in case they were bombed by the Italians. At this date [Kassala](#) had been captured by the enemy and the south-eastern railway system disrupted. The party was given, when it reached [Khartoum](#), a carriage with sleeping quarters, cooking facilities and an attendant, and covered the whole [Sudan](#) railway system.<sup>9</sup> Within forty-eight hours of making themselves comfortable at [Garawla](#) No. 3 Section

(Captain Nevins <sup>10</sup>) was on its way to Palestine on a depot survey job.

Before he had moved into the desert Colonel Anderson had been warned to hold himself in readiness to find and map a route for the extension of the railway system as far west as the military situation would permit. The actual fixing of the path of a new line is the most important, difficult and interesting part of railway construction. First there is a reconnaissance of the area between the two terminals, then a preliminary survey of a general route that has been thus disclosed, and finally the paper location or marking in of the actual route decided upon. The route is finally pegged out on the ground for the construction units, but if an Army Commander is waiting on your railway line you make quick decisions, try to solve your problems as you go and hope you have found the right answers.

The only considerable engineering difficulty in the initial stages was the climbing of the escarpment mentioned earlier, because the actual point of departure from the main line had already been decided by the engineers of the [Egyptian State Railways](#). The junction, later called [Similla](#), was approximately eight miles east of [Matruh](#). From Matruh to [Sidi Barrani](#) the ground rises in a series of terraces for about 25 miles inland, then swings to the coast at [Sollum](#) where it is extremely precipitous. It was to avoid this coast area that the line was to be taken inland south of [Sidi Barrani](#).



### western desert railway and extension

The first section to [Charing Cross](#) on the road to [Siwa](#) was begun on 4 October,

when a party commanded by Captain [Halley](#)<sup>11</sup> commenced the examination of possible routes. This date, 4 October 1940, may be taken as the start of the most important task of the New Zealand Railway Engineers in the [Middle East](#).

Lieutenant [Macky](#)<sup>12</sup> and party had the task of laying out the traffic handling facilities, including shunting yards, loops and stations giving access both towards [Matruh](#) and [Alexandria](#). There was also an exchange station consisting of five 600 metre loops and two 600 metre shunting necks, with provision for doubling the whole layout if necessary; and following the usual military practice there had to be exchange stations with 600 metre loops every seven and a half miles along the new line.

Meanwhile 10 Railway Construction Company, placed under command of 4 Indian Division, was put on a job of building defences on the eastern face of the [Baggush](#) Box. Amongst other amenities were 48 concrete pillboxes and 18 machine-gun emplacements; the sappers called it the 'Rabone Line' and endured desert sores, sandstorms and dysentery in its making.

Nights were enlivened for all in [Baggush](#) area by the Italians, who periodically dropped bombs from a very great height and with agreeably poor aim, and the pillboxes continued to sprout in the desert; the only use they were ever put to was to protect the Jerry rear troops from our bombs during July to October 1942.

While 10 Company was building its 'Rabone Line', 13, 16 and 17 Companies were parade-ground pounding at [Maadi](#), but by the middle of October Anderson's Construction Group was completed by the arrival of 13 Construction Company, which settled in at [Qasaba](#), 15 miles east of [Matruh](#). [Qasaba](#) was one of those spots you didn't know existed until you saw the name on a map; you passed a little sandbagged railway halt and you had passed [Qasaba](#). Nevertheless the camp, hidden among sandhills and right on the beach, was to have pleasant associations for its inhabitants in the ensuing months.

There was work waiting in the laying of a track on a coal siding, so for the first time since they walked into camp experienced railway construction men came into their own while the drill hounds faded into the background.

Colonel Anderson was planning a tight schedule for the rail extension, predicted on the assumption that equipment, labour and material would be available as required. Actually he got very little. The first early promise of all these things ended in a memo hoping that the Group would be able to handle the job with what machinery it owned plus some native labour.

A certain amount of equipment, about one-tenth of what was needed, did in fact arrive, plus 1200 native labourers, and 13 Company started work on 16 December; two days later 10 Company, less a detachment left to finish the 'Rabone Line', came on to the job and the New Zealand Railway Construction Group began its work as a unified formation.

The first two miles included a large rock embankment that had been pegged out by 9 Company before it was recalled for depot survey work in the Nile Delta, leaving only a handful of sappers working forward of Charing Cross.

The intention was that the attached native labour would be dispensed with as soon as the rock embankment was finished. In practice the performance of the auxiliary labour fell very short of expectations; the Saidi from Upper Egypt, dressed in blue gallabiahs and brown felt skull caps were, by New Zealand standards, very lazy and by any standards very lousy; the Bedewi, wrapped in dingy white wool nightshirts, were neither so lazy nor so lousy but did not like their countrymen from Upper Egypt. Day labour was a definite failure; the introduction of Palestinians to overcome the language difficulty effected little improvement; solid New Zealand cursing did no good either.

Finally the task system was tried—a day's work was laid out for each party under its Rais <sup>13</sup> and when the job was finished that party could return to camp. Results were immediate; when the first party completed its task everybody downed tools and headed back to camp. The sappers just stood and tore their hair.

The ancient rivalries of the two kingdoms of Upper and Lower Egypt reached a crisis on Christmas Eve with a pitched battle between north and south. Tenth Company, called out to restore order, charged into the tumult with trucks and the success of the mechanical assault earned them the title of 'The Fighting Tenth'. The warring tribes were then moved apart and rationed separately.

Progress continued to be a disappointment to men who had planned a spectacular line-laying programme; shortage of transport and the non-arrival of culverting prevented the completion of even the first two miles of formation.

What little tolerance the Saidi had for work had completely evaporated and they were replaced by Bedewi who, although they moved but three-quarters of a cubic yard per day when a sapper would have been loafing if he shifted only four times that amount, at least did stay on the job in spite of some very nasty dust-storms.

The final blow came on 8 January 1941 when work on the [Western Desert](#) extension was virtually stopped; no track laying was to be done and only the first eight miles of formation was to be completed.

It was of course the success of the Wavell offensive in driving the Italians some hundreds of miles to the west that had altered the lines-of-communication requirements, for with the ports of [Tobruk](#) and [Benghazi](#) in our possession it was thought that there was no need to build a railway across a desert.

As many men as possible were got away to a change-of-air camp and by 5 February 13 Company and Group Headquarters had put the [Western Desert](#) behind them and were located at [Geneifa](#) and [Moascar](#) respectively. Tenth Company finished the formation to the eight-mile peg and had moved back to [Qassassin](#) by 18 February.

The Operating Companies soon followed the construction sappers into the 'blue'. On 22 October 1940 16 Company, which on the 11th had sent forward the second-in-command, Captain [Pearse](#),<sup>14</sup> with a detachment of 100 all ranks, moved to [Daba](#), about 80 miles east of [Matruh](#), where it took over from a small composite railway unit, 10 Company, RE, which then went to the [Sudan](#).

To railwaymen who less than four months earlier were working in New Zealand, [Daba](#) was no oriental paradise; it was not even a village, merely a sub-terminal station serving a military post and the scattered natives. A mosque, a handful of dwellings and a barracks for the employees of the [Egyptian State Railways](#) constituted the permanent part of [Daba](#). Less substantial was a shanty town of about fifty petrol-tin shelters inhabited by Bedouin, their fowls, sheep, goats, camels,

and donkeys. It stank.

The importance of [Daba](#), and the place was important, lay partly in the fact that almost all train engines were changed and watered there. It was necessary therefore to ensure that the underground reservoir (capacity 100,000 gallons) was kept filled by railway tank wagons hauling water from [Alexandria](#).<sup>15</sup> Nile water in its unadulterated state is quite poisonous to European troops but eminently suitable for locomotives, consequently the tank wagons carrying loco water had a red flash painted on them and the filtered water-carrying wagons were marked, appropriately enough, with a blue band. With the build-up of force to meet the Italian aggression there were insufficient wagons of either colour.<sup>16</sup> The position deteriorated to such an extent that water was sometimes pumped out of one or more locos in order to fill the tank of another. And sometimes it was necessary to rob the troops of their drinking water.

The railway between [Alexandria](#) and [Daba](#) was ill enough managed, but the section between [Daba](#) and [Matruh](#) was being run with singular inefficiency and nobody was quite certain when a train did arrive if it was yesterday's, today's or even tomorrow's. Reports to the Egyptian Railways headquarters may have occasioned mild amusement there but brought no action. The East did not want to be reformed. Furthermore, the Egyptian Government had no intention of surrendering control of a line that, while permitting someone else to restrain the invader, was also earning countless millions of 'akkers' in freight and other charges.

Something had to be done about it, and a delicate situation was relieved by the diplomatic device of the newcomers operating as 'learners', and as 'learners' they staffed every station and every train with a shadow crew. The next step was to take charge of military sidings and use locomotives hired from the ESR; after that the shunters began to deal with the trains on arrival, although not technically entitled to do so until the wagons had been detached.

Steadily the infiltration went on until the locos were coaled, watered and kept in running order by the 'learners'. The Kiwi shadow crews made friends with the Egyptian crews, who were not bad fellows when you got to know them and made allowances for the fact that East is East and West is West. They on their side wouldn't run their trains or be shunted unless the 'learner' was present. A train with

flags waving and whistles blowing and the stationmaster screaming his head off might be ready to pull out, but the driver, having delivered his ukase 'Wait Kiwi', just waited until his Kiwi offsider arrived.

Major Aickin explains the risks that were taken by Gippo and Kiwi crews: 'At night the whole of the eighty mile run between [Daba](#) and [Mersa Matruh](#) was done without engine headlights. No signal lamps were lighted at wayside stations and vans carried no tail lights. Engine driving for the Egyptian crews and the 16th men was a nerve racking experience. For security against attack from the air, the cab and tender were covered in by a heavy black-out cover, but while it obscured the glare from the fire box it gave the crew a hemmed in feeling. Steaming along at night time these men never knew whether the line ahead was intact. They would often see that bombs were being dropped somewhere ahead of them and trusted that the railway ground staff would see that they did not run into a hole. The trains simply went on as a matter of course, the crews hoping for the best even when they feared the worst.

'Nor was the enemy always the most dangerous foe, as the constant menace of the sand drift had to be faced and this was present even at times other than during the khamseens. Wherever an obstruction to the path of the wind borne sand and dust was encountered, a drift would form on the side of the obstruction opposite to the direction of the wind, and even the rails were a sufficient obstacle; similarly where the ground fell away, as in a cutting or where there was an escarpment or an embankment. The result was that the rails, at times, were completely buried but the trains still ran in spite of all hazards.'

The work of pushing more and more trains along a track not organised to handle such traffic went on with increasing urgency until the December offensive opened. Conversely, fewer and fewer trains then passed through [Daba](#) as the success of the offensive made it possible to use the sea-ways and carry supplies to the captured ports.

From early February (1941) troops of all arms came streaming back from the [Western Desert](#) on their urgent way to another campaign in [Greece](#), while the western traffic was mostly governors, town majors, military magistrates, interpreters and their entourages en route to administer the late Italian provinces.

A party of 16 Railway Operating Company, Lieutenant [Bishop](#)<sup>17</sup> and 18 other ranks, who had been detailed to operate the Italian narrow gauge rail system between [Benghazi](#) east to [Barce](#) (65 miles) and west to [Soluk](#) (35 miles), did not use their own system but travelled by sea to [Tobruk](#) and then by motor transport to a warm reception by the Aussie CRE at [Benghazi](#), who had repaired the damage to the line that the departing Italian Army had inflicted.

The Kiwis took over three steam locos, two diesel locos, sundry carriages and four-wheeled wagons, one Italian station-master and several Arab enginedrivers and brakemen.

Their main work was transporting prisoners of war—about 850 per day—to [Barce](#) and backload with petrol. Two trips daily were made. The first run was regarded as something of an event by the troops in [Barce](#), who had almost forgotten what a train looked like. As Lieutenant Bishop recalls the event:

'On the first day's run of the first train from [Benghazi](#) to [Barce](#) great excitement prevailed. We were asked to estimate our arrival time at [Barce](#) and this was given as 12.30 p.m. Incredulously enough, on the tick of 12.30 p.m. the first train, hauled by a steam loco approached the [Barce](#) station platform. From the loco the platform seemed to be alive with about every British soldier in the town, all waving and cheering wildly and shouting greetings to a very surprised railway crew.'

After establishing the [Benghazi- Barce](#) rail traffic an endeavour was made to work the [Benghazi- Soluk](#) section. On the first run, however, the train, while standing at the unloading platform, was attacked by an Italian aircraft, and drums of petrol under discharge were set on fire. Seeing this, Sergeant Johnston,<sup>18</sup> enlisting the aid of the Arab enginedriver, quickly ran the diesel loco clear, this operation being rendered the more hazardous by the fact that the wagon attached immediately to the engine was loaded with heavy bombs. For this courageous action Sergeant Johnston received a letter of commendation from General Wavell.

Major Poole, who had established 17 Railway Operating Company headquarters at [Burg el Arab](#), about 40 miles west of [Alexandria](#), handed the place back to the Bedouin and the railway to the Egyptians. The Company moved to [Geneifa](#) to run the [Fanara](#) shunt from the docks on the [Bitter Lake](#) to the RE depots, and such-like jobs

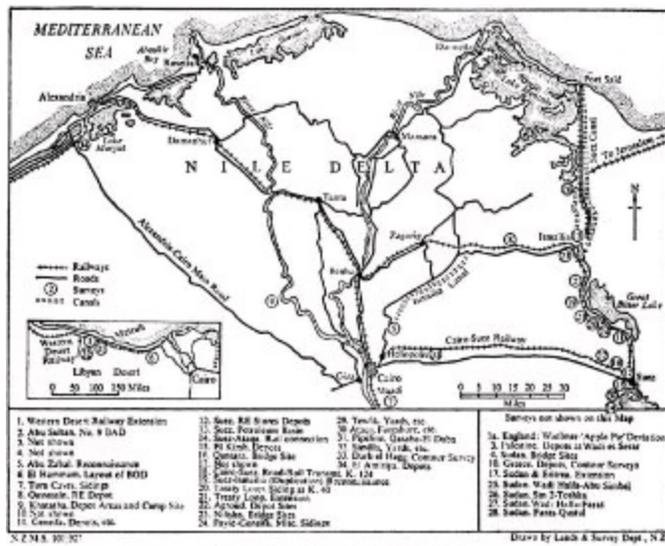
along the Canal.

Shunting in those early days had its moments, as Corporal [Dangerfield](#) <sup>19</sup> remembers:

'The Wogs while working for BTE were not adverse to a little fifth column in off duty hours. Brake slippers, those gadgets which stopped wagons from running away (ESR wagons have no handbrakes) somehow moved from siding roads onto the running lines. When hit with some speed they usually caused a derailment. In the soft sand a derailed wagon or two required considerable time to restore to the track. For this, massive re-railing shoes were used to form platforms for the wagons to ride up until reaching rail level. These also found their way onto the running lines and when acting in reverse the result was disastrous and time-consuming. In the blackout "Where are we" was also a problem. The desert darkness is really dark as you know. Leaving the RE sidings for the docks went something like this. Proceed cautiously until round a curve and going slightly uphill expect to find the trailing points where shunt reversed direction. Proceed quietly down the line counting nearby date palms as you go. Past eleven unevenly spaced trees prepare to stop. Past two more STOP and proceed on foot to facing points approx 20 yards ahead. Facing points left "half cocked" were always good for a derailment as the wily wogs well knew. Proceed cautiously once more with shunters using hand lamps to examine track for wrongly placed brake slippers and rerailing shoes. And onwards to the jettys where irate pongos usually made pointed comment on KIWI slowness.'

Sixteenth Company, still at [Daba](#), watched the [Long Range Desert Group](#), bewhiskered like pirates and flying several kinds of Italian flags, vanish towards [Cairo](#) in a cloud of dust, whereupon they waited lonely and dejected, the last New Zealand formation in the [Western Desert](#), for somebody to remember them. Somebody did remember them eventually and on 28 March they moved to [El Kirsh](#), on the Canal near [Ismailia](#).

At this point mention must be made of Major Packwood's command, 9 Railway Survey Company. The authorised strength, 7 officers and 62 other ranks, was the smallest in the Railway Groups but as surveyors they were the travellers. The difficulty of keeping track of their movements was appreciated by Major Nevins, who answered a query thus:



**surveys made in the Nile Delta**

'You will find 9 Rly. Svy. Coy. rather a difficult unit to deal with as there was only one occasion when the whole company was together from our arrival in Egypt until we went to Palestine in June'42 and then we quickly split up again.'

There were times when the Survey Company was stretched along a two thousand mile line and seldom were they in fewer than three different countries at any one time; sometimes they were in more and a sapper could be writing home from [Eritrea](#), [Sudan](#), [Libya](#), [Iran](#), [Iraq](#), [Palestine](#), [Greece](#), [Transjordan](#), [Syria](#), or [Turkey](#), describing his desert oven at the same time as his cobbler would also be writing home telling of the snow on the mountains.

At that period the development of the various railway systems for military use had scarcely begun, but the Army demands were already quite beyond civilian resources; and as the New Zealand unit was the only Railway Survey Company in the [Middle East](#), it had, until the arrival of Australian and South African units, to explore for, then map and survey nearly all the projects for supplying rail access to the desert depots. This aspect of survey work assumed colossal proportions as enemy ports were captured, lost and recaptured.

It will be recalled that Captain Nevins with 3 Section, 9 Survey Company, had pushed off to Palestine early in October to survey an ammunition depot at Wadi Serar on the line to [Jerusalem](#). An Australian company relieved them a month later, whereupon they made a quick return to [Cairo](#) where another job awaited them.

This time it was in [Greece](#), where the surprised but far from despondent Greeks were mobilising their resources against the Italian invasion and where a small force, code-name Barbarity Force, of [RAF](#) and ancillary troops was preparing to move; 9 Survey Company, the only tried unit available, was to send a section there.

'Before embarking on 13 November 1940, I was briefed by D.D.Tn at G.H.Q.,' writes Captain Nevins. 'The role of the section was to locate, and if necessary construct, the railways to serve as a base depot in the vicinity of [Athens](#). I was told to recce further afield for other suitable depot sites. On arriving in [Athens](#) I was ordered to proceed with location of railways to serve a depot in the Liossia-Menidi area. I was also told to see what I could of other plains in [Attica](#) and also to note any reasonably accessible beaches capable of being worked by barges.

'At that time military assistance to [Greece](#) was confined to the air and army units were only admitted to service the R.A.F. bomber squadrons; RAMC, RASC, RAOC and a small RE component. Troops were to remain in the immediate neighbourhood of [Athens](#) and the German embassy (which flew a flag in company with every other building in [Athens](#) to celebrate each Italian defeat) took considerable interest in our doings.

'Because of the Greeks' fear of offending [Germany](#) my recces had to be done unofficially and with circumspection. I was able to achieve this by an interest in archaeology and examined most of the coast from the vicinity of Chalkis to some 20 miles west of [Corinth](#), and all the plains of [Attica](#) and Boetia.'

Lieutenant [Rushton](#) <sup>20</sup> and five sappers loaded the section transport, one 30-cwt truck, two cars and a motor-bike, on a transport and themselves on HMAS [Sydney](#). They made a fast trip, twenty-two hours, thereby beating Captain Nevins and the main body by some hours, making history by being the first New Zealand troops in [Greece](#), and starting a 'flap' in New Zealand.

Daventry short-wave station announced that some New Zealand troops were in the British force in [Greece](#), but when the home papers asked the Minister of Defence for details they were told that the report was incorrect and that no New Zealanders were in [Greece](#). By this time the cables were running hot with messages, because, being Army troops, 2 NZEF Headquarters knew nothing about 9 Survey Company's

tasks or location but was quite definite that no divisional troops were in that country. Eventually it was announced that fifty-six all ranks of 9 Survey Company were in [Greece](#). Actually there were Captain Nevins, Lieutenant Rushton and 17 sappers.

The advance party was provided by the Greek authorities with a bus which, before it arrived at its destination, a school in Nicopoleos Street, had been completely filled with flowers thrown by a welcoming populace. Nothing happened for a week beyond moving to the New Phaleron Railway hotel, where the sappers had a grand view of the marine parade, took innumerable photos of ancient temples and contrived a lingua franca of Greek and English.

At this time [Germany](#) was not at war with [Greece](#) and the German military attaché and his staff moved freely about the city. So did the Allied troops, who had stringent orders as to the non-belligerent attitude they were to adopt in such bizarre circumstances.

The situation was something like the problems in algebra one used to wrestle with at school:

A is at war with B but not with C; D, who is A's ally against B, is also at war with C; What does D do?

Answer:

D continues the war with B and tries to restrain his language when C passes him in A's streets, D knowing well that C is spying on the movements of both A and D and reporting them to B.

The section, after guessing at what the Greek symbols on the maps might possibly mean, was surveying service sidings for the [RAF](#) at Athenian aerodromes. It was so occupied when [Germany](#) declared war on the little country that was treating the Italian invaders with such disrespect.

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<sup>1</sup> Lt-Col L. A. Lincoln, m.i.d.; [Auckland](#); born [Auckland](#), 14 Sep 1902; civil engineer; OC 18 Army Tps Coy Jul 1940-Jan 1942; [7 Fd Coy](#) Jan-Sep 1942; DCRE No. 8 Works, RE, Sep 1942-Aug 1943; CRE No. 56 Works, RE, Aug 1943-Nov 1944.

<sup>2</sup> Maj C. Langbein, m.i.d.; Wellington; born Nelson, 12 Oct 1894; Public Works Dept engineer; 1 NZEF 1914–19; OC 19 A Tps Coy Aug 1940-Jul 1942; OC NZ Engr Trg Depot 1942–43.

<sup>3</sup> This Survey Company was transferred, before embarkation, to the Artillery as an Artillery Survey Company and changed its title from 12 Railway Survey Company, NZE, to 36 Survey Battery, NZA.

<sup>4</sup> Lt-Col A. H. Sage, OBE, MM, m.i.d.; Wellington; born NZ 1 Dec 1893; railway officer; Auck Regt, 1915–19 (Lt); CO NZ Ry Op Gp Aug 1940-Jun 1943.

<sup>5</sup> Lt-Col R. T. Smith, OBE, ED, m.i.d.; Wellington; born Thames, 4 Jul 1895; civil engineer; 1 NZEF, 1915–18; OC 13 Ry Constr Coy Jun 1940-Dec 1942; CO NZ Ry Const Gp Dec 1942-Jun 1943; CRE Indian Works Unit in India, Burma and Malaya 1944–46.

<sup>6</sup> Maj F. W. Aickin, OBE, ED, m.i.d.; Wellington; born Onehunga, 7 Jul 1894; barrister and solicitor (Law Officer, NZ Govt Rlys); NZE, Sigs Coy, 1914–19 (2 Lt, 1918); OC 16 Ry Op Coy Aug 1940-Jun 1943; past General Manager, NZ Govt Rlys.

<sup>7</sup> Maj G. T. Poole; born NZ 3 Jul 1896; railway clerk; NZ Rifle Bde, 1915–19 (2 Lt, 1919); OC 17 Ry Op Coy 1940–42.

<sup>8</sup> Sgt H. R. Farrell; Taumarunui; born NZ 6 Mar 1911; clerk, NZR.

<sup>9</sup> This party was Lt Marchbanks, Lt D. White (9 Svy Coy), Cpl St. George, L-Cpl Fagan and Spr Wylie. They returned to Cairo on 31 October.

<sup>10</sup> Maj T. H. F. Nevins; Wellington; born NZ 23 Nov 1903; civil engineer.

<sup>11</sup> Maj D. J. B. Halley; Wellington; born Christchurch, 24 May 1906; civil engineer, PWD; OC 9 Ry Svy Coy Apr 1942-Jun 1943; 13 Ry Constr Coy Jun-Nov 1943.

<sup>12</sup> Capt J. H. Macky, m.i.d.; Wellington; born NZ 29 Aug 1913; civil engineer.

<sup>13</sup> Rais, meaning commander, was an accepted term in the command organisation of Egyptian labour and was the equivalent of the term foreman.

<sup>14</sup> Maj R. O. Pearse, MBE; born Levin, 26 Nov 1909; clerk; died 12 Sep 1950.

<sup>15</sup> Similar facilities existed at Mersa Matruh.

<sup>16</sup> Water via the pipeline did not reach Daba until 21 Jan 1941. The line was in limited operation as far as Hammam, 60 miles east, in December 1940.

<sup>17</sup> Capt C. H. B. Bishop; Wellington; born Christchurch, 26 Nov 1908; assistant locomotive engineer.

<sup>18</sup> Not traced.

<sup>19</sup> L-Sgt J. A. Dangerfield, m.i.d.; Upper Hutt; born Christchurch, 3 Dec 1915; railway porter.

<sup>20</sup> Capt G. Rushton; born England, 24 Aug 1907; civil engineer.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## DIVISIONAL ENGINEER UNITS

### *Divisional Engineer Units*

The Italians had made a cautious entry into Egypt but had stopped at [Sidi Barrani](#), where a system of defended camps was established and stores were being accumulated; it is worth mentioning at this point that Egypt had replied to the invasion by breaking off diplomatic relations and then withdrawing its forces to a position 'somewhere east of [Suez](#)' so that they were not available to defend the sacred sands of the [Western Desert](#).

General Wavell had bided his time until reinforcements, actual and potential, permitted him to consider the possibility of chasing the Italians out of Egypt before the build-up at [Sidi Barrani](#) was complete. One of the earlier moves towards the contemplated ejection of the enemy was the transfer of 6 Field Company from [Agamy Beach](#) to [Garawla](#) on 17 October to work on the [Charing Cross- Matruh](#) section of the water pipeline,<sup>21</sup> so that almost simultaneously Kiwi sappers began pushing water along the railway and pulling the pipeline across the desert. The CRE, besides his duties at [Divisional Headquarters](#), found time to make a personal contribution to the embarrassment of the enemy by passing on the tank-hunting drill that had been evolved in England for dealing with the expected German invasion. He writes:

'I had been mixed up with this extempore offensive action in [UK](#) (with Second Echelon) and took up the role at [Baggush](#) to help 4 Ind Div (and 6 Aust Div too) prior to the 1940 offensive. We wanted smoke for blinding the tanks and my Adjutant Capt Max [Carrie](#),<sup>22</sup> a commercial chemist, suggested Chlor-sulphonic acid. We got some from RAF practice bombs, put it in lemonade bottles (beer too tough). Thrown on to a tank they burst, the acid formed a dense white smoke—and Bobs your uncle! In went the tough boys for the "Kill".... Max was offered the job of Director Chemical Warfare for ME but [General Freyberg](#) wouldn't let him go. We were continually asked for engineers for special jobs but few were allowed to go.'

The plans for a limited offensive were almost disrupted by the next Italian

move. Maybe the news was not exciting enough from North Africa and II Duce wanted to keep his newspapers in banner type. At any rate an invasion in the approved Teutonic style was launched (28 October) through [Albania](#) into [Greece](#). The Greeks proved tougher customers than was anticipated, for, in spite of horse-drawn transport and an almost complete lack of modern weapons, they were soon throwing the Italians back into [Albania](#). Sixth Field sappers finished laying the water pipeline a few days before the fighting began (9 December) and were putting the finishing touches to storage tanks (on the 12th) when [Lieutenant-Colonel Clifton](#) arranged a transfer with the newly arrived 19 Army Troops Company, whereupon they took themselves and their desert sores back to Maadi.

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<sup>21</sup> It was many months before both ends of the water pipeline system were connected.

<sup>22</sup> [Maj M. S. Carrie](#), m.i.d.; Hastings; born [Wanganui](#), 18 Apr 1910; research chemist.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 19 ARMY TROOPS COMPANY

### *19 Army Troops Company*

Nineteenth Army Troops Company, being attached to the New Zealand Division, came under the direct control of [Colonel Clifton](#), who prescribed sufficient rifle training to make them reasonable marksmen, in a course of instruction calculated to make them look like soldiers on parade. By 25 October it was considered that the Company—if not scrutinised too closely—might possibly pass inspection, with the result that it found itself parading with the other units of the Third Echelon before General Wavell and Mr Anthony Eden, British Foreign Secretary. Everybody from Major Langbein to the humblest sapper was anxious to make an impression, and in this laudable ambition they certainly succeeded. The CO gave the order to 'Fix bayonets' from the slope and the sappers endeavoured to comply; the devastating display was referred to in places where soldiers gather for months afterwards. Parade-ground brilliance was not 19 Army Troops Company's forte and they were not sorry to leave [Maadi](#) for [Gebel Maryam](#), the 'Hills of Mary', on the west side of [Lake Timsah](#) where there was a salt-water lagoon, and where the Middle East School of Military Engineering had set up a Bridging Wing.

The Company was relieved by 6 Field Company at the end of December and then in turn boated, bridged and swam near [Ismailia](#), until recalled for river-crossing training with 6 Brigade.

Nineteenth Army Troops Company returned to [Maadi](#) but left for [Burbeita](#) a fortnight later. No. 4 Section went ahead to build a camp but the ubiquitous Colonel Boddington found so much for them to do that the main body had to build its own camp. One party had a lucky break and was given a job about which it knew almost nothing but which was carried out in true Kiwi style. It was told off to go to [Alexandria](#) and drive back a convoy of twenty-two trucks, and the fact that few of the men could drive a truck hardly seemed worth mentioning with a few hours in Alex at stake. Several stowaways went to help with advice and they couldn't drive either.

The trucks were taken over at the vehicle depot and by dint of perseverance, plus much clashing of gears, finally rolled away. The hazards of the city streets provided a full measure of thrills but nothing more serious than dented mudguards and damaged bumpers until almost outside Alex, when the leading vehicle shore off the wheel of a Gippo cart piled high with oranges.

Starting a truck is a major operation when it is a matter of trial and error so nobody stopped to ascertain the damage. Vainly the half demented owner plucked at his ragged beard, calling on Allah to wreak vengeance or at least to hurry the Redcaps along. But the convoy was now on the main highway where there were fewer traps for young players. Maybe Allah saw to it that the orange merchant was compensated from some fund administered by BTE Headquarters.

The sappers had hardly settled in when a new and unnerving experience was supplied by Italian planes straddling the area with bombs. Scarcely anyone enjoys the noise of bursting bombs no matter how great the distance between them; the next lot might be closer. The cardinal rule if a reasonably long life is desired in desert warfare is to dig a slit trench before doing anything else, but the newcomers had omitted that precaution. Adequate steps were taken at first light to minimise the danger arising from a recurrence of unwelcome visitations.

The Company was called on for a multitude of duties, for with the Wavell offensive in full swing, [Baggush](#) was a hive of industry; one detachment was kept busy with the unloading and checking of supplies at [Sidi Haneish](#), another was working on an aqueduct at [Burbeita](#); another was helping Workshops Section to get established. Thirty sappers with diesel experience were sent to [Sidi Barrani](#) to salvage abandoned Italian vehicles; a second party was scouring the late battlefield for enemy water-carrying trucks. Sometimes the trucks were found in going order but generally they had to be towed to the repair shop that Bill [Gourlick](#)<sup>23</sup> and Arthur [Roberts](#)<sup>24</sup> had liberated.

Sergeant John [Redpath](#)<sup>25</sup> piloted the convoys of repaired Italian water carts up to [Sollum](#) where Cypriot drivers, under command of an RASC Water Supply Company, took them over. The small one-jetty harbour at [Sollum](#) was already being used for the unloading of stores and water transported by sea from [Alexandria](#).

There was nothing to keep the curious at the jetty, which was also the point where the road left the coast and climbed an escarpment that had now turned north to the coast. The few stone sheds and huts scattered around the jetty marked where Egypt, to all military intents and purposes, ended and the top of the escarpment was practically the beginning of Italian [Libya](#). The [Sollum- Bardia](#) road snaked up the near precipice and passed the white buildings of the Egyptian frontier garrison barracks near the top. The whole area was pitted with caves, a fortunate circumstance because of the air raids and occasional heavy shells from a long-range gun in [Bardia](#). Australian troops were squaring up for an assault on the 17-mile perimeter defences of [Bardia](#) about ten miles inside [Libya](#)—and 20,000 men use a lot of water.

While detachments of 19 Army Troops Company were scouring the late battlefield by day and housing themselves comfortably in deserted Italian ambulances by night, after first partaking from unlimited stores of wines, brandies, liquors and just plain 'plonk', Sappers A. B. [Robinson](#) <sup>26</sup> and Tom [Hick](#), <sup>27</sup> with two crews of seagoing sappers, were operating a naval wing. They had left [Matruh](#) on 22 December as captains in a fleet of two water barges and arrived at [Sollum](#) the following morning, where they were met by an Italian reception committee which, from a very great height, although antiaircraft protection was non-existent, tore large holes in the water of [Sollum](#) harbour with bombs but without doing any material damage.

The job was to ferry water from the supply ships [Eocene](#) and [Myriel](#) and do other ship to shore work. The first assignment was to make a rendezvous east of [Sollum](#) and take on stores. The barges put to sea after last light, loaded up and, navigating by the stars, were returning slowly when the coast was lit up by gunfire. It was only a routine softening up of [Bardia](#), but it was a fine sight from the sea and permitted a quicker landfall.

Two more barges had arrived during the night. They had seen service at [Gallipoli](#) in 1915, were manned by Cypriots under British seamen, and were loaded with oranges and Christmas stores for the troops investing [Bardia](#). The newcomers were moored at the shore end of the wharf, so the Kiwi fleet tied up at the deepwater end and the first Christmas Eve away from home was spent in loading

stores on trucks of 4 RMT Company, which had turned up just before midday.

It was a busy scene; creaking winches on the [Gallipoli](#) barges were delivering nets full of golden oranges to the trucks, the sappers were filling 44-gallon water drums and there was cheery banter between the bargees and the drivers. Nobody noticed seventeen specks in the sky.

An explosion on the deck of a [Gallipoli](#) barge killed a number of Cypriots and the British seaman in charge; five of the RMT drivers were killed and five wounded; a splinter fatally wounded Corporal [Forsyth](#) <sup>28</sup> and killed outright Sapper Bill Burrell, an Australian attached to one of the water barges. A bomb fell on Sergeant Tom Hick's barge, tore through the decking, pierced a water tank but failed to explode.

The skipper of the [Gallipoli](#) barge managed to beach his craft; the dead and wounded were removed and the blood washed off the oranges, later to be thankfully received by the troops in the field who knew nothing of the tragedy behind the delivery of the festive season's delicacies.

In all there were fifty-two casualties. 'Fluge' Forsyth had known that he would not last long, for, before the barges had left [Matruh](#), he had cut out and inscribed a sandstone tombstone for himself. It was taken up by his cobbers and placed on his grave at the foot of the [Sollum](#) escarpment.

The crews were badly shaken by the blast and by the sight of casualties being attended by an MO, who came from somewhere almost as soon as the bombs fell, but the pressure of work permitted no let-up; the dud bomb was fished out of the water tank and the water delivery resumed.

Some 1250 tons of water were put ashore daily until the capture of [Bardia](#) permitted the use of local supplies, but this did not mean the end of the Engineers' naval occasions—on the contrary, as added use was made of [Sollum](#) for the landing of stores, troops, and the embarking of captured Italians.

Reinforcements for the field force were carried in Egyptian owned ships, whose captains declined to sail beyond the Egyptian border. That meant the transshipping of troops at [Sollum](#) Bay into naval vessels for passage first to [Bardia](#) and later to [Tobruk](#) when it fell in Wavell's offensive. For the greater part of January the two

crews, with Sergeant Tom Hick relieved by Sergeant John Redpath, ferried troops from ship to ship.

Meanwhile on 17 December the New Zealand Railway Operating Companies were delighted to read in ROs that, 'Any member of the Company who is the holder of a Mate's or Master's certificate, or who considers he has a sound knowledge of marine navigation, is to submit details of his qualifications and experience to the Orderly Room.'

'Considers' was the operative word and both companies volunteered en masse. Thirty sappers were selected to operate six diesel tugs, and on arrival at [Sollum](#) some of the seafarers were hard put to it to back up the qualifications with which they had presented themselves but managed to bluff their way through. They towed barges around the [Sollum](#) roadstead and unloaded supplies from ships. The air-raid defences were mostly passive—a red warning flag was hoisted at [Sollum](#) and everybody near enough made a dash for the caves; if you were off shore you just hoped for the best. In addition to the seagoing sappers a further two dozen were sent to supervise parties of Palestinians and Cypriots loading and unloading boats and lighters.

[General Freyberg](#) was by now most anxious to train together the two echelons he had managed to get into the same country. Thirteenth Corps was equally anxious to retain the borrowed Kiwi units and there was much letter writing, in which a trace of exasperation is noticeable, before the New Zealanders were released. Nineteenth Army Troops Company, with the exception of the two barge crews, was marched out at the end of January, <sup>29</sup> but before actually starting to move was involved in a situation not usually coming within the orbit of a lines-of-communication unit. German planes were then beginning to operate in North Africa and their tactics were directly opposite to those of the Italians—they came in at a low level preceded by machine-gun bullets and followed by bomb explosions.

The sappers were breaking camp, at [Sidi Barrani](#) on the last evening in January, when the [Sollum](#) with 800 Italian prisoners from [Tobruk](#) was strafed by two planes. From the escarpment above the beach the Company watched the terrified prisoners rush the lifeboats, all of which were swamped and the occupants drowned. The Captain tried to beach the [Sollum](#) but she grounded on a reef near the shore. An

Italian swam through the choppy sea with a line but collapsed on a ledge at the foot of the escarpment. Sergeant Tom [Cookson](#)<sup>30</sup> clambered down and dragged the man to safety. An Egyptian fireman brought another line ashore and the sappers were able to drag heavy ropes up the cliff and tie them to a truck braced between two rocks. The sappers toiled in relays waist deep in seething surf bringing the Italians ashore. Some were swept away in the backwash and others were injured on the rocks. The wounded were brought ashore on a Carley float and passed along a living ladder which was clinging precariously to the cliff. Finally the crew and sixteen guards came off. There were nearly 300 casualties, the majority in the first mad rush for the boats. Throughout the night trucks ferried the wounded to the RAP, where an MO from 215 Field Ambulance gave what attention was necessary. Detachments of [Durham Light Infantry](#) quartered nearby assisted at the cliff face and provided guards, though none of the Italians showed any inclination to wander. Finally blankets were brought from the DLI salvage dump and the shivering prisoners made comfortable. Then 19 Army Troops Company returned to the new camp at [Helwan](#)—all except the two barge crews. Special representations had been made for their retention until relief crews could be trained.

Some of [Hitler's](#) secret weapons—magnetic mines—were being dropped in the [Suez Canal](#) at this time and some were also laid by German planes in [Sollum Bay](#). Minesweepers were sent for but work had to go on until they arrived. Sergeant Redpath was ordered to take a [Jaffa](#) tug in tow and proceed to [Tobruk](#)<sup>31</sup> for water and lightering duties, while Sergeant Robinson continued ferrying Italian prisoners from [Sollum](#) to the transport Farida.

Robinson had a capacity load of 300 aboard when a mine exploded under the barge. The crew of four were killed and only a handful of Italians escaped. The bodies of Robbie and Johnny [Sharpe](#)<sup>32</sup> were recovered and buried at [Sollum](#), but no trace was found of 'Steak' [Dorset](#)<sup>33</sup> or Jim O'Connell<sup>34</sup> who were probably in the engine room at the time.

No. 1 barge reached [Tobruk](#) safely on 3 February, although the sole navigating aid Redpath had was an army ordnance map. [Tobruk](#) harbour was working again, but waves of planes were hourly strafing the shipping at the jetties and at anchor inside the boom and bombers dropped the new 'Tick-tock' mines in the harbour. [Tobruk](#) was not then the most heavily protected port on the North African coast.

On 5 February, at the height of a blinding sandstorm, No. 1 barge was instructed to co-operate with a Navy vessel in lightering prisoners to the SS Singhalese Prince. At the end of the day, with the job completed, it was noticed that the Navy boat was missing. In the morning a few scraps of wreckage told the tale. There was no trace of the crew or of the prisoners.

The next few days were reasonably calm until the Rhoda took the berth vacated by the Singhalese Prince. The French tanker Idina, about to anchor, went up on a mine and the petrol cargo caught fire; the Idina struck the Rhoda amidships and a wave of burning petrol gushed over the deck. Troops had been discharged from the Rhoda during the night but gangs of Australians and Cypriots were working the cargo. Their lighters were capsized and the men thrown into the sea of burning petrol. The New Zealanders helped with the rescue but forty-seven were posted missing or dead.

The railway sappers also took their tugs to [Tobruk](#) and carried on with the same routine as at [Sollum](#), and as at [Sollum](#) they were assisted by the shore party.

The relief crew for Sergeant Redpath's barge arrived during the last week in February but the railway details remained there until the end of May. <sup>35</sup>

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<sup>23</sup> [Spr W. P. Gourlick](#), MM; Mosgiel Junction; born NZ 11 Mar 1905; engineer; p.w. 29 Apr 1941.

<sup>24</sup> [L-Cpl A. T. Roberts](#); [Christchurch](#); born Woodville, 9 May 1919; apprentice electrical engineer.

<sup>25</sup> [Capt J. A. Redpath](#), DCM, MM; [Kerikeri](#); born [Christchurch](#), 2 Feb 1904; company manager; p.w. Jun 1941; escaped Jul 1941; returned to Egypt Oct 1941; wounded and p.w., Antiparos, 17 Feb 1942; escaped, [Italy](#), Sep 1943; served in 'A' Force (MI 9) in [Middle East](#), 1941–45.

<sup>26</sup> [Sgt A. B. Robinson](#), m.i.d.; born NZ 14 Sep 1904; bridge constructor; killed in action 3 Feb 1941.

<sup>27</sup> Sgt T. Hick; London; born England, 3 Jan 1914; miner.

<sup>28</sup> Cpl A. H. Forsyth; born Hooper's Inlet, 15 Jan 1908; enginedriver; killed in action 24 Dec 1940.

<sup>29</sup> The Railway Operating Companies were non-divisional and were not affected.

<sup>30</sup> Sgt T. N. Cookson; born England, 26 Oct 1905; road engineer.

<sup>31</sup> Captured on 22 Jan 1941.

<sup>32</sup> Spr J. N. Sharpe; born England, 9 Jun 1913; carpenter; killed in action 3 Feb 1941.

<sup>33</sup> Spr R. F. Dorset; born NZ 6 Aug 1913; carpenter; killed in action 3 Feb 1941.

<sup>34</sup> Spr J. E. O'Connell; born NZ 1 Aug 1916; enginedriver; killed in action 3 Feb 1941.

<sup>35</sup> Sapper A. G. Figgins was killed and Sapper M. J. Crosby lost at sea in these barge operations.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 5 FIELD PARK COMPANY

### *5 Field Park Company*

Fifth Field Park Company had, together with Divisional Signals, 4 RMT and other specialist troops, been borrowed for Wavell's limited offensive, but beyond guarding the water pipeline and establishing water points and forward dumps at [Charing Cross](#) the Company was not much affected. The British Army seemed to do very well without its assistance. The Italian invasion force was driven out of Egypt by the middle of December, but the greater part of five divisions, with guns, tanks and other material to match, was inside the [Bardia](#) perimeter.

The 5 Field sappers moved to [Sidi Barrani](#) on 30 December and on to the [Sollum](#) area the next day. [Bardia](#) was still holding and the big gun, ' [Bardia Bill](#)', obligingly landed a few shells in the harbour. It was all very breathtaking. [Bardia](#) fell on 5 January and the Company occupied the Egyptian barracks on the top of the [Sollum](#) escarpment. [Fort Capuzzo](#), just inside the Libyan border only a couple of miles farther west, was something that had to be seen to be believed. In the moonlight its white eagle statue in front of the entrance, its massive studded iron door and crenellated walls conjured up visions of Arab sheiks riding milk-white stallions and leading a charge of howling tribesmen in the best tradition of P. C. Wren or Hollywood.

Field Park moved to yet another barracks, at El Habboun just outside [Bardia](#). They were very comfortable quarters— after the fleas were defeated. This was a major operation, for one sapper, with a flair for statistics, claimed two hundred dead in a pincer movement before he gave up counting. Victory was won by the copious spraying of blankets with kerosene or benzine.

The sappers found their first Italian town small but interesting. ' [Bardia](#) is a very pretty little town, even after the [RAF](#) and the Navy have given it such a pasting,' wrote Corporal McVeagh. 'It is situated right over a high cliff which rises almost sheer for about 500 feet out of the sea. It has a tiny little harbour which is really a fiord or a sound as we know it. To get to the harbour you have to follow an

extremely steep and circuitous road down the face of the cliff. One half of the town is bordered by the cliff face and the other is protected by a high stone wall. In olden times the place would be practically impregnable.'

Keeping the forward engineers supplied with stores meant operating a fleet of Italian diesel trucks in addition to the ordinary Company transport. The huge Lancia diesels, the 'CRE Convoy' as it was called, had no self-starters, and swinging the inertia starters was a terrific job needing the strength of a superman. The enormous cranking handle had to spin a heavy flywheel which roared like a giant cream separator. When the din reached a screaming crescendo a lever connected with the crankshaft was pulled and the impetus of the whirling flywheel was supposed to turn the motor over and start it. Generally it did nothing of the sort and the whole back-breaking business had to be repeated.

There were elaborate instructions on the care and maintenance of these trucks but the Italian language was not a New Zealand primary school subject. A worn-out sapper was scratching his head and wondering what all the writing was about when Sapper 'Speed' [Humberstone](#)<sup>36</sup> came by.

'Don't you know what it says?' Speed asked.

'No. Do you?'

'Sure. It says, "Don't be a bloody fool—get a tow".'

It was good advice even if it was not good Italian, and each morning thereafter a petrol-engined truck towed them all to a start. Once going they were most reliable and were about tentonners by our rating.

Another technical problem connected with water supplies is mentioned by Captain Morrison:

' [Bardia](#) Pumps concerned me more than most. The water had to be pumped 1,000 ft up to the escarpment and we had quite a job finding out all the tricks of the very special pumps. We had some new pumps with V8 engines—no sand filters. Orders were to run the pumps no matter what and we did. After eight hours' running the engines were kaput.'

Besides operating the 'CRE Convoy', the water point and the pumping station in [Bardia](#), the Company sought for and removed mines, booby traps and bombs. Field Workshops section was kept flat out putting salvaged equipment into going order again.

The fall of [Tobruk](#) meant that the clearance of [Cyrenaica](#) was not impossible even though only the same two divisions were available. Steps were taken to force the issue and the Kiwi sappers moved into [Tobruk](#) (25 January), but they were there only long enough to get the electrical power supply operating and begin an investigation of the water distillation plant before they were ordered to [Derna](#).

[Derna](#) was a haven after the desert. Whereas [Bardia](#) and [Tobruk](#) were no more than military and naval outposts, [Derna](#) was a lovely little town, if a deserted one. The houses of the officials stood in gardens with trees and palms taking the edge off the tropic sun. Company Headquarters was established in a long low white villa until recently the residence of the local military governor; the sections selected houses with a water supply and chip heaters in the bathrooms. After settling in, the sappers gave themselves a celebration at the governor's expense. Another piano was carried in to supplement the one already in position, and with 'Jitterbug' [Caldwell](#)<sup>37</sup> and 'Urky' [Haswell](#)<sup>38</sup> supplying the music and the governor unknowingly providing the marsala and other liquid refreshment it was quite a party.

The Company, unhappily, did not stay long in [Derna](#) for 6 Australian and 7 Armoured Divisions had collected the last 20,000 Italians east of [Benghazi](#) and the sappers moved to the edge of the escarpment above [Barce](#), where they were given the most glamorous job of the campaign.

The attack had struck inland across the desert plateau south of [Benghazi](#), but [Barce](#) was on the coast in a country of green grass and running water; houses of Italian colonists dotted the plain below and a railway line wriggled out of sight towards [Benghazi](#).

A concrete bridge across a gully had been blown by the departing enemy and 5 Field Park was given the task of rebuilding it. Captain Morrison accepted the assignment with alacrity because no real bridging practice had been obtainable in a country that did not run to rivers.

The Company had no proper bridging equipment nor was any readily available, but the 'Skipper' had a keen eye and a good memory; in very quick time trucks were racing back to [Tobruk](#), a mere couple of hundred miles eastward, where there were abandoned seaplane hangars built with tubular steel scaffolding and bombed buildings which might supply planking timbers. The system of obtaining supplies was unorthodox but effective—truck No. 1 was told to get this and that and to check up with truck No. 2, which was met on the way back and which would alter its loading list accordingly. Truck No. 3 did likewise after conferring with truck No. 2 and so on. The 140-foot viaduct, according to the unit war diary, was completed in three days, a monument to Kiwi ingenuity. Officially that was the position, but actually, when 5 Field Park left for [Helwan](#) on 16 February, the OC plus a car and a 30-cwt Morris load of volunteers were missing. They finished the bridge in thirty-six hours non-stop and then caught the convoy at [Baggush](#) after another twenty hours' non-stop drive.

When the enemy returned to the attack they were no doubt profoundly grateful to the unknown bridge builders but that is how it is in war. General O'Connor was very nice about 5 Field Park Company in a letter he sent to [General Freyberg](#), who passed the compliment on.

Headquarters

13 Corps

15th Feb. 1941.

' Dear Freyberg,

The 5th Field Park Coy, New Zealand Engineers is leaving [Barce](#) tomorrow to rejoin you at [Helwan](#). I want to let you know what good work the unit has done. We had no Corps Troops Field Park Company of our own, and your unit filled the bill most admirably.

'At the start of the campaign, 5th Field Park Coy was at Maaten Bagush operating the water supply. For the attack on Nebeiwa etc, I needed water points further forward, along the [Matruh- Siwa](#) road. There was little enough time for the work, and the fact that two hundred tons of water a day was available at these points was due largely to the efforts of 5th Field Park Coy.

'During the advance which followed the unit has had the task of keeping the forward engineers supplied with the stores they wanted. The distances to be covered were great, and both men and vehicles had a hard task. But the stores required invariably reached the job in time. It was essential to make fullest use of captured Engineer stores, plant and installations; only by so doing could delays be avoided. The 5th Field Park Company was conspicuous in its ability to adapt and run enemy plant and installations.

'The unit's last task has been the building of a bridge east of [Barce](#) to replace the one blown by the Italians. Here again the Field Park Company has shown its ability to improvise speedily and effectively. Their bridge is made with tubular scaffolding obtained from a building in [Tobruk](#).

'My Chief Engineer has formed the highest opinion of Captain W. G. Morrison OC 5th Field Park Company and of his officers and men. Their assistance has been invaluable and I am most grateful that you were able to spare them.

Yours ever,

R. O'; Connor.'

The seven-day journey back to [Cairo](#), with one day spent in vehicle maintenance at [Burbeita](#) oasis, was uneventful—until the convoy was halted by the MPs at the [Daba](#) check post.

All enemy weapons had been called in before departure and so the sappers were merely draped like walking arsenals, but the most difficult object to explain away would be the piano from the governor's residence at [Derna](#). It was to be delivered to the sisters at 2 General Hospital and guile was called for.

Captain Morrison took the Redcap sergeant to the truck where the piano was hidden under a pile of anti-tank mines and the introduction went something like this.

'See those mines there, sergeant? They are full of nitroglycerine and unless we get moving soon and get some fresh air around them, you and I and everyone else around here will be going up in a big bang.'

As a face-saver forty revolvers were confiscated and the convoy dismissed. Safely back in [Helwan](#), the hardy sons of Mars who had helped General O'Connor to chase the Italians out of [Cyrenaica](#) were very patronising to all and sundry until [Colonel Clifton](#) knocked the conceit out of them. He inspected them and said he was very glad to have them back again. (Nearly as nice a bloke as Dick O'Connor.) Then he warned them that they would have to be ready for action again soon and ended:

'This time it will be real war. The show you have been in is nothing more than comic opera compared to what you'll see next.'

Perhaps the CRE was a bit clairvoyant just then.

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<sup>36</sup> [Spr L. H. Humberstone](#), m.i.d.; born NZ 1 Oct 1915; lorry driver.

<sup>37</sup> [Spr G. M. U. Caldwell](#); Dunedin; born NZ 15 Jan 1918; clerk.

<sup>38</sup> [Cpl D. A. Haswell](#); born NZ 27 Feb 1917; clerk; died 23 May 1960.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## CHAPTER 3 – IN THE LEE OF THE STORM

## CHAPTER 3

### *In the Lee of the Storm*

Coincident with the losing of provinces and divisions in [Libya](#), [II Duce's](#) troops were being very roughly handled by the Greeks, who were not without hopes of as complete a victory as had been won in North Africa.

[Hitler](#) at this period was moving diplomatically in the [Balkans](#)—the kind of diplomacy that is backed by armies. Roumania soon saw Teutonic reason and [Bulgaria](#) gave no signs of defiance, so that the situation speedily arose where [Germany](#) was in a position to march against [Greece](#) or [Turkey](#) or [Yugoslavia](#).

Our counter was to offer the Greeks some armoured troops, field artillery and anti-aircraft batteries for the defence of their Bulgarian border, but this was declined on the grounds that such a gesture was more likely to provoke than restrain aggression. Later the Greeks altered their opinion and asked what assistance could be sent in the event of a German attack. General Wavell was ordered to send every available unit to [Greece](#), for early and substantial help could come only from North Africa, where any danger of an enemy counter-offensive, it was thought, could be disregarded. But while this decision was being implemented a German light division was landing in [Tripoli](#).

In spite of having to denude his western front, the completeness of the victory in [Cyrenaica](#) decided General Wavell to allow the operations against Italian East Africa to proceed.

In the meantime there was no lack of employment for the Engineers; there were kit and equipment deficiencies to be made good, some accumulated pay to be disposed of and an infinity of small jobs to be done around the camps. There was also routine training, shifting battalions across the [Nile](#) in night exercises with assault boats and rafts, and the breaking down of infantry prejudices concerning a close acquaintanceship with anti-tank mines.

About the middle of February the tempo began to quicken and stores up to G1098 scale—the war equipment of a unit—became freely available. The issue of tropical kit was proof that wherever the Division was going, and it was clearly going

there soon, the potential battleground was likely to be, climatically at least, very hot. As Lieutenant [Wheeler](#)<sup>1</sup> saw it:

'Orders for equipment and movement came rolling in, cancelling and contradicting each other. Much paper and time might have been saved if a composite order could have been sent us somewhat on these lines—

"At 1600 hours all ranks will be issued with battledress to make them think they are going to a cooler climate.

"At 1800 hours all ranks will be re-issued with shorts to make them think they are going to a hotter climate.

"At 2000 hours all ranks will be issued with solar topees to prove to them that they are going to Hell."

'By 2000 hours all ranks didn't care if they were going to Hell. As a courtesy gesture from Peter Fraser or the King or someone, we had been issued with a bottle of beer per man. This barely touched the sides as it sizzled down our parched throats but it started a fashion and set us on the way to a practical expression of the jubilation that was seething through the camp.'<sup>2</sup>

Pursuant to a directive from Headquarters New Zealand Division, the Engineer units departed from [Cairo](#) and its environs.

'Divisional training will be held in March. The Div. Comd. directs that the exercise be carried out with as much realism as possible. Security measures such as would be adopted for a real Op will be put into effect at once. For instance, orders for the move will be delayed until the last possible moment. Units are being supplied up to G 1098 scale, and will be brought up to WE immediately. Existing camp areas will be completely evacuated. Base kits will be left behind. Only Fd Service kits will be taken. In short the Div. trg is to be regarded as a full rehearsal for active service.'

The Second Echelon, en route from England, arrived at [Port Tewfik](#) on 3 March and entrained for [Helwan](#), where the 'Glamour Boys' of 7 Field Company had about three weeks seeing the sights and tasting the 'juice of Egypt's grape' before they followed the rest of the Division to [Amiriya](#) transit camp.

Eleven days after 7 Field Company had marched into [Helwan](#), 8 Field Company (Major A. R. [Currie](#) <sup>3</sup>), re-embodied after turning itself into 18 and 19 Army Troops Companies, also marched eagerly into [Maadi](#).

It was to take its place as the Division's third field company in the 'exercises' and its rate of equipment up to G1098 was a miracle of ease and celerity. On 5 April the company moved to [Amiriya](#) and loaded its vehicles and equipment on the transport; the following dawn the German troops in [Bulgaria](#) crossed the frontier into [Greece](#); 8 Field Company unloaded its gear and returned profanely to [Cairo](#), this time to [Mena Camp](#), where it remained for the next few months.

Nineteenth Army Troops Company, which was already in [Greece](#), took over the role of 8 Field Company although it was neither equipped nor trained as a field company. The position then was that [Lieutenant-Colonel Clifton](#) had under his command in [Greece](#) a Headquarters, 5 Field Park Company, 6 and 7 Field Companies, and 19 Army Troops Company acting as a field company.

## ***21 Mechanical Equipment Company***

On 30 October 1940 the High Commissioner for the [United Kingdom](#) wrote to the Prime Minister of New Zealand to the effect that, following earlier communications, he had received a letter from the United Kingdom Government stating that as there was not the same experience in England of earthmoving machines as there was in New Zealand, it would be of the greatest assistance if New Zealand could provide the personnel for a mechanical equipment company.

New Zealand was indeed well situated to supply men experienced in the operation of bulldozers, graders, ditchers and draglines, for the Government had been roading large areas of broken country and the use of mechanical equipment had been a big factor in the progress of the development plan. [Britain](#), on the other hand, was a country where highways had been levelled for centuries and where earthmoving machinery was a rarity.

Immediate steps were taken to raise a mechanical equipment company with an authorised strength of a headquarters (3 officers and 8 other ranks), a repair section (1 officer and 22 other ranks) and four working sections (1 officer and 51 other

ranks), in all 8 officers and 234 other ranks.

As with other specialist non-divisional units, military prowess was a secondary consideration; officers were chosen for their engineering qualifications and non-commissioned officers for their all-round experience. The rank and file were quite in accord with the method of choosing their military betters for they were themselves thoroughly of the opinion that soldier training was totally unnecessary for a sapper of 21 Mechanical Equipment Company.

Drill instructors, that hardy race, were broken-hearted after a few turns on the training circuit and 'Bob Semple's Wild Cats' left New Zealand full of good intentions and without much military erudition.

It was not that they did not want to learn; they were just too full of the importance of the gears, levers and lubricants of this or that machine to absorb anything else. That they tried to do the right thing is proved by a story which became a standing joke in 2 NZ Division—a sapper on sentry duty one night in [Trentham](#) recognised another member of the Company approaching a forbidden area and challenged him, 'Halt Higgens! Who goes there?'

Twenty-first Mechanical Equipment Company (Major Tiffen <sup>4</sup>) left New Zealand with the third section of the 4th Reinforcements on 1 February 1941 in the Nieuw Amsterdam, together with 8 Field Company, 18 Army Troops Company and a party of divisional and non-divisional Engineer reinforcements. On arrival at [Bombay](#), because of the situation in the [Red Sea](#)—[Eritrea](#) and Somaliland were still in enemy hands—it was necessary to change into smaller ships which maintained a shuttle service to [Suez](#). Those units not going on straight away went to a transit camp at [Deolali](#) outside [Bombay](#). After six weeks in the transit camp 21 Mechanical Equipment Company arrived at [Port Tewfik](#) on 23 March. The next day the unit marched in to [Maadi](#). The term 'marched in' is military jargon for being taken on strength, but in the most literal meaning of the word the sappers marched in to [Maadi](#) with all their gear on their backs. It was about three miles to their quarters and a soldierly bearing was something they had not acquired. 'Keep up with your three', one, bent like an ambulatory hairpin, was urged.

'I am keeping up with my three,' he answered indignantly.

'Your head might be,' he was told, 'but your backside is here three files behind.'

March and April were busy months in North Africa; they were also busy months in [Greece](#) but our immediate concern is with 21 Mechanical Equipment Company. The new arrivals were going through the usual routine of drawing stores when a party of five sappers under Lieutenant [Bryant](#)<sup>5</sup> was detailed to deliver to and assemble at [Barce](#) several 10 RB shovels and a Le Tourneau roter required urgently for digging anti-tank defences.

The situation in late March was that the frontier in [Cyrenaica](#) was held by bits and pieces of armoured formations, some mounted in Italian tanks which were scarcely mobile owing to the lack of replacements. Ninth Australian Division, less one brigade in [Tobruk](#) without transport, was supporting the armour.

Enemy strength was then known to be building up but no serious movement was expected for at least another month, when Imperial troops and transport would have replaced the formations and the 8000 vehicles that had been sent to [Greece](#).

The enemy did not keep to our timetable and a counter-attack was mounted on 31 March by 5 German Light Armoured Division and two Italian divisions, one armoured and one motorised. It must be admitted that they made a very workmanlike job of restoring [Libya](#) to the Italian Empire, for by 11 April, with the exception of the Aussies and others in [Tobruk](#), we were back again in Egypt.<sup>6</sup>

The equipment was loaded on White 10-ton transporters driven by RASC drivers, and after trouble with the [Cairo](#) overhead tramway wires a routine stop was made at [Matruh](#) for orders and petrol. Lieutenant Bryant takes the tale on:

'The convoy then proceeded towards Solum against a steadily increasing eastward bound stream of traffic which even to the somewhat uninitiated eyes of 21 Mech. Equip. Coy. Section appeared a little odd to say the least, in so far as Air Force, Army and even Navy Detachments were mixed together with such abandon that the men were heard to remark that even the Army couldn't intentionally organise such a conglomeration. ... In view of the original B.T.E. orders the section officer decided to push on to [Bardia](#) which was reached at dusk and on reporting to the Officer Commanding was informed that the equipment was [now] urgently

required in [Tobruk](#) and that the convoy must push on without delay.

'Consequently, having fed and refuelled and issued 5 rounds per man the convoy moved westwards at night without lights on the now empty road, arriving at the defences of [Tobruk](#) to meet a "Halt! Who goes there?" in the early hours of the morning and to be informed that we were either bloody heroes or bloody fools as the road was now cut, which accounted for the rumbling sounds, crossing laterally to the route heard during the night run; on reflection the sentry was right. We were bloody fools.

'Having reached [Tobruk](#) and in view of the [Bardia](#) Commander's orders re extreme urgency a report was made to [Tobruk](#) Fortress Headquarters at 0230 hours to be met with a most encouraging reception and admonition "Go jump in the sea and let a man sleep."

'So, having fulfilled orders the section selected a piece of real estate and settled down for the remainder of the night. The equipment was unloaded and assembled to a background of dive and high level bombing attacks on the Fortress and harbour and subsequently handed over to an RAE <sup>7</sup> Coy for operation.'

The work of assembly took a fortnight whereupon they embarked with Indian troops on the SS Bankura, but air-raid warning signals changed from white to red before they had settled down. It was soon painfully clear that the Bankura was on the target list, for near misses gave her such a list that she had to be beached. The shipwrecked sappers re-embarked on the corvette Southern Cross, survived another attack and reached [Alexandria](#) on 25 April. The engineers with 5 Brigade were having similar experiences between [Greece](#) and [Crete](#) about the same time.

While Lieutenant Bryant's party was undergoing its baptism of fire No. 4 Section (Lieutenant Hendry <sup>8</sup>) had departed to [Matruh](#) with shovels, 'dozers and carry-alls to work on tank traps in case the enemy might venture farther east than the Egyptian border. Another job was the provision of berthage to replace the destroyed [Matruh](#) jetty. A wall of sandbags was built, then, with shovel and dragline, the seaward side of the wall was dredged and the spoil used to provide storage space. Destroyers slipped in after dark, discharged at the improvised wharf and were gone before daybreak.

Lieutenant [Allen](#)<sup>9</sup> moved up to [Sidi Haneish](#) with No. 1 Section which, after learning to share the desert with the asps, chameleons and scorpions, also worked on tank traps.

No. 3 Section (Lieutenant [Hornig](#)<sup>10</sup>) endured a few weeks in the 'bullring' but were rewarded for their sufferings. They went to help on the outer defences of [Alexandria](#) and levelled the far bank of the [Nubariya](#) canal to provide a field of fire for pillboxes being constructed on the near side. They were quartered in Gianaclis, a small Greek community situated in the middle of acres of grapes. The sappers first ate the fruit for breakfast, dinner and tea, and then proceeded to distil the juice thereof. The results varied from awful to hellish.

No. 2 Section (Lieutenant [Hazledine-Barber](#)<sup>11</sup>) did not work as a unit but reinforced the other sections from time to time as well as doing sundry small jobs of their own. Not typical, but true none the less, was the experience of a detachment who were ordered to report to an RE command in [Alexandria](#). Nobody knew why they had come or what to do with them so they lived in [Mustapha Barracks](#) for three happy, uncomplaining weeks, during which time they were reinforced by another party, who also indulged with enthusiasm in the sea bathing and other pleasures that Alex provides so abundantly.

When Nemesis caught up with them they were sent to operate a dragline at [Amiriya](#), where a defensive ditch was being excavated. The sappers claimed that the dragline had originally been offered to Noah during his flood troubles but that he rejected it on the ground that it was out of date. They had dug about half a mile of ditch with their prehistoric implement when new orders came that the ditch wasn't wanted any more and that they were to go on road repair work at [El Alamein](#). Nobody knew where the place was—then.

## ***18 Army Troops Company***

Eighteenth Army Troops Company (Major L. A. Lincoln), with its job in [Fiji](#) under its military belt, left New Zealand with 21 Mechanical Equipment Company and endured stoically the Forget-all-you-learnt-in-New-Zealand-this-is-the-way-you-do-it of the [Maadi](#) instructors on account of the exciting new surroundings.

Their sphere of operations had already been defined as the care and operation of the [Western Desert](#) water-supply system. As has already been outlined, the provision of water into bulk storage in the [Western Desert](#) was partly:

- (a) From wells or aqueducts,
- (b) By pipeline,
- (c) By railway tank car,
- (d) By sea.

A number of different authorities overlapped in this organisation and steps were being taken to simplify the administration so that the Royal Engineers would be responsible for the bulk supply of water to the [Western Desert](#). The RE would be responsible for the quantity moved and for supervising the equipment so that pumps, hoses, water barges, lighters, water ships, and tankage on shore could be interconnected as necessary.

Formations and detachments, including the [RAF](#), were to place their demands for bulk supply on the local RE representative. This officer, if he could not supply from local resources or by pipeline, was to place his demand, in tons, on GHQ, having obtained the agreement of the local commander. If any special type of container was required this was to be stated in the demand.

Those arrangements were, substantially, unaltered at the conclusion of the campaign in North Africa.

After a month's training and the procuring of G1098 stores the Company spread, section by section, over the [Western Desert](#), until by the end of April their locations and duties were:

In [Alexandria](#) E and M Section and Company Headquarters were located at [Mex Camp](#). An idle Italian-owned workshop equipped with the lathes and machinery necessary for the repair of water pumping plants had been taken over and put into operation.

No. 2 Section (Lieutenant [Goodsir](#) <sup>12</sup>) worked from [Amiriya](#) with a detachment at [Burg el Arab](#). They operated and maintained the pipeline and stations from [Gabbary](#) (inclusive) to Hammam (exclusive) and from [Nubariya](#) filtration plant to Abd el Qadir. There were 19 miles of line to patrol on account of the Bedouin practice of

driving spikes into the lead joints whenever they wanted water. The [Burg el Arab](#) detachment found consolation for its isolation through the fact that trains were often diverted to a siding there and it was possible to 'liberate' quantities of [Naafi](#) beer. When the survivors of 19 Army Troops Company returned from [Crete](#) some really satisfying reunions were staged through this circumstance.

No. 1 Section (Lieutenant [Mackersey](#) <sup>13</sup>) detrained at [Daba](#), met up with 16 Railway Operating Company, who gave them a hot meal and some buckets of the precious water they had come to control, and to whom they passed on the latest news from home before moving into three army huts that were to be home for them for the next fourteen months. Their main jobs were the pipeline from Hammam to [Daba](#), the pumping station at [El Alamein](#) and the water point at [Fuka](#), which was supplied by railborne water. Their lack of transport was eased by smart repair work. An Australian truck left unattended after an accident was quickly got into running order, its distinguishing signs obliterated with a new coat of paint suitably embellished with fern leaves. It was recovered through a mischance by its rightful owners many months afterwards.

From the [Burbeita](#) oasis No. 3 Section (Lieutenant [Concher](#) <sup>14</sup>) maintained the aqueducts between there and [Baggush](#), likewise the pipeline from there to [Sidi Haneish](#). They also carried the water supply westward from [Fuka](#) to [Matruh](#).

No. 4 Section (Lieutenant [Wallace](#) <sup>15</sup>) detrained at [Matruh](#) where No. 4 Section, 21 Mechanical Equipment Company, met them with hot bully beef stew before ferrying them in its only truck to their camp about two miles away. They operated the water supply in the area and maintained the pipeline from [Matruh](#) to [Charing Cross](#).

In addition to these pipeline jobs a number of 18 Army Troops Company men, like the 19th, had taken to the sea and were operating water barges about the same time as some of the 19th were driving a railway train in [Greece](#) over a line without a signal system, in the dark without lights, and with an engine whose brakes were not so good; but that is another story.

Major Lincoln was directed to take over two water barges, including the provision of crews and maintenance. They were lying in [Alexandria](#) harbour, stank

exceedingly of Egyptian crew and had engines that would not go. Sufficient sappers were found in the Company who had marine diesel experience to operate the fleet and recondition the engines. The seagoing sappers were then given a short training course in compass work, coastal navigation and signalling, whereupon they fulfilled the same functions as 19 Army Troops Company had done earlier in the year.

## *Railway Units*

Tenth Railway Construction Company, which, it will be remembered, left the [Western Desert](#) in February for [Qassassin](#)<sup>16</sup> (where, following surveys by 9 Railway Survey Company, there was platelaying and formation work at [El Firdan](#), [Tel el Kebir](#) and [El Kirsh](#)) did not remain undisturbed for long.

No. 2 Section was warned to stand by on a day's notice to move to the [Sudan](#), where Lieutenant Marchbanks was to build a bridge across the Gash River which divides the [Sudan](#) from [Eritrea](#). The Italians had got as far as putting in the concrete foundations for the piers of a bridge at [Tessenei](#) and the job was to finish what the Italians had begun.

The campaign against the Italian East African army was going according to plan; the South Africans had captured [Addis Ababa](#), the capital of [Abyssinia](#), and two Indian divisions were attacking the natural stronghold of [Keren](#), protecting [Asmara](#), the enemy capital of [Eritrea](#). The troops were supplied through [Kassala](#) and the [Sudan](#) Railway Department had, with civilian labour, built a line from [Kassala](#) to [Tessenei](#), a distance of about 40 miles. The Gash was dry until the rainy season, June to December, and a temporary line crossed the dry riverbed, then trucks hauled supplies along an Italian built road from the river to [Agordat](#), which was the beginning of another enemy railway line to [Asmara](#).

The Army was to build the bridge across the Gash and extend the line from the river to [Agordat](#)—before the rainy season.

The fifty-strong section left [Qassassin](#) on 6 March by train through the [Nile](#) valley to Upper Egypt. At [Shallal](#), the southern terminus, they changed to river boat and ploughed along the lake formed by the Aswan dam. Two days of stewing in an oppressive heat brought them to [Wadi Halfa](#), the northern terminal of the [Sudan](#)

railway system and the home of Kipling's Fuzzy Wuzzy who 'broke a British square'.

Another two days of train travel across the searing Nubian desert, a smooth grey ocean dotted with islands of crumbling rock, landed the sappers in [Kassala](#).

Major Halley and twenty sappers of the ubiquitous 9 Railway Survey Company <sup>17</sup> had preceded the new arrivals by about a fortnight and were surveying the proposed line from the [Tessenei](#) bridge site to [Agordat](#). They were doing themselves fairly well and had taken over stone houses previously occupied by Italian public works engineers. They started work at 5 a.m. with Dinka natives cutting their lines with wicked long swords which appeared as dear to them as the kukri to the Gurkha. Other characteristics of the Dinkas were the great crops of fuzzy black tresses, which hung in ringlets down their shoulders, and the long wooden forks carried like a comb so that they could have a scratch every now and then. Work ceased at midday when the heat was unbearable, and lunch was followed by an Eritrean siesta, long hours of wakeful, restless sweating. Late in the afternoon the more energetic went shooting gazelle, buck or guineafowl, while the others persevered with the siesta. In the evenings the sappers sat on the steps of their stone house and watched the lights of convoys threading through the mountain passes with supplies for the troops preparing to storm [Keren](#). When it was quite dark they made themselves homesick by looking across the mountain tops, where low in the sky hung the Southern Cross.

The bridge builders went on to [Tessenei](#) and looked the job over. They saw an empty riverbed with heavy scrub along its banks, hundreds of bright-coloured birds above the trees and monkeys in untold numbers in their branches.

From the [Kassala](#) end the bridge spans were one 55 ft, five 50 ft and two 40 ft, a total length of 385 ft. These spans were fixed by the concrete foundations already put in position by the Italians, but the steel built-up girders sent down from Egypt would not fit these measurements and had to be adapted on the job.

Lieutenant Marchbanks wrote later:

'We were always short of Equipment but managed to get hold of an Italian electric welding set, gas cutting torches and compressors. About 1000 cubic yards of concrete was poured and for this we had only two ? c. yd mixers. Total weight of steel handled was about 1000 tons with a heaviest lift of 10 tons. We were fortunate

in being able to borrow two caterpillar drag lines from the [Sudan](#) Rlys for handling the girders.

'As an example of the way we had to improvise, 1200 ½ and ? [in.] dia. holes had to be drilled in the steel by hand ratchet drills and over 1000 hook bolts for holding the sleepers to the girders had to be forged and threaded.'

The party worked for a month on formation and culverting until material came down from Egypt. The first concrete was poured on 14 April and the first train ran over the bridge on 28 May. Lieutenant Marchbanks was evacuated to hospital a fortnight before the bridge was completed, leaving Sergeant [Keller](#)<sup>18</sup> in charge. The sappers did not rejoin their unit until the end of June.

Tenth Railway Construction Company lost another 65 all ranks to a composite Operating and Construction Company being assembled to proceed, under the command of Major Smith, to [Greece](#). The rest of the men were provided by 13 Company (132 all ranks) and 16 Company (77 all ranks).<sup>19</sup>

The selected sappers assembled at [El Firdan](#), where they were issued with tropical kit and began a concentrated course of infantry training. It did not last long.

Further instructions arrived that administration would be simplified if all constructional people were drawn from one unit, and as 10 Company already had one section detached, 13 Company would be withdrawn and 10 Company would supply all the construction element. And the new company would assemble at [Qassassin](#).

Under the new plan 7 officers, 262 other ranks, 11 lorries, 4 motor-cycles and 57 tons of equipment were assembled, with orders to be ready to move within twenty-four hours as from 25 March. An advanced guard of eleven drivers commanded by Sergeant Jack [Molloy](#)<sup>20</sup> left with the gear on the 29th and the sappers were to follow the next day; they route-marched and machine-gun drilled until 3 April, when they were told that they were beyond doubt leaving within forty-eight hours; in the morning the departure was postponed indefinitely.

Tenth Company detail was to stand by and 16 Company detail was to go to [Amiriya](#) and work on the extensive military sidings there. On 14 April 10 Company

detail was 'definitely embarking' the next day—it got as far as loading rations on a train and striking camp before the order was countermanded and camp was unstruck.

The sappers really left [Qassassin](#) a couple of evenings later, this time in trucks, but a Don R caught them within two hours and the column halted at [Tahag](#). It stayed halted there for a week, when the now thoroughly demoralised detail was told that it was really and truly on its way—back to the [Western Desert](#). But there was one more blow to come: new equipment had been drawn to replace that loaded on the transport and shipped to [Greece](#), but it had come back again and was found lying on a wharf at [Port Said](#).<sup>21</sup> The new equipment was to be handed back forthwith and the old gear taken on charge again. New words were added to the English language and the sappers' vocabulary grew in strength and vigour.

This apparently irresponsible conduct was of course partly on account of the situation in [Greece](#), where the campaign was going far from well, and partly because of the enemy counter-attack in the [Western Desert](#).

In the meantime the balance of 16 Railway Operating Company had arrived at [El Kirsh](#) to take over the duties of 17 Company, who unknown to themselves were shortly to move to Palestine; on 7 April they were hotfooting it back to [Daba](#). Major Aickin had been informed that if the enemy attack in [Cyrenaica](#) was not stopped he might have to operate the whole 200 miles of railway from [Amiriya](#) to [Matruh](#); he was to make his headquarters at [Daba](#) and to plan on the assumption that communications would fail and that he would be out of touch with his section at [Amiriya](#). Major Aickin could muster only 116 men at the time so he had received a fair-sized job; it was added to materially, as he explains:

'That night (8th) about 6.30 o'clock, a British Major who held the high-sounding title of Town Major (though his domain was merely a large chunk of desert, a few water wells and numerous latrines for the cleanliness of which he was held responsible) came into our mess and read us a signal. It appeared that the tiny force representing the then strength of the 16th, a few bakers of the RASC field bakery and less than a dozen men of the Movement Control staff were the garrison of [Daba](#). There were no troops behind us all the way to [Alexandria](#) while up forward there was only a small garrison at [Mersa Matruh](#) and nothing much in the way of troops or

armour in the desert west of there.... We had no wire, no minefields, no artillery and we had not had a tremendous amount of practice with our rifles. We had an anti-tank rifle which temporarily incapacitated the firer at every shot, plus three brens and a lewis gun.

'The Town Major described our role in terms that gave us freedom of movement and freedom of decision. What he said was, "You'd better put some men over at the cross roads or somewhere. Send out a patrol or two on a truck or something, with bren guns or something of that sort; anyhow you are supposed to do something." The Town Major was in too much of a hurry to have a whiskey or something as he had to go and organise the bakehouse in depth or something.'

Without more ado 16 Railway Operating Company, the whole 116 of them, set about preparing to receive General Rommel, his two Italian divisions and his 5 German Light Armoured Division, either one at a time or all together. They dug trenches and built field works; they acquired a distaste for sleep in order to complete their defences and carry out their train-running shifts more or less continuously. They were assisted in staying awake by the weight and frequency of enemy air raids.

The Company strength was increased by the return of men from leave, and of another party that had been detailed but which did not go to [Eritrea](#), and the defence works grew in complexity.

Little by little the flap died down. The Australian and British force in [Tobruk](#) was a thorn in the side of the enemy communication system and there was no invasion of Egypt.

Tenth Company returned to the [Western Desert](#) on 2 May and spread from [Daba](#) to [Matruh](#) on emergency repair work; by night they endured air raids and by day they repaired the damage.

Thirteenth Company remained in the Canal Zone, where its main work was at [Abu Sultan](#) constructing new spurs in the Ammunition Depot, the laying of depot tracks at [Geneifa](#) and [Amiriya](#), and a bridge over the [Sweetwater Canal](#) to the wharf. By and large it was a pretty poor show; the food was not good and meal hours did not suit; the heat was trying, for at 116 in the shade steel rails could not be touched with bare hands; furthermore the work was rushed and the native labour more than

usually poor.

## *The Forestry Group*

Fourteenth Forestry Company found that its billets in the stables of [Grittleton House, Grittleton, Wilts.](#), although a very imposing postal address, were without heat or light, and a stable without heat or light in the middle of an English winter is not the acme of comfort. There were other drawbacks; the cookhouse lacked a stove, there were no showers, drying rooms, telephone or bathing facilities; the latrines were located in the main stable yard next to the sergeants' mess. The men's mess-room, lately the coach house, was cold and dark—there were radiators but the boiler was useless and endeavours to procure another one were quite fruitless.

The remedying of these inadequacies was a slow and tedious business, for munitions and military equipment were being manufactured to the exclusion of everything else and hundreds of thousands of men were being brought from under canvas into winter quarters.

Improvements were gradual and sporadic. Early in December twenty coal-burning stoves arrived and were installed, then nine bedrooms and the servants' hall at [Grittleton House](#) were requisitioned, permitting sixty-two sappers to move out of the stables. Other amenities had to wait the passing to and fro of sundry letters to and from sundry authorities, who first refused permission to carry out repairs unless they were done by civilian contractors. Eventually the sappers were permitted to do sufficient plumbing and electrical work themselves to make their stables tolerably comfortable. The officers, for whom there was no provision whatever, were billeted at the Rectory and had their meals at the Red Lion Inn close by. Civilian kindness and hospitality were immediate and widespread and helped to take the edge off the acute discomfort of life in the [Grittleton House](#) stables.

Fifteenth Forestry Company had more luck and was billeted in [Langrish House, Langrish, Hants.](#)

Both units after disembarkation leave did a month's solid training under instructors lent by Southern Command. The sappers got on very well with their instructors, though one of the favourite indoor pastimes was wondering what a nice

quiet day's work would feel like.

The intention was for each company, with the help of labour supplied by civilian pioneer units, to operate three mills. Eleventh Company was operating [Hailey Wood](#) and [Overley Wood](#) and was building, as fast as the erratic supply of parts would permit, its third mill at Bowood. Unlike the English-type mills, Bowood and the others to be erected by the Forestry Group were of New Zealand design and in accordance with plans drawn up by Lieutenants [Tunncliffe](#)<sup>22</sup> and [King](#).<sup>23</sup> Standard New Zealand features absent from the English mills were power feeds for the breaking-down bench, sawdust conveyors and a power goose saw, while the unsatisfactory push bench was discarded for a return-feed breast bench.

Fifteenth Company moved half its strength to [Arundel](#) in [Sussex](#), where two mills known as East and West [Arundel](#) were taken over from civilians. The rest of the Company built its third mill at Basing Park forest, [Langrish](#), and commenced cutting on 10 February.

Fourteenth Company built a mill at [Grittleton](#) which put its first log through on 31 January, relieved 11 Company for its ten-day drill period, detailed groups of men for urgent felling jobs around landing grounds and detached other parties for felling beech urgently needed for rifle butts. The War Office had approached the Ministry of Supply for a nation-wide effort to ensure the cutting of this timber before April when the sap began to rise. When cutting was discontinued over 2500 beech trees had been felled by New Zealand detachments in five weeks.

Reference has been made to the fact that the Forestry Group was subject to control by both the Forestry Division of the War Office and the Ministry of Supply, which did not make for smooth running and was discontinued in February, when home-grown timber came under direct control of the Ministry of Supply.

Colonel Elliott's letter to the Military Secretary sent on 21 February is revealing:

`... The supply of equipment has recently rather improved but remains far from plentiful. The location of operations is widespread and administration, from the military point of view, made rather difficult, in that whenever a unit is divided effective operative personnel tend to become more and more involved in administrative duties. Positions of strange contradictions occasionally arise when the

requirements of the Army vary from the requirements of the Ministry of Supply. I more than once on such occasions have sat back and refused to move until I have an order from the Army, pointing out at the same time, politely I trust, but very definitely that I am primarily a soldier and will obey orders from one place only—that place being the Army.'

Throughout February and March felling and cutting beech was first priority: 11 Company had a party felling at Winchester and 15 Company's [Langrish](#) mill was cutting beechwood; 15th was felling at Castle Combe, also at Gatcombe Hill, Whitegate and [Parsonage Wood](#) plantations, and in addition one officer and thirty other ranks were operating in Dropmore Wood. Bucks.

Throughout the winter sappers had been inclined to be critical at the apparent uselessness of working at great discomfort and against time to produce timber which nobody seemed to want, but this matter was brought into correct perspective by a memo from the Director of the Home Grown Timber Production Department pointing out the urgent necessity of the work on which the Forestry companies were engaged and the reasons for the large stocks being accumulated at the mills. In the Battle of the [Atlantic](#) one of the largest items imported was timber; and the reduction of the demands on shipping space was of vital importance. A certain amount of stock had to be reserved for national emergencies at home or where the armies were operating abroad. To date stock, largely imported, had been stacked at the various docks, but owing to the air raids it had been necessary to remove those stocks and use them. It was necessary to replace them with home-grown timber for just such another emergency. It was a reasonable explanation and henceforth the output grew appreciably.

March also saw the bushmen given an operational role in the event of invasion, still considered a possibility with the German military machine stalled for want of opponents not separated by a sea lane.

The decision was taken by the CRE, South Midland Area and Southern Command, that if the occasion demanded 11 and 14 Companies would form a mobile column for the defence of Gloucestershire airfields and would deal with parachute landings inside the area bounded by Northleach, [Cirencester](#), Stroud and Andoversford. As 15 Company was in a different military area and the [Arundel](#)

detachment in a different Command, they were integrated into the local defence plans. Rifles, of which only twenty were held by each company for guards and pickets, were to be made a 100 per cent issue. The sappers were enthusiastic about a scheme which converted them, in case of necessity, into fighting troops, although they were quick to point out that until the rifles arrived [Hitler](#) would have to give reasonable notice of his intention to attack in their area.

During this period, which might be called the running-in of the New Zealand Forestry Group, there were some changes in command. [Captain O. Jones](#) asked to be relieved of command of 14 Company on transfer to the [RAF](#); Sergeant [Chandler](#) <sup>24</sup> of 11 Company was commissioned and transferred to 15 Company and most of the junior officers were changed from their original commands; Captain [Thomas](#) <sup>25</sup> took command of 14 Company. Rugby footballers were withdrawn from circulation to train for a projected tour of Wales. [Hailey Wood](#) mill's output for the month was a [United Kingdom](#) record (95,244 super. feet); [Grittleton](#) mill broke the record for a week's production; [Langrish](#) mill, still lacking a yard tramway, put up impressive figures. Both [Arundel](#) mills lost time through floods, but in spite of these and more technical hitches the seven New Zealand mills produced 67,000 cubic feet of timber and the total output passed the million cubic feet mark.

Spring passed into summer. Canteens were established and gardens, tended by sappers, provided more than adequate supplies of fresh vegetables. Guards of honour were supplied for War Weapons Week at Salisbury, [Chippenham](#), [Arundel](#) and Littlehampton, and for Mr Jordan at [Calne](#). The 14th Company detachment that was to operate a mill being built by civilians at Savernake forest, near [Marlborough](#), moved into quarters at [Burbage](#) and commenced felling a backlog of timber. Eventually the company was asked to finish the building itself. The erection of this mill had been a classic in delay and muddle until the Kiwis took over, when it was reduced to delay waiting for essential parts. Savernake began cutting on 23 July.

Bowood mill, changing from beech to Douglas fir, one week turned out 4000 cubic feet, a record, then went on to better it the next week by another 580 cubic feet. The Bowood average of 3800 cubic feet for the four-weekly period of April was a complete answer to the English critics of the New Zealand type mill. At its peak in supply and operation this mill was cutting 117 cubic feet an hour, a figure never

before approached by civilian or service timber men in the [United Kingdom](#).

The withdrawal of 93 Alien Pioneer Company from 11 Company meant that without this unskilled labour, even if its quality was poor, the Company could not operate three mills. The [Calne](#) detachment was accordingly moved to [Cirencester](#) and a detachment of 14 Company moved to [Grittleton](#) to work Bowood.

The outstanding features of June were not mill work or forestry. Her Majesty the Queen Mother (Queen Mary) visited 14 Company at [Grittleton](#) and took tea with the officers and representatives of the rank and file. There was a sequel which the diarist of 14 Company describes:

'The Queen Mother returned the compliment and the Duchess of Beaufort <sup>26</sup> gave tea to the men and the Queen Mother gave tea to Maj Thomas and Lt [Austin](#). <sup>27</sup> The Queen allowed the men to attend the show with their coats off. Only some availed themselves of this favour and after the show the Queen was amused to hear that the others couldn't because had they done so they would have been down to the buff.'

A mobile column formed by 11 and 14 Companies performed an exercise on 15 June which included the defence of an airfield. Further recourse to the 14 Company diarist provides the real flavour of the event:

'An exercise was carried out at Aston Downs aerodrome, the 14th and 11th Coys being given the job of attacking and retaking the aerodrome in the hands of the enemy. Dive bombers took part and a very realistic show took place and it should have been of immense help in showing to our troops their complete lack of training and knowledge in modern warfare. The objective was reached only because blanks were used.'

All troops, except essential guards, of the New Zealand Forestry Group were concentrated at Barton Stacy camp, Hants., on 19 June for the ten-day training period. During the training they were inspected by Brigadier [Inglis](#), <sup>28</sup> who gave a short talk on the [Crete](#) campaign. Even before the Brigadier had told them something of the fighting and evacuation of [Crete](#), sufficient news had been released about both [Greece](#) and [Crete](#) to start a stream of applications for transfers to a first-line unit. Colonel Elliott wrote (9 June) to the Military Secretary, [2 NZEF](#), thus:

'Work continues here much on the same lines working through War Office with the Ministry of Supply. Our work appears to give satisfaction.... Discipline is difficult. 99 percent of the men and officers too wish to rejoin—or should I say join?—the Division and I can only hope that my personal note to the GOC asking him to call for us will bear some fruit. England may be attacked of course and we may have our chance but wish to get out with the New Zealand troops and be with the Division and more directly controlled operationally by the GOC. Applications to me for transfer to [Middle East](#) to other units are innumerable.'

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<sup>1</sup> [Lt C. M. Wheeler](#); [Singapore](#); born NZ 28 Dec 1914; civil engineer; wounded 25 Jun 1942.

<sup>2</sup> [Kalimera Kiwi](#), p. 28.

<sup>3</sup> [Lt-Col A. R. Currie](#), DSO, OBE; [Wellington](#); born [Napier](#), 12 Nov 1910; military engineer; OC [8 Fd Coy](#) Oct 1940-Jul 1942; CO NZ Engr Trg Depot Apr-Jul 1943; OC [7 Fd Coy](#) Jul-Nov 1943; three times wounded; Director, Fortifications and Works, Army HQ, 1946–49; Chief Engineer, NZ Army, 1951–60.

<sup>4</sup> Maj J. H. Tiffen, m.i.d.; [Wanganui](#); born [Gisborne](#), 15 Mar 1903; civil engineer (British Colonial Service, [Fiji](#)); OC [21 Mech Equip Coy](#) Nov 1940–Nov 1943.

<sup>5</sup> [Capt K. A. Bryant](#); [Lower Hutt](#); born [Petone](#), 30 Dec 1916; mechanical draughtsman.

<sup>6</sup> Including the detachment of 16 Ry Op Coy sappers working the [Benghazi-Barce](#) trains.

<sup>7</sup> Royal Australian Engineers.

<sup>8</sup> [Capt E. L. Hendry](#); [Wellington](#); born [NSW](#) 1 Feb 1901; engineer.

<sup>9</sup> Capt A. F. Allen, m.i.d.; born NZ 19 Nov 1909; civil engineer; killed in action 18 Feb 1944.

<sup>10</sup> Capt C. B. Hornig; born NZ 22 Nov 1913; civil engineer; wounded 28 Mar 1942; killed in action 6 Mar 1944.

<sup>11</sup> Capt E. Hazledine-Barber, m.i.d.; Melville, Hamilton; born England, 3 Jul 1903; county engineer.

<sup>12</sup> Maj J. A. Goodsir, MC; born NZ 10 Oct 1907; civil engineer; wounded 20 Nov 1943.

<sup>13</sup> Lt C. A. Mackersey; Havelock North; born Masterton, 2 May 1900; electrical engineer, NZR.

<sup>14</sup> Maj J. R. Concher; Wellington; born NZ 14 Jul 1908; civil engineer.

<sup>15</sup> Maj J. B. Wallace, MBE; Papatoetoe; born NZ 28 Jan 1914; civil engineer.

<sup>17</sup> At that period 9 Ry Svy Coy was spread along a 2000-mile front with one third of its strength in [Eritrea](#), one third on the [Suez Canal](#) and one third in [Greece](#).

<sup>18</sup> [Capt A. A. Keller](#), MC; born NZ 8 Oct 1917; engineer cadet; wounded 19 Apr 1945; died [Rotorua](#), 24 May 1956.

<sup>19</sup> In addition No. 3 Section was away for some weeks at [Haifa](#) working on locomotives and rolling stock.

<sup>20</sup> [Sgt B. J. Molloy](#); born [Ireland](#), 11 Sep 1905; plant foreman.

<sup>21</sup> [Sgt Molloy's](#) party landed and reached [Athens](#) in its own trucks on 11 April and was employed carrying troops from the docks to their camps, and then in the transport of wounded from train to hospital ship. It was evacuated to [Crete](#) on 27–28 April and on 16 May was again evacuated to Egypt. Sapper L. E. Fischer went missing in [Greece](#) and was later reported PW, the Company's first casualty.

<sup>22</sup> [Maj K. O. Tunncliffe](#), MBE; Edgecumbe, Bay of Plenty; born Hukanui, 22 Jul 1904; sawmill owner; OC 14 Forestry Coy Jul-Aug 1944.

<sup>23</sup> [Capt K. W. King](#); [Whangarei](#); born NZ 12 May 1913; civil engineer.

<sup>24</sup> [Lt C. H. Chandler](#); Reefton; born Reefton, 14 Nov 1910; logging contractor and sawmiller.

<sup>25</sup> [Maj D. V. Thomas](#), OBE; Wairoa; born [Ashburton](#), 19 Jun 1897; farmer and sawmiller; 1 NZEF, 1917 (Cpl); Lt 2/34 Sikh Pioneers, 1919; OC 14 Forestry Coy 1941–44.

<sup>26</sup> Lady-in-waiting to Her Majesty.

<sup>27</sup> Capt W. Austin; Christchurch; born NZ 12 May 1893; forest foreman.

<sup>28</sup> Maj-Gen L. M. Inglis, CB, CBE, DSO and bar, MC, m.i.d., MC (Gk); Hamilton; born Mosgiel, 16 May 1894; barrister and solicitor; NZ Rifle Bde and MG Bn 1915–19; CO 27 (MG) Bn Jan-Aug 1940; comd 4 Inf Bde 1941–42, and 4 Armd Bde 1942–44; GOC 2 NZ Div 27 Jun–16 Aug 1942, 6 Jun-31 Jul 1943; Chief Judge of the Control Commission Supreme Court in British Zone of Occupation, Germany, 1947–50; Stipendiary Magistrate.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## [SECTION]

Coincident with the losing of provinces and divisions in [Libya](#), [II Duce's](#) troops were being very roughly handled by the Greeks, who were not without hopes of as complete a victory as had been won in North Africa.

[Hitler](#) at this period was moving diplomatically in the [Balkans](#)—the kind of diplomacy that is backed by armies. Roumania soon saw Teutonic reason and [Bulgaria](#) gave no signs of defiance, so that the situation speedily arose where [Germany](#) was in a position to march against [Greece](#) or [Turkey](#) or [Yugoslavia](#).

Our counter was to offer the Greeks some armoured troops, field artillery and anti-aircraft batteries for the defence of their Bulgarian border, but this was declined on the grounds that such a gesture was more likely to provoke than restrain aggression. Later the Greeks altered their opinion and asked what assistance could be sent in the event of a German attack. General Wavell was ordered to send every available unit to [Greece](#), for early and substantial help could come only from North Africa, where any danger of an enemy counter-offensive, it was thought, could be disregarded. But while this decision was being implemented a German light division was landing in [Tripoli](#).

In spite of having to denude his western front, the completeness of the victory in [Cyrenaica](#) decided General Wavell to allow the operations against Italian East Africa to proceed.

In the meantime there was no lack of employment for the Engineers; there were kit and equipment deficiencies to be made good, some accumulated pay to be disposed of and an infinity of small jobs to be done around the camps. There was also routine training, shifting battalions across the [Nile](#) in night exercises with assault boats and rafts, and the breaking down of infantry prejudices concerning a close acquaintanceship with anti-tank mines.

About the middle of February the tempo began to quicken and stores up to G1098 scale—the war equipment of a unit—became freely available. The issue of

tropical kit was proof that wherever the Division was going, and it was clearly going there soon, the potential battleground was likely to be, climatically at least, very hot. As Lieutenant [Wheeler](#)<sup>1</sup> saw it:

‘Orders for equipment and movement came rolling in, cancelling and contradicting each other. Much paper and time might have been saved if a composite order could have been sent us somewhat on these lines—

“At 1600 hours all ranks will be issued with battledress to make them think they are going to a cooler climate.

“At 1800 hours all ranks will be re-issued with shorts to make them think they are going to a hotter climate.

“At 2000 hours all ranks will be issued with solar topees to prove to them that they are going to Hell.”

‘By 2000 hours all ranks didn't care if they were going to Hell. As a courtesy gesture from Peter Fraser or the King or someone, we had been issued with a bottle of beer per man. This barely touched the sides as it sizzled down our parched throats but it started a fashion and set us on the way to a practical expression of the jubilation that was seething through the camp.’<sup>2</sup>

Pursuant to a directive from Headquarters New Zealand Division, the Engineer units departed from [Cairo](#) and its environs.

‘Divisional training will be held in March. The Div. Comd. directs that the exercise be carried out with as much realism as possible. Security measures such as would be adopted for a real Op will be put into effect at once. For instance, orders for the move will be delayed until the last possible moment. Units are being supplied up to G 1098 scale, and will be brought up to WE immediately. Existing camp areas will be completely evacuated. Base kits will be left behind. Only Fd Service kits will be taken. In short the Div. trg is to be regarded as a full rehearsal for active service.’

The Second Echelon, en route from England, arrived at [Port Tewfik](#) on 3 March and entrained for [Helwan](#), where the ‘Glamour Boys’ of 7 Field Company had about three weeks seeing the sights and tasting the ‘juice of Egypt's grape’ before they

followed the rest of the Division to [Amiriya](#) transit camp.

Eleven days after 7 Field Company had marched into [Helwan](#), 8 Field Company (Major A. R. [Currie](#)<sup>3</sup>), re-embodied after turning itself into 18 and 19 Army Troops Companies, also marched eagerly into [Maadi](#).

It was to take its place as the Division's third field company in the 'exercises' and its rate of equipment up to G1098 was a miracle of ease and celerity. On 5 April the company moved to [Amiriya](#) and loaded its vehicles and equipment on the transport; the following dawn the German troops in [Bulgaria](#) crossed the frontier into [Greece](#); 8 Field Company unloaded its gear and returned profanely to [Cairo](#), this time to [Mena Camp](#), where it remained for the next few months.

Nineteenth Army Troops Company, which was already in [Greece](#), took over the role of 8 Field Company although it was neither equipped nor trained as a field company. The position then was that [Lieutenant-Colonel Clifton](#) had under his command in [Greece](#) a Headquarters, 5 Field Park Company, 6 and 7 Field Companies, and 19 Army Troops Company acting as a field company.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 21 MECHANICAL EQUIPMENT COMPANY

### *21 Mechanical Equipment Company*

On 30 October 1940 the High Commissioner for the [United Kingdom](#) wrote to the Prime Minister of New Zealand to the effect that, following earlier communications, he had received a letter from the United Kingdom Government stating that as there was not the same experience in England of earthmoving machines as there was in New Zealand, it would be of the greatest assistance if New Zealand could provide the personnel for a mechanical equipment company.

New Zealand was indeed well situated to supply men experienced in the operation of bulldozers, graders, ditchers and draglines, for the Government had been roading large areas of broken country and the use of mechanical equipment had been a big factor in the progress of the development plan. [Britain](#), on the other hand, was a country where highways had been levelled for centuries and where earthmoving machinery was a rarity.

Immediate steps were taken to raise a mechanical equipment company with an authorised strength of a headquarters (3 officers and 8 other ranks), a repair section (1 officer and 22 other ranks) and four working sections (1 officer and 51 other ranks), in all 8 officers and 234 other ranks.

As with other specialist non-divisional units, military prowess was a secondary consideration; officers were chosen for their engineering qualifications and non-commissioned officers for their all-round experience. The rank and file were quite in accord with the method of choosing their military betters for they were themselves thoroughly of the opinion that soldier training was totally unnecessary for a sapper of 21 Mechanical Equipment Company.

Drill instructors, that hardy race, were broken-hearted after a few turns on the training circuit and 'Bob Semple's Wild Cats' left New Zealand full of good intentions and without much military erudition.

It was not that they did not want to learn; they were just too full of the

importance of the gears, levers and lubricants of this or that machine to absorb anything else. That they tried to do the right thing is proved by a story which became a standing joke in 2 NZ Division—a sapper on sentry duty one night in [Trentham](#) recognised another member of the Company approaching a forbidden area and challenged him, 'Halt Higgens! Who goes there?'

Twenty-first Mechanical Equipment Company (Major Tiffen <sup>4</sup>) left New Zealand with the third section of the 4th Reinforcements on 1 February 1941 in the Nieuw Amsterdam, together with 8 Field Company, 18 Army Troops Company and a party of divisional and non-divisional Engineer reinforcements. On arrival at [Bombay](#), because of the situation in the [Red Sea](#)—[Eritrea](#) and Somaliland were still in enemy hands—it was necessary to change into smaller ships which maintained a shuttle service to [Suez](#). Those units not going on straight away went to a transit camp at [Deolali](#) outside [Bombay](#). After six weeks in the transit camp 21 Mechanical Equipment Company arrived at [Port Tewfik](#) on 23 March. The next day the unit marched in to [Maadi](#). The term 'marched in' is military jargon for being taken on strength, but in the most literal meaning of the word the sappers marched in to [Maadi](#) with all their gear on their backs. It was about three miles to their quarters and a soldierly bearing was something they had not acquired. 'Keep up with your three', one, bent like an ambulatory hairpin, was urged.

'I am keeping up with my three,' he answered indignantly.

'Your head might be,' he was told, 'but your backside is here three files behind.'

March and April were busy months in North Africa; they were also busy months in [Greece](#) but our immediate concern is with 21 Mechanical Equipment Company. The new arrivals were going through the usual routine of drawing stores when a party of five sappers under Lieutenant [Bryant](#) <sup>5</sup> was detailed to deliver to and assemble at [Barce](#) several 10 RB shovels and a Le Tourneau roter required urgently for digging anti-tank defences.

The situation in late March was that the frontier in [Cyrenaica](#) was held by bits and pieces of armoured formations, some mounted in Italian tanks which were scarcely mobile owing to the lack of replacements. Ninth Australian Division, less one brigade in [Tobruk](#) without transport, was supporting the armour.

Enemy strength was then known to be building up but no serious movement was expected for at least another month, when Imperial troops and transport would have replaced the formations and the 8000 vehicles that had been sent to [Greece](#).

The enemy did not keep to our timetable and a counter-attack was mounted on 31 March by 5 German Light Armoured Division and two Italian divisions, one armoured and one motorised. It must be admitted that they made a very workmanlike job of restoring [Libya](#) to the Italian Empire, for by 11 April, with the exception of the Aussies and others in [Tobruk](#), we were back again in Egypt. <sup>6</sup>

The equipment was loaded on White 10-ton transporters driven by RASC drivers, and after trouble with the [Cairo](#) overhead tramway wires a routine stop was made at [Matruh](#) for orders and petrol. Lieutenant Bryant takes the tale on:

‘The convoy then proceeded towards Solum against a steadily increasing eastward bound stream of traffic which even to the somewhat uninitiated eyes of 21 Mech. Equip. Coy. Section appeared a little odd to say the least, in so far as Air Force, Army and even Navy Detachments were mixed together with such abandon that the men were heard to remark that even the Army couldn't intentionally organise such a conglomeration. ... In view of the original B.T.E. orders the section officer decided to push on to [Bardia](#) which was reached at dusk and on reporting to the Officer Commanding was informed that the equipment was [now] urgently required in [Tobruk](#) and that the convoy must push on without delay.

‘Consequently, having fed and refuelled and issued 5 rounds per man the convoy moved westwards at night without lights on the now empty road, arriving at the defences of [Tobruk](#) to meet a “Halt! Who goes there?” in the early hours of the morning and to be informed that we were either bloody heroes or bloody fools as the road was now cut, which accounted for the rumbling sounds, crossing laterally to the route heard during the night run; on reflection the sentry was right. We were bloody fools.

‘Having reached [Tobruk](#) and in view of the [Bardia](#) Commander's orders re extreme urgency a report was made to [Tobruk](#) Fortress Headquarters at 0230 hours to be met with a most encouraging reception and admonition “Go jump in the sea and let a man sleep.”

'So, having fulfilled orders the section selected a piece of real estate and settled down for the remainder of the night. The equipment was unloaded and assembled to a background of dive and high level bombing attacks on the Fortress and harbour and subsequently handed over to an RAE <sup>7</sup> Coy for operation.'

The work of assembly took a fortnight whereupon they embarked with Indian troops on the SS Bankura, but air-raid warning signals changed from white to red before they had settled down. It was soon painfully clear that the Bankura was on the target list, for near misses gave her such a list that she had to be beached. The shipwrecked sappers re-embarked on the corvette Southern Cross, survived another attack and reached [Alexandria](#) on 25 April. The engineers with 5 Brigade were having similar experiences between [Greece](#) and [Crete](#) about the same time.

While Lieutenant Bryant's party was undergoing its baptism of fire No. 4 Section (Lieutenant Hendry <sup>8</sup>) had departed to [Matruh](#) with shovels, 'dozers and carry-alls to work on tank traps in case the enemy might venture farther east than the Egyptian border. Another job was the provision of berthage to replace the destroyed [Matruh](#) jetty. A wall of sandbags was built, then, with shovel and dragline, the seaward side of the wall was dredged and the spoil used to provide storage space. Destroyers slipped in after dark, discharged at the improvised wharf and were gone before daybreak.

Lieutenant [Allen](#) <sup>9</sup> moved up to [Sidi Haneish](#) with No. 1 Section which, after learning to share the desert with the asps, chameleons and scorpions, also worked on tank traps.

No. 3 Section (Lieutenant [Hornig](#) <sup>10</sup>) endured a few weeks in the 'bullring' but were rewarded for their sufferings. They went to help on the outer defences of [Alexandria](#) and levelled the far bank of the [Nubariya](#) canal to provide a field of fire for pillboxes being constructed on the near side. They were quartered in Gianaclis, a small Greek community situated in the middle of acres of grapes. The sappers first ate the fruit for breakfast, dinner and tea, and then proceeded to distil the juice thereof. The results varied from awful to hellish.

No. 2 Section (Lieutenant [Hazledine-Barber](#) <sup>11</sup>) did not work as a unit but reinforced the other sections from time to time as well as doing sundry small jobs of

their own. Not typical, but true none the less, was the experience of a detachment who were ordered to report to an RE command in [Alexandria](#). Nobody knew why they had come or what to do with them so they lived in [Mustapha Barracks](#) for three happy, uncomplaining weeks, during which time they were reinforced by another party, who also indulged with enthusiasm in the sea bathing and other pleasures that Alex provides so abundantly.

When Nemesis caught up with them they were sent to operate a dragline at [Amiriya](#), where a defensive ditch was being excavated. The sappers claimed that the dragline had originally been offered to Noah during his flood troubles but that he rejected it on the ground that it was out of date. They had dug about half a mile of ditch with their prehistoric implement when new orders came that the ditch wasn't wanted any more and that they were to go on road repair work at [El Alamein](#). Nobody knew where the place was—then.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 18 ARMY TROOPS COMPANY

### *18 Army Troops Company*

Eighteenth Army Troops Company (Major L. A. Lincoln), with its job in [Fiji](#) under its military belt, left New Zealand with 21 Mechanical Equipment Company and endured stoically the Forget-all-you-learnt-in-New-Zealand-this-is-the-way-you-do-it of the [Maadi](#) instructors on account of the exciting new surroundings.

Their sphere of operations had already been defined as the care and operation of the [Western Desert](#) water-supply system. As has already been outlined, the provision of water into bulk storage in the [Western Desert](#) was partly:

- (a) From wells or aqueducts,
- (b) By pipeline,
- (c) By railway tank car,
- (d) By sea.

A number of different authorities overlapped in this organisation and steps were being taken to simplify the administration so that the Royal Engineers would be responsible for the bulk supply of water to the [Western Desert](#). The RE would be responsible for the quantity moved and for supervising the equipment so that pumps, hoses, water barges, lighters, water ships, and tankage on shore could be interconnected as necessary.

Formations and detachments, including the [RAF](#), were to place their demands for bulk supply on the local RE representative. This officer, if he could not supply from local resources or by pipeline, was to place his demand, in tons, on GHQ, having obtained the agreement of the local commander. If any special type of container was required this was to be stated in the demand.

Those arrangements were, substantially, unaltered at the conclusion of the campaign in North Africa.

After a month's training and the procuring of G1098 stores the Company spread, section by section, over the [Western Desert](#), until by the end of April their locations

and duties were:

In [Alexandria](#) E and M Section and Company Headquarters were located at [Mex Camp](#). An idle Italian-owned workshop equipped with the lathes and machinery necessary for the repair of water pumping plants had been taken over and put into operation.

No. 2 Section (Lieutenant [Goodsir](#) <sup>12</sup>) worked from [Amiriya](#) with a detachment at [Burg el Arab](#). They operated and maintained the pipeline and stations from [Gabbary](#) (inclusive) to Hammam (exclusive) and from [Nubariya](#) filtration plant to Abd el Qadir. There were 19 miles of line to patrol on account of the Bedouin practice of driving spikes into the lead joints whenever they wanted water. The [Burg el Arab](#) detachment found consolation for its isolation through the fact that trains were often diverted to a siding there and it was possible to 'liberate' quantities of [Naafi](#) beer. When the survivors of 19 Army Troops Company returned from [Crete](#) some really satisfying reunions were staged through this circumstance.

No. 1 Section (Lieutenant [Mackersey](#) <sup>13</sup>) detrained at [Daba](#), met up with 16 Railway Operating Company, who gave them a hot meal and some buckets of the precious water they had come to control, and to whom they passed on the latest news from home before moving into three army huts that were to be home for them for the next fourteen months. Their main jobs were the pipeline from Hammam to [Daba](#), the pumping station at [El Alamein](#) and the water point at [Fuka](#), which was supplied by railborne water. Their lack of transport was eased by smart repair work. An Australian truck left unattended after an accident was quickly got into running order, its distinguishing signs obliterated with a new coat of paint suitably embellished with fern leaves. It was recovered through a mischance by its rightful owners many months afterwards.

From the [Burbeita](#) oasis No. 3 Section (Lieutenant [Concher](#) <sup>14</sup>) maintained the aqueducts between there and [Baggush](#), likewise the pipeline from there to [Sidi Haneish](#). They also carried the water supply westward from [Fuka](#) to [Matruh](#).

No. 4 Section (Lieutenant [Wallace](#) <sup>15</sup>) detrained at [Matruh](#) where No. 4 Section, 21 Mechanical Equipment Company, met them with hot bully beef stew before ferrying them in its only truck to their camp about two miles away. They operated

the water supply in the area and maintained the pipeline from [Matruh](#) to [Charing Cross](#).

In addition to these pipeline jobs a number of 18 Army Troops Company men, like the 19th, had taken to the sea and were operating water barges about the same time as some of the 19th were driving a railway train in [Greece](#) over a line without a signal system, in the dark without lights, and with an engine whose brakes were not so good; but that is another story.

Major Lincoln was directed to take over two water barges, including the provision of crews and maintenance. They were lying in [Alexandria](#) harbour, stank exceedingly of Egyptian crew and had engines that would not go. Sufficient sappers were found in the Company who had marine diesel experience to operate the fleet and recondition the engines. The seagoing sappers were then given a short training course in compass work, coastal navigation and signalling, whereupon they fulfilled the same functions as 19 Army Troops Company had done earlier in the year.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## RAILWAY UNITS

### *Railway Units*

Tenth Railway Construction Company, which, it will be remembered, left the [Western Desert](#) in February for [Qassassin](#) <sup>16</sup> (where, following surveys by 9 Railway Survey Company, there was platelaying and formation work at [El Firdan](#), [Tel el Kebir](#) and [El Kirsh](#)) did not remain undisturbed for long.

No. 2 Section was warned to stand by on a day's notice to move to the [Sudan](#), where Lieutenant Marchbanks was to build a bridge across the Gash River which divides the [Sudan](#) from [Eritrea](#). The Italians had got as far as putting in the concrete foundations for the piers of a bridge at [Tessenei](#) and the job was to finish what the Italians had begun.

The campaign against the Italian East African army was going according to plan; the South Africans had captured [Addis Ababa](#), the capital of [Abyssinia](#), and two Indian divisions were attacking the natural stronghold of [Keren](#), protecting [Asmara](#), the enemy capital of [Eritrea](#). The troops were supplied through [Kassala](#) and the [Sudan](#) Railway Department had, with civilian labour, built a line from [Kassala](#) to [Tessenei](#), a distance of about 40 miles. The Gash was dry until the rainy season, June to December, and a temporary line crossed the dry riverbed, then trucks hauled supplies along an Italian built road from the river to [Agordat](#), which was the beginning of another enemy railway line to [Asmara](#).

The Army was to build the bridge across the Gash and extend the line from the river to [Agordat](#)—before the rainy season.

The fifty-strong section left [Qassassin](#) on 6 March by train through the [Nile](#) valley to Upper Egypt. At [Shallal](#), the southern terminus, they changed to river boat and ploughed along the lake formed by the Aswan dam. Two days of stewing in an oppressive heat brought them to [Wadi Halfa](#), the northern terminal of the [Sudan](#) railway system and the home of Kipling's Fuzzy Wuzzy who 'broke a British square'.

Another two days of train travel across the searing Nubian desert, a smooth

grey ocean dotted with islands of crumbling rock, landed the sappers in [Kassala](#).

Major Halley and twenty sappers of the ubiquitous 9 Railway Survey Company <sup>17</sup> had preceded the new arrivals by about a fortnight and were surveying the proposed line from the [Tessenei](#) bridge site to [Agordat](#). They were doing themselves fairly well and had taken over stone houses previously occupied by Italian public works engineers. They started work at 5 a.m. with Dinka natives cutting their lines with wicked long swords which appeared as dear to them as the kukri to the Gurkha. Other characteristics of the Dinkas were the great crops of fuzzy black tresses, which hung in ringlets down their shoulders, and the long wooden forks carried like a comb so that they could have a scratch every now and then. Work ceased at midday when the heat was unbearable, and lunch was followed by an Eritrean siesta, long hours of wakeful, restless sweating. Late in the afternoon the more energetic went shooting gazelle, buck or guinea fowl, while the others persevered with the siesta. In the evenings the sappers sat on the steps of their stone house and watched the lights of convoys threading through the mountain passes with supplies for the troops preparing to storm [Keren](#). When it was quite dark they made themselves homesick by looking across the mountain tops, where low in the sky hung the Southern Cross.

The bridge builders went on to [Tessenei](#) and looked the job over. They saw an empty riverbed with heavy scrub along its banks, hundreds of bright-coloured birds above the trees and monkeys in untold numbers in their branches.

From the [Kassala](#) end the bridge spans were one 55 ft, five 50 ft and two 40 ft, a total length of 385 ft. These spans were fixed by the concrete foundations already put in position by the Italians, but the steel built-up girders sent down from Egypt would not fit these measurements and had to be adapted on the job.

Lieutenant Marchbanks wrote later:

'We were always short of Equipment but managed to get hold of an Italian electric welding set, gas cutting torches and compressors. About 1000 cubic yards of concrete was poured and for this we had only two 7 c. yd mixers. Total weight of steel handled was about 1000 tons with a heaviest lift of 10 tons. We were fortunate in being able to borrow two caterpillar drag lines from the [Sudan](#) Rlys for handling the girders.

'As an example of the way we had to improvise, 1200 ½ and ? [in.] dia. holes had to be drilled in the steel by hand ratchet drills and over 1000 hook bolts for holding the sleepers to the girders had to be forged and threaded.'

The party worked for a month on formation and culverting until material came down from Egypt. The first concrete was poured on 14 April and the first train ran over the bridge on 28 May. Lieutenant Marchbanks was evacuated to hospital a fortnight before the bridge was completed, leaving Sergeant Keller<sup>18</sup> in charge. The sappers did not rejoin their unit until the end of June.

Tenth Railway Construction Company lost another 65 all ranks to a composite Operating and Construction Company being assembled to proceed, under the command of Major Smith, to Greece. The rest of the men were provided by 13 Company (132 all ranks) and 16 Company (77 all ranks).<sup>19</sup>

The selected sappers assembled at El Firdan, where they were issued with tropical kit and began a concentrated course of infantry training. It did not last long.

Further instructions arrived that administration would be simplified if all constructional people were drawn from one unit, and as 10 Company already had one section detached, 13 Company would be withdrawn and 10 Company would supply all the construction element. And the new company would assemble at Qassassin.

Under the new plan 7 officers, 262 other ranks, 11 lorries, 4 motor-cycles and 57 tons of equipment were assembled, with orders to be ready to move within twenty-four hours as from 25 March. An advanced guard of eleven drivers commanded by Sergeant Jack Molloy<sup>20</sup> left with the gear on the 29th and the sappers were to follow the next day; they route-marched and machine-gun drilled until 3 April, when they were told that they were beyond doubt leaving within forty-eight hours; in the morning the departure was postponed indefinitely.

Tenth Company detail was to stand by and 16 Company detail was to go to Amiriya and work on the extensive military sidings there. On 14 April 10 Company detail was 'definitely embarking' the next day—it got as far as loading rations on a train and striking camp before the order was countermanded and camp was

unstruck.

The sappers really left [Qassassin](#) a couple of evenings later, this time in trucks, but a Don R caught them within two hours and the column halted at [Tahag](#). It stayed halted there for a week, when the now thoroughly demoralised detail was told that it was really and truly on its way—back to the [Western Desert](#). But there was one more blow to come: new equipment had been drawn to replace that loaded on the transport and shipped to [Greece](#), but it had come back again and was found lying on a wharf at [Port Said](#).<sup>21</sup> The new equipment was to be handed back forthwith and the old gear taken on charge again. New words were added to the English language and the sappers' vocabulary grew in strength and vigour.

This apparently irresponsible conduct was of course partly on account of the situation in [Greece](#), where the campaign was going far from well, and partly because of the enemy counter-attack in the [Western Desert](#).

In the meantime the balance of 16 Railway Operating Company had arrived at [El Kirsh](#) to take over the duties of 17 Company, who unknown to themselves were shortly to move to Palestine; on 7 April they were hotfooting it back to [Daba](#). Major Aickin had been informed that if the enemy attack in [Cyrenaica](#) was not stopped he might have to operate the whole 200 miles of railway from [Amiriya](#) to [Matruh](#); he was to make his headquarters at [Daba](#) and to plan on the assumption that communications would fail and that he would be out of touch with his section at [Amiriya](#). Major Aickin could muster only 116 men at the time so he had received a fair-sized job; it was added to materially, as he explains:

'That night (8th) about 6.30 o'clock, a British Major who held the high-sounding title of Town Major (though his domain was merely a large chunk of desert, a few water wells and numerous latrines for the cleanliness of which he was held responsible) came into our mess and read us a signal. It appeared that the tiny force representing the then strength of the 16th, a few bakers of the RASC field bakery and less than a dozen men of the Movement Control staff were the garrison of [Daba](#). There were no troops behind us all the way to [Alexandria](#) while up forward there was only a small garrison at [Mersa Matruh](#) and nothing much in the way of troops or armour in the desert west of there.... We had no wire, no minefields, no artillery and we had not had a tremendous amount of practice with our rifles. We had an anti-

tank rifle which temporarily incapacitated the firer at every shot, plus three brens and a lewis gun.

'The Town Major described our role in terms that gave us freedom of movement and freedom of decision. What he said was, "You'd better put some men over at the cross roads or somewhere. Send out a patrol or two on a truck or something, with bren guns or something of that sort; anyhow you are supposed to do something." The Town Major was in too much of a hurry to have a whiskey or something as he had to go and organise the bakehouse in depth or something.'

Without more ado 16 Railway Operating Company, the whole 116 of them, set about preparing to receive General Rommel, his two Italian divisions and his 5 German Light Armoured Division, either one at a time or all together. They dug trenches and built field works; they acquired a distaste for sleep in order to complete their defences and carry out their train-running shifts more or less continuously. They were assisted in staying awake by the weight and frequency of enemy air raids.

The Company strength was increased by the return of men from leave, and of another party that had been detailed but which did not go to [Eritrea](#), and the defence works grew in complexity.

Little by little the flap died down. The Australian and British force in [Tobruk](#) was a thorn in the side of the enemy communication system and there was no invasion of Egypt.

Tenth Company returned to the [Western Desert](#) on 2 May and spread from [Daba](#) to [Matruh](#) on emergency repair work; by night they endured air raids and by day they repaired the damage.

Thirteenth Company remained in the Canal Zone, where its main work was at [Abu Sultan](#) constructing new spurs in the Ammunition Depot, the laying of depot tracks at [Geneifa](#) and [Amiriya](#), and a bridge over the [Sweetwater Canal](#) to the wharf. By and large it was a pretty poor show; the food was not good and meal hours did not suit; the heat was trying, for at 116 in the shade steel rails could not be touched with bare hands; furthermore the work was rushed and the native labour more than usually poor.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## THE FORESTRY GROUP

### *The Forestry Group*

Fourteenth Forestry Company found that its billets in the stables of [Grittleton House, Grittleton, Wilts.](#), although a very imposing postal address, were without heat or light, and a stable without heat or light in the middle of an English winter is not the acme of comfort. There were other drawbacks; the cookhouse lacked a stove, there were no showers, drying rooms, telephone or bathing facilities; the latrines were located in the main stable yard next to the sergeants' mess. The men's mess-room, lately the coach house, was cold and dark—there were radiators but the boiler was useless and endeavours to procure another one were quite fruitless.

The remedying of these inadequacies was a slow and tedious business, for munitions and military equipment were being manufactured to the exclusion of everything else and hundreds of thousands of men were being brought from under canvas into winter quarters.

Improvements were gradual and sporadic. Early in December twenty coal-burning stoves arrived and were installed, then nine bedrooms and the servants' hall at [Grittleton House](#) were requisitioned, permitting sixty-two sappers to move out of the stables. Other amenities had to wait the passing to and fro of sundry letters to and from sundry authorities, who first refused permission to carry out repairs unless they were done by civilian contractors. Eventually the sappers were permitted to do sufficient plumbing and electrical work themselves to make their stables tolerably comfortable. The officers, for whom there was no provision whatever, were billeted at the Rectory and had their meals at the Red Lion Inn close by. Civilian kindness and hospitality were immediate and widespread and helped to take the edge off the acute discomfort of life in the [Grittleton House](#) stables.

Fifteenth Forestry Company had more luck and was billeted in [Langrish House, Langrish, Hants.](#)

Both units after disembarkation leave did a month's solid training under

instructors lent by Southern Command. The sappers got on very well with their instructors, though one of the favourite indoor pastimes was wondering what a nice quiet day's work would feel like.

The intention was for each company, with the help of labour supplied by civilian pioneer units, to operate three mills. Eleventh Company was operating [Hailey Wood](#) and [Overley Wood](#) and was building, as fast as the erratic supply of parts would permit, its third mill at Bowood. Unlike the English-type mills, Bowood and the others to be erected by the Forestry Group were of New Zealand design and in accordance with plans drawn up by Lieutenants [Tunncliffe](#)<sup>22</sup> and [King](#).<sup>23</sup> Standard New Zealand features absent from the English mills were power feeds for the breaking-down bench, sawdust conveyors and a power goose saw, while the unsatisfactory push bench was discarded for a return-feed breast bench.

Fifteenth Company moved half its strength to [Arundel](#) in [Sussex](#), where two mills known as East and West [Arundel](#) were taken over from civilians. The rest of the Company built its third mill at Basing Park forest, [Langrish](#), and commenced cutting on 10 February.

Fourteenth Company built a mill at [Grittleton](#) which put its first log through on 31 January, relieved 11 Company for its ten-day drill period, detailed groups of men for urgent felling jobs around landing grounds and detached other parties for felling beech urgently needed for rifle butts. The War Office had approached the Ministry of Supply for a nation-wide effort to ensure the cutting of this timber before April when the sap began to rise. When cutting was discontinued over 2500 beech trees had been felled by New Zealand detachments in five weeks.

Reference has been made to the fact that the Forestry Group was subject to control by both the Forestry Division of the War Office and the Ministry of Supply, which did not make for smooth running and was discontinued in February, when home-grown timber came under direct control of the Ministry of Supply.

Colonel Elliott's letter to the Military Secretary sent on 21 February is revealing:

'... The supply of equipment has recently rather improved but remains far from plentiful. The location of operations is widespread and administration, from the military point of view, made rather difficult, in that whenever a unit is divided

effective operative personnel tend to become more and more involved in administrative duties. Positions of strange contradictions occasionally arise when the requirements of the Army vary from the requirements of the Ministry of Supply. I more than once on such occasions have sat back and refused to move until I have an order from the Army, pointing out at the same time, politely I trust, but very definitely that I am primarily a soldier and will obey orders from one place only—that place being the Army.'

Throughout February and March felling and cutting beech was first priority: 11 Company had a party felling at Winchester and 15 Company's [Langrish](#) mill was cutting beechwood; 15th was felling at Castle Combe, also at Gatcombe Hill, Whitegate and [Parsonage Wood](#) plantations, and in addition one officer and thirty other ranks were operating in Dropmore Wood. Bucks.

Throughout the winter sappers had been inclined to be critical at the apparent uselessness of working at great discomfort and against time to produce timber which nobody seemed to want, but this matter was brought into correct perspective by a memo from the Director of the Home Grown Timber Production Department pointing out the urgent necessity of the work on which the Forestry companies were engaged and the reasons for the large stocks being accumulated at the mills. In the Battle of the [Atlantic](#) one of the largest items imported was timber; and the reduction of the demands on shipping space was of vital importance. A certain amount of stock had to be reserved for national emergencies at home or where the armies were operating abroad. To date stock, largely imported, had been stacked at the various docks, but owing to the air raids it had been necessary to remove those stocks and use them. It was necessary to replace them with home-grown timber for just such another emergency. It was a reasonable explanation and henceforth the output grew appreciably.

March also saw the bushmen given an operational role in the event of invasion, still considered a possibility with the German military machine stalled for want of opponents not separated by a sea lane.

The decision was taken by the CRE, South Midland Area and Southern Command, that if the occasion demanded 11 and 14 Companies would form a mobile column for the defence of Gloucestershire airfields and would deal with parachute

landings inside the area bounded by Northleach, Cirencester, Stroud and Andoversford. As 15 Company was in a different military area and the Arundel detachment in a different Command, they were integrated into the local defence plans. Rifles, of which only twenty were held by each company for guards and pickets, were to be made a 100 per cent issue. The sappers were enthusiastic about a scheme which converted them, in case of necessity, into fighting troops, although they were quick to point out that until the rifles arrived Hitler would have to give reasonable notice of his intention to attack in their area.

During this period, which might be called the running-in of the New Zealand Forestry Group, there were some changes in command. Captain O. Jones asked to be relieved of command of 14 Company on transfer to the RAF; Sergeant Chandler<sup>24</sup> of 11 Company was commissioned and transferred to 15 Company and most of the junior officers were changed from their original commands; Captain Thomas<sup>25</sup> took command of 14 Company. Rugby footballers were withdrawn from circulation to train for a projected tour of Wales. Hailey Wood mill's output for the month was a United Kingdom record (95,244 super. feet); Grittleton mill broke the record for a week's production; Langrish mill, still lacking a yard tramway, put up impressive figures. Both Arundel mills lost time through floods, but in spite of these and more technical hitches the seven New Zealand mills produced 67,000 cubic feet of timber and the total output passed the million cubic feet mark.

Spring passed into summer. Canteens were established and gardens, tended by sappers, provided more than adequate supplies of fresh vegetables. Guards of honour were supplied for War Weapons Week at Salisbury, Chippenham, Arundel and Littlehampton, and for Mr Jordan at Calne. The 14th Company detachment that was to operate a mill being built by civilians at Savernake forest, near Marlborough, moved into quarters at Burbage and commenced felling a backlog of timber. Eventually the company was asked to finish the building itself. The erection of this mill had been a classic in delay and muddle until the Kiwis took over, when it was reduced to delay waiting for essential parts. Savernake began cutting on 23 July.

Bowood mill, changing from beech to Douglas fir, one week turned out 4000 cubic feet, a record, then went on to better it the next week by another 580 cubic feet. The Bowood average of 3800 cubic feet for the four-weekly period of April was

a complete answer to the English critics of the New Zealand type mill. At its peak in supply and operation this mill was cutting 117 cubic feet an hour, a figure never before approached by civilian or service timber men in the [United Kingdom](#).

The withdrawal of 93 Alien Pioneer Company from 11 Company meant that without this unskilled labour, even if its quality was poor, the Company could not operate three mills. The [Calne](#) detachment was accordingly moved to [Cirencester](#) and a detachment of 14 Company moved to [Grittleton](#) to work Bowood.

The outstanding features of June were not mill work or forestry. Her Majesty the Queen Mother (Queen Mary) visited 14 Company at [Grittleton](#) and took tea with the officers and representatives of the rank and file. There was a sequel which the diarist of 14 Company describes:

'The Queen Mother returned the compliment and the Duchess of Beaufort <sup>26</sup> gave tea to the men and the Queen Mother gave tea to Maj Thomas and Lt [Austin](#). <sup>27</sup> The Queen allowed the men to attend the show with their coats off. Only some availed themselves of this favour and after the show the Queen was amused to hear that the others couldn't because had they done so they would have been down to the buff.'

A mobile column formed by 11 and 14 Companies performed an exercise on 15 June which included the defence of an airfield. Further recourse to the 14 Company diarist provides the real flavour of the event:

'An exercise was carried out at Aston Downs aerodrome, the 14th and 11th Coys being given the job of attacking and retaking the aerodrome in the hands of the enemy. Dive bombers took part and a very realistic show took place and it should have been of immense help in showing to our troops their complete lack of training and knowledge in modern warfare. The objective was reached only because blanks were used.'

All troops, except essential guards, of the New Zealand Forestry Group were concentrated at Barton Stacy camp, Hants., on 19 June for the ten-day training period. During the training they were inspected by Brigadier [Inglis](#), <sup>28</sup> who gave a short talk on the [Crete](#) campaign. Even before the Brigadier had told them something of the fighting and evacuation of [Crete](#), sufficient news had been released

about both [Greece](#) and [Crete](#) to start a stream of applications for transfers to a first-line unit. Colonel Elliott wrote (9 June) to the Military Secretary, [2 NZEF](#), thus:

'Work continues here much on the same lines working through War Office with the Ministry of Supply. Our work appears to give satisfaction.... Discipline is difficult. 99 percent of the men and officers too wish to rejoin—or should I say join?—the Division and I can only hope that my personal note to the GOC asking him to call for us will bear some fruit. England may be attacked of course and we may have our chance but wish to get out with the New Zealand troops and be with the Division and more directly controlled operationally by the GOC. Applications to me for transfer to [Middle East](#) to other units are innumerable.'

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## CHAPTER 4 – THE CAMPAIGN IN GREECE

## CHAPTER 4

### *The Campaign in Greece*

The experiences of the engineer companies at [Amiriya](#) before leaving for [Greece](#) were equally boring and varied only in the length of time before embarkation at [Alexandria](#). Where they were going was kept a secret from the sappers but from few others, not surprising when it is remembered that some ships in the convoy were making the voyage for the second or third time.

The official veil was removed when a special order, issued by [General Freyberg](#), was read on each transport:

‘Before leaving Egypt for the battlefield I had planned to say a last word to you. I find that events have moved quickly and I am prevented from doing so. I therefore send this message to you in a sealed envelope to be opened on the transport after you have started on your journey.

‘In the course of the next few days you may be fighting in defence of [Greece](#), the birthplace of culture and learning. We shall be meeting our real enemy, the Germans, who have set out with the avowed object of smashing the British Empire. It is clear therefore that wherever we fight them we shall be fighting not only for [Greece](#) but also in defence of our own homes.

‘A word to you about your enemy. The German soldier is a brave fighter so do not underestimate the difficulties that face us. On the other hand, remember that this time he is fighting with difficult communications, in country where he cannot use his strong armoured forces to their full advantage. Further, you should remember that your fathers of the 1st New Zealand Expeditionary Force defeated the Germans during the last war whenever they met them. I am certain that in this campaign in [Greece](#) the Germans will be meeting men who are fitter, stronger and better trained than they are.... You can shoot and you can march long distances without fatigue. By your resolute shooting and sniping and by fierce patrolling by night you can tame any enemy you may encounter.

‘A further word to you, many of whom, I realise, will be facing the ordeal of battle for the first time. Do not be caught unprepared. In war, conditions will always

be difficult, especially in the encounter battle; time will always be against you, there will always be noise and confusion, orders may arrive late, nerves will be strained, you will be attacked from the air. All these factors and others must be expected on the field of battle. But you have been trained physically to endure long marches and fatigue and you must steel yourselves to overcome the ordeal of the modern battlefield.

'One last word. You will be fighting in a foreign land and the eyes of many nations will be upon you. The honour of the New Zealand Division is in your keeping. It could not be in better hands.'

It took nearly a month to shift the Division to [Greece](#). Sixth Field Company (transport HMS Breconshire) arrived at [Piraeus](#) on 8 March. Headquarters Divisional Engineers (SS Hellas) arrived on 15 March. Nineteenth Army Troops Company (SS Ionia) ran into a storm and after a most uncomfortable trip arrived at [Piraeus](#) late in the night of 15 March. Fifth Field Park Company (HMS Breconshire) arrived on 20 March, and 7 Field Company (MV [Cameronia](#)) arrived on 3 April.

Engineer officer appointments on 6 April were:

Headquarters Divisional Engineers

CRE [Lt-Col G. H. Clifton](#), MC

Adjut Capt M. S. Carrie

[Lt J. F. B. Peacocke](#) Field Officers

2 Lt H. L. Yorke Field Officers

RMO Capt T. A. Macfarlane, [NZMC](#)

RSM WO I L. R. Baigent

5 Field Park Company

OC Capt W. G. Morrison

2 i/c Lt R. C. Pemberton

Lt D. G. Thomson

2 Lt C. F. Skinner

6 Field Company

OC [Maj L. F. Rudd](#)

2 i/c Capt H. C. S. Woolcott

Lt D. V. C. Kelsall, [No. 1 Sec](#)

2 Lt C. M. Wheeler, [No. 2 Sec](#)

Lt St. G. W. Chapman, No. 3 Sec

2 Lt J. O. Wells, HQ Sec

7 Field Company

OC Maj F. M. H. Hanson, MM

2 i/c Capt J. B. Ferguson

Lt K. Rix-Trott, Attached

Lt G. A. Lindell, No. 1 Sec

Lt G. I. B. Thomas, No. 2 Sec

Lt J. R. M. Hector, No. 3 Sec

2 Lt P. B. Wildey, Attached

Lt N. N. Gard'ner, Attached

19 Army Troops Company

(acting as a Field Company)

OC Maj C. Langbein

2 i/c Capt J. N. Anderson

Lt L. C. Smart, E and M Sec

Lt F. W. O. Jones, No. 1 Sec

2 Lt H. C. Page, No. 2 Sec

2 Lt R. J. Collins, No. 3 Sec

2 Lt D. M. Patterson, No. 4 Sec

Divisional Postal

Unit

2 Lt H. S. Harbott

If Amiriya was typical of Egypt—dusty and desiccated—Hymettus transit camp was equally typical of Greece. Captain Carrie wrote in his diary:

' Hymettus Camp was a picturesque spot a few miles out of Athens and situated amongst foothills, which, like most Greek hills, were rocky and had no depth of soil. But there were plenty of trees and the place was a very welcome change from Egypt. The local inhabitants seemed to come there for picnics, and on Sunday particularly, the place swarmed with visitors who didn't want backsheesh, who didn't want to sell anything and who didn't want to exploit you in any way at all.'

From the moment the sappers moved off the wharf there was no doubt about their welcome. They were greeted in crowded streets with cheers, the Churchillian thumbs-up, and the graceful Grecian palms-up wave of the hand; flowers were thrown and handkerchiefs fluttered. Clearly they were welcome for their own sakes

and not for the cash in their pockets. It was a new experience.

Each company spent a few days at [Hymettus](#)—just sufficiently long to see enough of [Athens](#) to want to see more.

The Allied force available for [Greece](#) was little more than a token and even some of that did not get there in time, but politically and sentimentally the gesture of not abandoning [Greece](#) was justifiable and necessary. There was no underestimating the task by the men who would have to conduct the coming battles. [General Freyberg](#) put his reactions on record:



'When I said goodbye, I said to General Wavell that I had no illusions about how tough the Greek campaign was going to be.' <sup>1</sup>

General Blamey, commanding the Australians committed to the venture, wrote:

'I am not criticising the higher policy that has required it, but regret that it must take this dangerous form. However, we will give a very good account of ourselves.' <sup>2</sup>

Both commanders knew that when the German action to succour her Italian partner commenced, the odds against [Greece](#) were likely to be in the order of ten to one.

The diplomatic situation was unusual in that the New Zealand Division was not going to join battle with the Italian invaders—no aid beyond that already being supplied by the [RAF](#) was needed there—but was to help defend a country then technically at peace with [Germany](#). The German Embassy was therefore free to note

the landing of men and material and to transmit the information to wherever it deemed necessary.

A little Greek politico-military geography is necessary to the better understanding of the campaign. Greece is bounded in the north by the mountain frontiers of Turkey, Bulgaria, Yugoslavia and Albania; Bulgaria had already acquiesced in German occupation and Albania was an Italian-Greek battlefield. Naturally the bulk of the Greek Army was deployed against the Italians, while the rest was either in the fixed defences on the Bulgarian frontier or covering Salonika, Greece's second largest port. There was only a single-line railway between Athens and Salonika. This branched, beyond the Aliakmon River, with the left fork passing east of the Vermion mountain range, then climbing through the Edhessa Pass and the Florina valley into Yugoslavia via the Monastir Gap, the historic invasion route.

The roads were as few as the railways; the principal one, linking Athens with Belgrade, followed an inland route west of Mt Olympus (the railway ran along the coast on the eastern side of the mountain) through the Servia Pass, over the Aliakmon River, through Kozani, Florina and the Monastir Gap.

The plan was to hold a defensive position on the line of the Aliakmon River from the coast to the Yugoslav frontier. It was a strong position as long as the Germans did not outflank it by overpowering Yugoslavia and striking down the Monastir Gap. That was precisely what they did do and the threat forced a retirement to a shorter line. But let us return to the engineer companies.

Sixth Field Company, the first arrivals, had only a couple of nights in Athens before moving north. The stone houses and the picturesque villages were vastly different from the mud hovels and flat-topped buildings in the land they had just left. The hilly country, emphasised by Egypt's sandy monotony, drew comparisons with New Zealand, but the likeness ceased with the topography for there was no livestock on the hills and no able-bodied men in the fields where the spring corn was in early growth.

The Company left the main highway at Elasson junction (13 March) and crossed the Olympus Mountains by a secondary road that snaked through a narrow gorge, heavily wooded and with rocky outcrops, on to the northern plains. The description

would cover a dozen other defiles in [Greece](#) or in New Zealand, but this one had a particular significance to the Division. It had two names, classically and officially Petras Pass, colloquially Katerini Pass, after the town 20 miles or so to the north. The Army gave it a third, Olympus Pass.

[Colonel Clifton](#), who had gone ahead to look the area over, met the convoy near the southern end of the pass and instructed No. 1 Section (Lieutenant Kelsall) to drop out at [Ay Dhimitrios](#), a mountain village where stone houses clung to the sides of the valley before it closed in to the steep and often sunless Olympus Pass. The job was to prepare and improve the road for the very considerable increase in traffic that would be using the pass in the near future. No. 3 Section (Lieutenant Chapman <sup>3</sup>) was detached near the northern exit about ten miles farther on with the same mission. The remainder of the Company went as far as [Katerini](#), a rail and agricultural centre of some 14,000 inhabitants, one hotel and several cafés which provided toothsome plate-sized omelettes, wholemeal bread and the local red krassi and white retsina. There was also the universal ouzo which the sappers had met before as zibbib, and which was to reappear under the aliases of arak, anisetta and absinthe. Despite the variety of names the effect was remarkably uniform; mixed with water the stuff looked like milk, tasted like peppermint and acted like dynamite.

They were, however, at [Katerini](#) only a couple of days before the Company moved back nearer the mouth of the pass. Bivvies were pitched under the trees on a hillside near the [Kalokhori](#) village church and the sappers compared the daffodil studded grass underfoot with the sandy wastes of Egypt.

On the same day (15 March) the Divisional Postal Section established a post office at [Hymettus](#) and on the 20th another at [Voula](#). This served the whole [Athens](#) area and remained in operation for the duration of the campaign. A few days later another office was opened at [Katerini](#) with branches at 4, 5 and 6 Brigades, the supply dump at [Keramidhi](#) and Divisional Headquarters.

During this period 6 Brigade (Brigadier Barrowclough <sup>4</sup>), right, and 4 Brigade (Brigadier [Puttick](#) <sup>5</sup>), left, were taking station along their sectors of the Aliakmon line, and it is hardly necessary to mention that in a mountainous country like [Greece](#) roads were of paramount importance. Engineer work therefore fell mainly into two categories—keeping roads open for the passage of transport and, in the event of a

withdrawal, making them impassable for as long as possible. There was, at least as far as the troops were concerned, no question of withdrawal, and for the next fortnight the sappers worked on access roads and bridges.

Engineer Headquarters in the Hellas and 19 Army Troops Company in the Ionia had a most unhappy crossing for they ran into a gale that dispersed the convoy. Some of the transports, certainly the Ionia, were ill-found tubs with a habit of rolling alarmingly while every plate groaned under the strain of overloaded equipment and overcrowded men. The Ionia took twice as long as usual on the journey, wallowing, pitching and trying to sink under the stormy waters. Many of the sappers hoped she would succeed and thus end their misery.

Nineteenth Army Troops Company spent a week at [Hymettus](#) sinking tent-pole holes in the rocky ground by day and 'doing' [Athens](#) by night. After dark their camp held only the guard and the orderly sergeant. The Company, less No. 3 Section (Lieutenant [Collins](#) <sup>6</sup>) sent to [Chaoichani](#) <sup>7</sup>, near [Ellasson](#), where it worked on underground shelters for Force Headquarters, was concentrated around [Katerini](#) by 23 March.

E and M Section (Lieutenant [Smart](#) <sup>8</sup>) set up workshops in a park and Smart went up to [Salonika](#) with a detachment and empty trucks. They returned with very full trucks of much prized equipment obtained from engineer dumps there.

No. 2 Section (Lieutenant [Page](#) <sup>9</sup>) was sent back to [Ay Dhimitrios](#), now vacated by 6 Field Company, and for almost a month worked on the pass road. The men were billeted, some in the local schoolroom and some in the church; 'Harry', the village priest, was appointed civil liaison and public relations officer by the non-Greek speaking sappers, for he was a nice chap with a good command of English and an amazing capacity for dealing with the local brew.

No. 1 Section ( [Lieutenant Jones](#) <sup>10</sup>) and No. 4 Section (Lieutenant [Patterson](#) <sup>11</sup>) relieved the sections of 6 Field who were doing roadwork behind the brigades, and who then joined the rest of their company helping on an anti-tank ditch being dug by Greek women and men militarily unfit; and in [Greece](#) to be unfit you had, it seemed, to be at least half dead or over ninety.

There was practically no mechanical equipment available and the job of paying

the civilians who took its place fell to Captain Carrie. He found that army acquittance rolls were a useless formality when the Labour Union officials spoke no English, the paying officer spoke no Greek and the official interpreter could not interpret sufficiently well to make each party's meaning clear to the other. In addition the villagers were illiterate, many had the same name about twenty letters long, which for good measure then ended with 'opoulos', and there wasn't enough room on the roll to get it all on. The only way to balance the account was to resort to artifice, as Captain Carrie admits:

'By this time we'd realised the sheer impossibility of getting each man personally to sign the payroll, and our consciences had become a bit more elastic. As a matter of fact they had been stretched a little in our first pay out when we had finished with 10/- short. <sup>12</sup> We didn't feel like parting out with 10/- out of our own pockets, so we paid up the 10/- to a purely fictitious "Georgius Papadopoulos" and forged his signature. But this paled into insignificance compared with the last pay out. We had a big session at which the Union officials, together with a few helpers signed all the rolls varying the handwriting and putting in an "X his mark" at intervals. The result was a very convincing document which I am sure would never have been detected for the forgery it was. We then handed over the money in bulk which saved us all the bother of change and left the Union officials to pay the men or their representatives.... It's amusing to think now of all those headaches and the trouble those rolls gave us when not one of them got back to the Chief Paymaster. They were all destroyed before the final evacuation and we left [Greece](#) without a receipt for a penny of the £15,000 we'd spent.'

Fifth Field Park, the third company to be deployed, was concentrated near [Katerini](#) on 25 March with a supply section (Corporal Bob [Sweet](#) <sup>13</sup>) at [Larisa](#) and one (Sergeant Len Morris) at [Katerini](#) railway station.

Seventh Field Company did not have the opportunity of 'making an entrance' on the Field of Mars, for it arrived in [Katerini](#) the same day that [Germany](#) declared war on [Greece](#) and everybody was too excited to take any notice of it. In accordance with a decision already taken to speed up work on the [Olympus](#) reserve positions, the 7th sappers were moved the next day back through the [Olympus Pass](#) to [Kokkinoplos](#), a mountainous village on a by-road about five miles south-east of [Ay](#)

**Dhimitrios**. From there they began to form a road over the shoulder of the mountain and down to the right flank battalion in front of the pass. The sappers were spread along its length in a world of their own high on the shoulder of **Olympus**—a world of cold winds, driving rain squalls and sudden snow flurries. They agreed that snow in **Greece** was no different from snow in England, but wasn't a man 'stiff' to leave England in the depth of winter for sunny Egypt and then find himself freezing in the mountains of **Greece**?

It will not be forgotten that Captain Nevins and his survey section had been in **Greece** since November; their record of being the first New Zealand troops in **Greece** was now added to by being among the first under fire. The section was still quartered in the New Phaleron hotel with other RE units when the Germans followed their declaration of war against **Greece** by raiding the **Piraeus** harbour.

Wave after wave of bombers came over about midnight (6 April), rocking the city with explosions and setting fire to the harbourside, but the hotel was well away from the danger zone and the sappers finally went to bed. They were wakened by an explosion loud enough to bring them back to the windows, but nothing could be seen through the dense smoke. The noise came from the freighter **Clan Fraser** which had been hit by a bomb and set on fire; she was loaded with TNT, and an hour later blew up with such force that windows in the hotel were shattered and a cascade of giant sparks was heaved high into the smoky night—sparks that were red-hot sections of steel plate and superstructure.

There was an urgent call for fire fighters; the sappers jumped into their truck and made for the waterfront; on the way they passed a section of the **Clan Fraser's** steel plating folded up like a piece of paper.

Dawn was near when Captain Nevins reported to the Admiralty building and was taken to a military officer connected with the dock area. He was a brigadier with a patch over one eye and was christened Lord Nelson on the spot. He very soon earned the respect of the sappers, for he did a neat job all by himself: about two hundred yards from the wharf where a minesweeper was tied up, a small vessel was burning and a Greek gun crew was trying to sink it—it was loaded with petrol. The Greeks, either through excitement or ignorance, were missing the target.

'God's teeth! Give me that gun!'

Lord Nelson pushed the crew aside and, single-handed, holed the ship at the water line. Then he produced a tug and took the sappers over to the *Clan Cumming* which was also on fire. Her sides towered above the tug, for she had just left the slipway after being torpedoed, was quite empty and very high out of the water.

There was nobody aboard except the captain and the chief engineer; buckets of salt water were hauled up the steep sides and thrown on the flames while everything that was movable and burning was thrown overboard. All around them drifted burning barges filled with petrol drums exploding like a ragged barrage.

The battle was won by mid-morning and the next job was the *Davies* some distance away. The section boarded its truck and passed warehouses on fire, cranes lying twisted and forsaken like children's discarded toys and crowds watching their homes burning. They passed an Australian just standing and swearing; for two days he had helped load petrol drums into a rake of box wagons and now they were burning and he could do nothing about it—the points were fouled and the wagons could not be moved.

The fire on the *Davies* was more readily got under control, and when the last smouldering ember had been put out the section returned to the Admiralty building for further orders. They were thanked and told that that would be all. Besides the destruction of the *Clan Fraser* another merchant ship and a tug had been sunk, six merchantmen, twenty lighters and a tug burnt out.

The section, prior to returning to its billets, found a two-gallon jar and a five-gallon keg of cognac in the deserted Admiralty café. The jar was consumed easily enough but the keg was a little beyond their capacity and was sold to less fortunate inmates of the billets. <sup>14</sup>

The Greek garrison on the Bulgarian frontier took the first shock of the invading blitzkrieg and put up a valiant defence, but there was disturbing news of a German column sweeping around the Greek flank, thence down the Axios River towards *Salonika*.

By the afternoon of 8 April *Yugoslavia* was in a political turmoil and an

uncoordinated resistance was swept aside. The Greek Eastern Macedonian Army was on the point of being isolated and it was possible for enemy troops to be in [Monastir](#) by nightfall; the only counter to the threat was an immediate withdrawal.

Orders were issued forthwith: 4 Brigade was to move post-haste to cover the [Servia](#) Pass, where the road from [Monastir](#) crosses the [Peria Mountains](#) north-west of [Olympus](#) and 30 miles south-west of [Katerini](#), while an Australian brigade with some British tanks and artillery, plus half the New Zealand Machine Gun Battalion, was to block the [Monastir Gap](#).

Sixth Brigade was to move back into reserve near [Elasson](#) and cover the junction of the roads from [Servia](#) and [Olympus](#), while 5 Brigade would stand fast on [Olympus Pass](#) and fight where it stood. While the realignment was taking place two squadrons of Divisional Cavalry would ensure that the enemy was not unduly precipitate in crossing the [Aliakmon River](#).

By the night 10–11 April the redeployment was complete and the engineer situation was as follows:

Fifth Field Park Company was spread along a side road between [Ay Dhimitrios](#) and [Kokkinoplos](#), whence it charged the demolitions prepared by 6 Field and 19 Army Troops Companies in the pass and on the bridges forward of it. At this point it must be stated that 5 Field Park Company did not for the rest of the campaign in [Greece](#) carry out its normal functions as a supply unit for the field companies. On the contrary it was used as a reservoir for parties on work for which it was neither trained nor equipped, but needs must when the devil drives. And the Teutonic devil drove exceedingly hard in the ensuing few weeks. Normally a field park company maintained a bridging section which delivered bridging material where needed and then replenished from Corps dumps, a field stores section which had charge of the divisional dumps, and a workshops section composed of tradesmen who repaired, built, altered, invented, or, that all-embracing word, 'procured' anything asked for from a latrine seat to a chronometer. It was in effect a company of storekeepers, drivers and tradesmen. At that stage there were only four officers on the establishment and one, Lieutenant [Skinner](#),<sup>15</sup> was attached to 6 Brigade so that practically all the details were commanded by sergeants.

To resume, 7 Field Company, assisted by working parties from 26 Battalion, continued forming the access road. [General Freyberg](#) had been informed, wrongly, that it could be built without much trouble, for very deep cuttings through solid marble alternated with retaining walls. The real obstacle, however, was a deep valley, almost a ravine, a major engineering project, that would have to be crossed before wheeled traffic could make any use of the work.

Most of the Company was camped in the valley, a thousand feet below the job, but Lindell's <sup>16</sup> section occupied the [Kokkinoplos](#) schoolroom and the school mistress, late of the [USA](#), acted as interpreter for him in organising the man and woman power of the village for work on his section of the project.

Sixth Field Company was widely spread. No. 1 Section (Lieutenant Kelsall) moved with 4 Brigade (8 - 9 April) to the [Servia](#) Pass. As at [Olympus](#) there was a pass, called variously [Portas](#) and [Servia](#), through the dividing range.

No. 2 Section (Lieutenant Wheeler) left with 6 Brigade the following night in rain. It had a very nasty drive, without lights, through a misty darkness back through [Olympus Pass](#) to [Livadhion](#), another mountainside village in the south Olympian foothills, and began working on an access road to [Ay Dhimitrios](#).

No. 3 Section (Lieutenant Chapman) remained with a troop of field guns and the two squadrons of Divisional Cavalry on the New Zealand sector of the [Aliakmon](#) line, which stretched from the little fishing village with the big name— [Neon Elevation](#)—about 15 miles westward to the Australian sector. Company Headquarters (Captain Woolcott) moved close to [Kokkinoplos](#) but Major Rudd stayed at [Kalokhori](#) in touch with Lieutenant Chapman, whose sappers were manning road blocks and mined bridges between the [Aliakmon River](#) and [Olympus](#).

Nineteenth Army Troops Company found itself even more spread out than it was before:

No. 1 Section (Lieutenant Jones) left [Katerini](#) by a coastal track for [Platamon](#), where 21 Battalion was digging in along a ridge running from Mt Olympus to the sea. The railway from [Katerini](#) to [Larisa](#) skirted the beach at that point and there was a tunnel through the ridge. The job was to prepare the tunnel for demolition without

impeding the traffic. It was thought most unlikely that the enemy would move in any force against [Platamon](#) for the road was ill defined and not capable of carrying much heavy traffic.

No. 2 Section remained at [Ay Dhimitrios](#) repairing a fast deteriorating road surface.

No. 4 Section left the anti-tank ditches and reinforced No. 2 on the pass road. Lieutenant Page made his headquarters at the [Gibraltar](#) feature near the left flank of 22 Battalion.

No. 3 Section (Lieutenant Collins) stopped digging shelters for Force Headquarters at [Tsaritsani](#) (it had already decided to move somewhere else) and a detachment was sent to strengthen bridges west of the New Zealand sector for the passage of [Anzac Corps](#) tanks, and at the same time prepare the bridges for demolition. It returned on the 13th to [Tsaritsani](#).

E and M Section went with Company Headquarters to [Pithion](#), near [Divisional Headquarters](#) at [Dholikhi](#). Some worked on roads in the vicinity and the rest began to erect its plant.

The New Zealand Division, instead of holding a river line across a plain (or as near to a plain as a country lying along a seismic fault and convulsed by aeons of earthquakes could provide) was holding passes through a tangled mass of mountain ridges that broke down into narrow valleys; communications were foot or bridle tracks, where a mile as the crow flies meant hours of mountaineering.

The reader must now visualise a situation where the enemy held absolute air superiority. Why it was so is not the province of this history to explain in any detail. Shortly, there were few planes for the same reason that there were not enough troops—more were just not available, and those aircraft that were there were overwhelmed by numbers. They put up a gallant fight but did not last long.

The next three days <sup>17</sup> were spent in waiting for the oncoming enemy. The weather, up till then generally fine, broke with misty rain and low cloud. Reconnaissance planes daily showed their black crosses over [Olympus](#) but they were more objects of interest than alarm to the busy sappers.

The Germans and Italians met at [Florina](#) in [Albania](#) and the Greek armies, with only horse-transport and no anti-aircraft guns, were disintegrating. Sixteenth Australian Infantry Brigade was marching south across the ranges to fit in between 5 and 4 Brigades.

Out on the left flank the [Luftwaffe](#) was more active and Kelsall's section was dive-bombed while it worked. It was an unnerving experience to have planes plummeting out of the sky, screaming like banshees in pain. The noise was supposed to upset the troops on the ground and was not without its effect; later the German refinement to ground strafing was assessed at its true value—merely to put the wind up raw troops. But there was nothing tranquillising in the sight of bombs, up to a thousand pounds in weight, hurtling through the air and apparently going to drop on the same spot that the viewer stood on.

German advanced elements felt their way up to the [Aliakmon River](#) (12 April) and a motor-bike patrol surveyed the blown bridges. Those who were not machine-gunned by cavalry armoured cars hull down behind the south stopbank departed with some expedition and later in the day enemy infantry tried to launch pontoons. [Colonel Clifton](#), who had been ceaselessly traversing the whole area since the withdrawal began, describes what followed:

'... over the northern stop bank poured hundreds of infantry, carrying folded assault boats. Jammed in the thirty yards flat between stop bank and water, with Vickers guns firing in enfilade up and down the river, they never had Buckley's chance. Three determined attempts failed, leaving bodies and shattered boats along the stained river's edge or floating down to the sea. Very much on the alert, the New Zealanders peered through the night rain, expecting the right answer—a night assault—but nothing happened until further heavy ineffective shelling next morning, to which the four twenty-five-pounders vigorously replied. In the late afternoon, according to plan and under cover of soaking rain, the cavalry pulled back. They were delighted with their first scrap and left the river most reluctantly.'<sup>18</sup>

But more menacing was the fact that the [Monastir Gap](#) was being forced, with the consequent threat to the [Anzac Corps](#) left flank.

Easter Sunday, 14 April, opened fine and sunny. At [Platamon](#), 21 Battalion,

isolated on its ridge between the mountain and the sea, was working on its positions and enjoying the warmth. No. 1 Section, 19 Army Troops Company, was adding a few finishing touches to the [Platamon](#) tunnel by mining the track over the ridge and was making some home-made grenades for the infantry, who had not been supplied with those amenities. Lieutenant Jones, however, was not very happy about the tunnel. He had had only about one-fifth of the explosives necessary for a proper job and no tools for laying the charges; a compressor is not an Army Troops Company tool, and driving holes in the concreted sides of a tunnel with a pick is not a recognised method of preparing a demolition.

A part of Lieutenant Jones's demolition equipment consisted of a naval depth-charge which had been obtained in an irregular manner by [Colonel Clifton](#). He had been told of the use of such charges on roads and bridges in [Norway](#) and had without any authority whatsoever obtained forty from the naval authorities in [Alexandria](#) and then talked the captain of his transport into carrying them to [Greece](#). The mines used on the [Platamon](#) ridge had a longer history but an equally irregular origin. When the Second Echelon was withdrawn from its anti-invasion role in England, 7 Field Company managed to avoid handing back much of its demolition and anti-tank stores, which were eventually shared among the other engineer units in [Greece](#). Major Hanson confesses:

'These mines were brought by 7 Field Company from U.K. and closely guarded until arrival in [Greece](#). We had to talk very persuasively to the shipping authorities in England before we were allowed to take the mines with us. This was not to be our greatest obstacle however. The shipment from Egypt to [Greece](#) presented many problems, but in this case I don't think the shipping people were notified that so many of our trucks were loaded with mines. My arguments were that a bn of machine gunners or infantry would not embark without taking front line ammunition, and in the same way engineers should not move without at least some supply of mines. Lt [Rix-Trott](#) <sup>19</sup> was a wizard in achieving what we wanted and he got those mines to [Greece](#). Risks must be taken in war and I consider that our risk was justified.

'Although the engineers of Rommel's Army in the desert are usually given the credit for being the first to mine the locality of demolitions, this is not so. 7 Field Company made many demolitions more difficult by mining in [Greece](#). The bridge

demolished by Lieut [Thomas](#) <sup>20</sup> just north of [Elasson](#) was a good example where all likely by-pass routes were well mined. Demolitions by 7 Field Company on the [Lamia- Molos](#) road were also generally mined. Some effective mining was done around the demolition on the direct road route over the hills from [Elasson](#) to [Tyrnavos](#). All this was possible by virtue of bringing mines from the [United Kingdom](#).'

[General Freyberg](#) called on 21 Battalion during the afternoon with the news that successful resistance so far north was not now possible and that another withdrawal, this time to the [Thermopylae](#) line in southern [Greece](#), was under way. Twenty-first Battalion, which need expect only infantry patrols, was to hold [Platamon](#) until instructed to the contrary, and was to blow the tunnel when circumstances required it.

Circumstances required it shortly after the General's departure, when sun glinting off glass windscreens denoted the approach of an enemy force and the tunnel was blown forthwith.

The ridge rocked with the explosion and smoke poured from the tunnel openings, but on inspection it was not a satisfactory job, partly from insufficient charges and partly because cavities behind the concrete lining had absorbed some of the shock. An emergency reserve of 50 lb of gelignite was placed in a breach in the roof and brought down a lot of debris, but even so Jones estimated that the damage could be repaired within six hours. In point of fact the roof was still falling four days later, and 2 Panzer Division's diary states that the German movements were seriously hampered thereby.

No. 1 Section packed up and set out for the [Pinios Gorge](#) about six miles to the south, where the railway line crossed the river on a steel arch bridge at the far end and where road and railway track ran on opposite sides of the gorge.

In front of 5 Brigade the enemy, after the withdrawal of the cavalry screen, crossed the [Aliakmon River](#) and began making paths over the anti-tank ditches and repairing the cratered roads and blown bridges. A 'blow and go' job does not hold up engineers for long, and as it was beyond the capacity of the cavalry to impose further delay they were recalled. Lieutenant Chapman's section and Major Rudd's headquarters retired with the cavalry, the former blowing the prepared demolitions

to cover the retreat. They passed through the infantry at the mouth of the pass in the late afternoon and carried on to [Dholikhi](#). There were a few 'recce' planes overhead but nothing offensive, and for the sappers in the gorge the position was unchanged. The decision to retire had not yet been announced there.

It was still very lively on the [Servia](#) sector, with enemy columns approaching in plain view across the flats below the infantry positions. The New Zealand guns, plus some British mediums which had arrived the previous day and given the engineers a job of roadmaking, tore holes in the lines of vehicles making for the shelter of villages. By nightfall, the Kiwis were in contact with the enemy from the sea to [Servia](#) and were rather looking forward to the prospect of action on the morrow. But at 10 p.m. the brigadiers were told that the Division was not going to fight. On the contrary, 6 Brigade would cover the withdrawal of 5 and 4 Brigades and become the rearguard.

At first light (15th) 21 Battalion was attacked by infantry and later by armour and infantry, but the steepness of the ridge defeated the tanks and the fighting died down.

It is not too much to say that messages from 21 Battalion, at first thought to be bogus, describing the armour arrayed on the plain in front of [Platamon](#) ridge gave Corps Headquarters, as [Colonel Clifton](#) wrote in his diary, 'One Hell of a shock'.

There was, however, nothing bogus about the tank, infantry and motor-cycle units which tried to take possession of [Platamon](#) ridge and 16 Australian Brigade was sent to reinforce. Clearly the German intention was to push, in spite of its drawbacks, along the shortest route to [Larisa](#) and so isolate any force north of that badly battered town. And that force at that time was the main bulk of [Anzac Corps](#).

On the other side of Mt Olympus 5 Brigade spent the day watching the enemy build up, and at [Servia](#), after a cheeky attempt to rush the defences in the early morning, the position was much the same as previously. Behind the fighting troops the sappers began moving again.

Fifth Field Park was instructed to take over an RE dump a few miles south of [Larisa](#).

Seventh Field Company ceased work on the access road; the narrow track from the main pass road to [Kokkinoplos](#) had been metalled and widened where necessary and the new road formed and metalled for a distance of approximately five miles. But the gorge still remained to be crossed. The Company went by independent vehicles to [Tirnavos](#), halfway between [Elasson](#) and [Larisa](#). Lieutenant Hector's <sup>21</sup> section was detached before the move and came under command of 5 Brigade.

Sixth Field remained dispersed; Company Headquarters moved three miles south of [Elasson](#). No. 2 Section reported to 6 Brigade in the [Elasson](#) area; No. 1 was at [Servia](#) with 4 Brigade. No. 3 was still with the Divisional Cavalry along the [Elasson- Dheskati](#) road disposing of a ton and a half of explosives and 200 anti-tank mines in and around four road blocks.

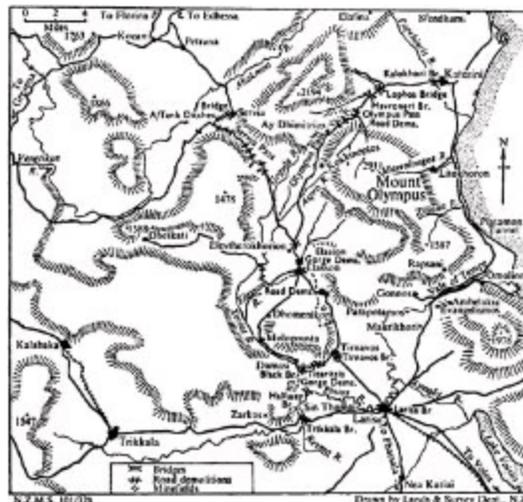
Nineteenth Army Troops Company moved again. Lieutenant Smart repacked his workshop and the section set out for [Lamia](#) where, after some vicissitudes, it arrived safely the following day. The rest of the company, less Lieutenant Jones's section at [Platamon](#), concentrated five miles south of [Larisa](#) and took possession of a deserted tented area.

The enemy attacked 21 Battalion again at dawn on the 16th and the battalion, attacked frontally by tanks and with its left flank turned, was forced off the ridge. The first Lieutenant Jones knew of the disaster was the arrival of Colonel [Macky](#) <sup>22</sup> reconnoitring the route out. Two pits had already been sunk in likely places in the road with crowbars and sundry tools borrowed from a Greek roadman, but there were no explosives to charge them. A small quantity found in a railway hut was used to block a tunnel by first hauling a box-car from a siding and then blowing off its undercarriage, blowing the rails at each end of the tunnel and demolishing a culvert.

As soon as Colonel Macky's message concerning the withdrawal had been received at [Divisional Headquarters](#), Colonel [Clifton](#) sent 19 Army Troops Company post-haste to blow the bridge at the south end of the gorge, and prepare demolitions on the road back to [Larisa](#) and on two bridges on the northern outskirts of the town. Major Langbein sent Lieutenants Page and Collins with 2 and 3 Sections to look after the [Larisa](#) bridges while he took the rest of the company to the Gorge. When he found that Jones was out of explosive he sent Sapper Les [Condgon](#) <sup>23</sup> back to the RE dump for more. Condgon's trip was fairly hair-raising, for with a large quantity of

explosive aboard, a drive through a town under heavy bombardment is nothing to look forward to. He was lucky to arrive with his load.

In the meantime parties of 21 Battalion withdrawing from [Platamon](#) had concentrated at the mouth of the gorge, but the only way to cross the river there was by a hand-operated barge and it was late in the afternoon before the men were across. The guns of the supporting section of 25-pounders were also ferried over, but the artillery quads and the battalion carriers had to bump along the railway tracks and cross over the bridge Major Langbein was working on.



**some of the demolitions done by new zealand engineers, 12–18 april 1941**

The pursuing enemy had been expected momentarily, and the reason why contact had been so easily broken was because the tanks had not only run on to the mines Jones had scattered along the track but those that did manage to struggle to the top of the ridge had been marooned there by the steepness of the descent. Third Panzer Division supplies the enemy version:

‘The tanks pressed forward along narrow mule path. Many of them shed their tracks on the boulders or split their assemblies and finally the leading troop ran on to mines. A detour was attempted. Two more tanks stuck in a swamp and another blew up on a mine and was completely burnt out. After strenuous exertions a track was cleared while the engineers carried out a very successful sweep for mines.’

After the troops had passed through, the barge was sunk and the road blown in

two places. They were, Lieutenant Jones wrote, 'reasonably effective demolitions but presented only temporary obstacles unless covered with fire as they were in such positions that they could be fairly easily bridged.'

When the last of the unit vehicles had crossed the rail bridge it was blown and dropped into the river and both sapper parties returned to [Larisa](#). Meanwhile 2 and 3 Sections, after sharing a bale of contraband tobacco with passers-by and dining off a young porker allegedly killed by bomb blast, had begun their jobs on the [Larisa](#) bridges. Sundry German pilots, judging by the attention they were lavishing on the project, were anxious to assist. Jerry, however, wanted the bridges destroyed at once and thus sorely inconvenienced the [Anzac Force](#) north of the Pinios River. One great consolation was that the sections had the free run of a deserted canteen, and between dodging streams of machine-gun bullets and whistling bombs secured ample supplies of beer, cigarettes and tinned foods, much of which was handed over to convoys passing through.

Fifth Brigade was to vacate the [Olympus Pass](#) that night and Lieutenant Hector, with sappers standing by the prepared demolitions on the pass road, worked on the best remaining site with compressor and explosives to lessen the chances of an early pursuit. The section, working in relays non-stop for twenty-four hours, blasted a fourteen-foot hole through the solid marble and then filled it with two cases of gelignite, half a ton of ammonal and the packing. All this was done to the accompaniment of the echoing roar of guns and the explosions of searching enemy shells, while faintly in the distance crackling noises rose and fell.

The last of the troops coming out by that route passed about midnight and the forward road blocks were fired. It was hoped that the charges would blow the whole road into the gorge below, but the result was only a series of craters of varying depths. Unless covered by fire they would not give the German engineers much trouble to repair.

The Maori Battalion had difficulty in disengaging and had not shown up at 3 a.m., at which time it should have been in a defensive position at the mouth of the gorge. It was to come off the hills into the gorge near Hector's last demolition, where Brigadier [Hargest](#) <sup>24</sup> was waiting to see the troops through. He ordered another half hour's wait, after which the charge was to be blown without more ado.

Right on 3.30, just as the plunger was about to be pushed down, there was a sound of men moving in the darkness. Germans or Maoris? Maoris! But it was a near thing. Fifth Brigade took up a defensive position from [Kokkinoplos](#) to [Ay Dhimitrios](#) covering the exit from the [Olympus Pass](#).

Fourth Brigade had a relatively quiet day; perhaps the enemy's success in forcing 21 Battalion off the [Platamon](#) ridge had been encouraging enough to leave the unpromising [Servia](#) area alone for the time being. The brigade was, however, in a most precarious situation for 16 Australian Brigade on its right had departed to reinforce 21 Battalion and [19 Australian Brigade](#) on its left was also moving back, followed by 26 NZ Battalion which was under its command. Farther to the left Greek divisions were dispersing under the weight of enemy air and ground attacks, so that actually 4 Brigade had both its flanks open. Lieutenant Kelsall's section stopped filling bomb craters and began preparing demolitions instead.

At this stage it should be mentioned that the withdrawal timetable had been altered and 5 Brigade was to move back from [Olympus](#) a day earlier, to take advantage of the continued misty weather in the foothills which made it possible to use the roads in daylight. Accordingly 5 Brigade began to move during the afternoon. No. 3 Section, 7 Field Company, went with the brigade. A last-minute change of route from the coastal road, which had been reported as impassable, on to the central route, which was more than full of Australian traffic, resulted in a night of stopping and starting before [Lamia](#) was reached.

With the departure of 5 Brigade the enemy was free, if the blocks in the gorge did not prevent it, to get his vehicles as far as the [Elevtherokhorion](#) crossroads, five miles north of [Elasson](#).

The [Elasson](#) area, where 6 Brigade was preparing a rearguard position, requires some description. The roads from the [Olympus](#) and [Servia](#) passes, the only practicable routes for wheeled traffic, met at [Elevtherokhorion](#) a little to the north, on the edge of the plain that surrounds [Larisa](#). [Elasson](#) itself was also a junction with the road from [Dheskati](#) almost due west (some of the Australian troops and 26 Battalion came out that way). From [Elasson](#) to [Tirnavos](#), about halfway to [Larisa](#), there were two roads, the direct eastern route winding over hills and through a pass while the longer and easier western road followed the [Xerias River](#) for some

distance. From [Tirnavos](#) the one road led direct to [Larisa](#).

Seventh Field Company, less No. 3 Section, had arrived at [Tirnavos](#) before daylight, and Major Hanson was given a number of bridges and road blocks to get ready around [Tirnavos](#) and the two roads north to [Elasson](#). Of course, there were insufficient power tools for so many jobs to be done simultaneously. Lieutenant Wildey describes how to demolish a road in constant use by transport and under continual attention by enemy bombers:

'I prepared a demolition on the hill route and placed it about a quarter of a mile down the road from the crest on the slope facing the enemy approach. I had a subsection of men from Lindell's section, I think, and Sergt I. [Larson](#).<sup>25</sup> We had no rock drills or compressor so that meant very slow hand work. The crust of the road was about 4" thick but beneath that it was solid hard marble. We had no time to attempt tunneling in under the road so I arranged to have some shafts sunk down from the centre of the road and some against the bank so that trucks could straddle our shafts as we worked. I went to the [Elasson](#) demolition to try and borrow a compressor from Lt G. Thomas but it was fully engaged and he promised it as soon as they were finished. To get our shafts down we used cold chisels to make small holes—charged these with explosive, shattered the rock and then excavated it. This was repeated until the holes were about six feet deep after working flat out in relays for about 24 hours.

'We were strafed by fighters while loading these holes and it was very disconcerting having to crouch in a hole with some hundreds of pounds of explosive while the Jerries had their fun. While we were filling in these shafts the withdrawal of vehicles nose to tail was so continuous that we bobbed down while they straddled us and continued the work of tamping as soon as a gap occurred. Lt Wheeler had a demolition on the other side of the hill and it was arranged that he fire both.'

Besides the bridge at [Elevtherokhorion](#) where Lieutenant Thomas was working, other parties were in the [Elasson Gorge](#) between the two places, at the [Elasson](#) bridge where the track from [Dheskati](#) crossed the river, at the Black Bridge where the western fork crossed the [Xerias River](#), and in the [Tataritsos Gorge](#) between the bridge and the town.

The 17th was a day of excursions and alarms around [Larisa](#). It was also a slaughterous day in [Larisa](#) for the enemy air force expended great energy in trying to block the only exit for the retreating [Anzac Corps](#). By this time, with the rain and the tremendous traffic, the roads were breaking up beyond repair and mud was the prevailing feature.

A big strain was taken by the Postal Section with units drawing rations in advance, and in consequence not being where the Divisional Postal Unit thought they were. The previous day 144 bags of mail had arrived but it had not been possible to deliver 46 bags, which were brought back to [Larisa](#). Those postal sappers, like the field engineers, were fairly versatile types and did not always restrict themselves to delivering mail. The war diary of the Divisional Postal Unit contains the following entry dated 17 April:

' [Larissa](#) heavily bombed, train abandoned by Greek railway officials. Cpl [Sangster](#),<sup>26</sup> Postal Courier, with the assistance of a soldier, brought a train into the station from about 2 miles south of [Larissa](#). One bag of mail delivered to HQ PO at [Tyrnavos](#).'

The first bad news that reached [Divisional Headquarters](#) was of the premature blowing of a bridge on the [Trikkala- Larisa](#) road. It was to have been destroyed after the Australians had crossed the winding Pinios River, but was accidentally demolished before they arrived. What happened is best told by one of the actors in the drama.

'While I was there I was in rather a poor show. I went out on a bridge on the [Larissa/ Trikkala](#) road to prepare it for demolition. It was a fairly big one of about 5 spans each 100 ft about 40 ft above water level and was of steel struss construction—about 16 ft roadway and about 14 or 15 ft high. Well I found a fellow from the 6th Fd Coy. on the job and I was talking about some of the steel I struck on a reinforced concrete bridge I had trouble with the previous day. The result was that he put on a test cut to try the steel on one of the struts. After the explosion you can imagine our consternation when we found that we had blown up the bridge by accident.... I was extremely upset but nothing could be done except divert the traffic on a 10 mile detour. It caused a devil of a lot of trouble and was made much worse when later in the day the dive bombers blew up another big bridge on the detour and the fresh

detour had to be increased to about 30 Miles.' <sup>27</sup>

What actually happened was that the decking of the bridge was set on rollers on top of the piers, with the usual allowance for expansion and contraction. The shock of the test charge, a mere five plugs of explosive, was sufficient to make the span jump the rollers and drop into the river. The result of this accidental demolition, probably the cheapest on record, was that the Australians had to feel along the Pinios River for fords and crossings with the enemy at no great distance behind them. There was another bridge farther north but an unlucky, or according to the point of view, a well aimed bomb sent it up before their arrival. The troops had to cross by punts and fords while the vehicles continued on to [Tirnavos](#) and thence to [Larisa](#).

Fifth Field Park Company had found nobody to take over from at the RE dump, which was being hammered by enemy planes. So in the absence of further orders, Captain Morrison on his own initiative sent the bulk of his company south to [Lamia](#), while he with fifteen sappers returned to [Larisa](#), where he met a very disturbed Australian officer wondering how he was to get his men across the river at the demolished [Trikkala](#) bridge. There was a punt nearby but the ropes were wearing, and it was feared that they would part and leave the troops stranded.

The upshot was that Captain Morrison was asked to fill a ninety-foot span in the bridge with no material and no men to do the work. There was a pile of bridging cribs in the engineer dump and he set about improvising a footbridge across the gap with the makeshift materials. For the non-technical reader a bridging crib is a box of steel angles 6 ft by 2 ft by 2 ft which may be fastened together with metal couplings. These were cantilevered out from one side as in the normal method of erecting a Bailey bridge, which at that time had not been invented. The crib was three feet from the far side when a defective coupling broke and the bridge folded up like a jack knife. This was being repaired when the Australians sent a message that they were all across and thank you very much. Engineers are fairly vocal in such a situation and they departed blasphemously for [Lamia](#).

The enemy did not catch up with 21 Battalion until evening, when the first tanks were stopped by the box-car in the tunnel and the removal of the barge. Sixteenth Australian Brigade had arrived and taken up a position supporting the New

Zealanders.

An idea, or perhaps a suggestion, the source of which, in spite of much inquiry, it has not been possible to ascertain, resulted in Sappers Hoot [Gibson](#) <sup>28</sup> and Frank [Lynch](#) <sup>29</sup> being asked if they would like to resume their peacetime occupations and drive a train to the [Pinios Gorge](#) and, if necessary, bring 21 Battalion out. They accepted and were taken to the [Larisa](#) station. They selected an engine, raised steam, coupled up some trucks and set off, passing through the Australians and stopping somewhere near 16 Brigade Headquarters. Nobody seemed in need of rescue but the Aussies said that maybe they had better wait until morning in case some new orders were on the way. In the morning they found that the boiler had leaked away all its water and the banked-up fire was a mass of sodden cinders. The Aussies offered them transport back to [Larisa](#) so that they could get another engine. They went, fired another engine and returned, not forgetting to load the cab with cases of beer from the hospitable Aussies. This time they were told that they had passed over country that might be full of Jerries at any time and that the bright thing to do was to return to [Larisa](#) forthwith. They saw the point and left the trucks and derelict engine where they stood.

Fifth Brigade was moving south and 4 Brigade in the [Servia](#) Pass disengaged that night (17–18 April) and moved through 6 Brigade at [Elasson](#) en route for [Molos](#). Two companies of 18 Battalion were the last troops to come off the silent ridges and climb aboard the waiting vehicles. Behind them were Lieutenant Kelsall's sappers, a section of carriers and the CO 20 Battalion, whose job as rearguard commander included ordering the firing of the demolitions.

The brigade was to be well clear of the [Servia](#) Pass before dawn but it was broad daylight when the engineers emerged into the open country. Behind them was a series of blown bridges, cratered roads, mined creeks and delayed action mines in ammunition dumps.

The vehicles were soon spotted from the air and the men were several times forced to halt and shelter from a plane that swooped along the road with blazing machine guns. There were no casualties from this attack but the extra delay was fatal. The blow fell at the moment that safety seemed assured.

'400 yds from intersection at Elevetherokhorion and a shell landed in front of the truck and SA fire was heard behind us. Jumped out, looked back and saw two tanks on the road in the middle of the convoy; coming over the hills to the NE were 6–7 vehicles bringing motorised infantry. Looking back along the convoy of which only four trucks were visible I suddenly saw away to the right coming over the ridge motorised infantry sitting up in their tracked vehicles in row of forms like toy soldiers. Forward of me at the X roads I saw two Div Cav officers Col [Carruth](#)<sup>30</sup> and Lt [Robinson](#)<sup>31</sup> who were beckoning me on. They could not fire while I was in the way I suppose. So went on passing them and round the bend where Div Cav carriers were lying nose to tail in the lee of the hill side. Went on to [Elasson](#) and through to [Molos](#).'<sup>32</sup>

[Colonel Kippenberger](#), describing the catastrophe from the rear of the column, wrote:

'... we received a particularly determined attack from the plane and we were forced to halt and take cover. I noticed that there seemed to be more fire than one would expect from a single plane attacking and then saw that one truck was ablaze about 500 yards ahead of me, and ahead of it again and about the road junction was a medium tank which I recognised as German, and I also saw another tank shooting in a southerly direction from a point about 500 yards north of the cross roads and quite close to where I stood on the road.... two or three planes were now attacking the road and the sappers both with bombs and machine guns and making it very difficult to get a clear view of what was happening.'

Sapper Jack [Farnham](#)<sup>33</sup> was among those who were cut off. 'I was in Cpl Brian Lockett's<sup>34</sup> truck well back in the convoy,' he says, 'and when we came under fire Cpl Lockett gave the order to try and get out on foot. Most of us were in a valley at the time and owing to many engineers not having had much infantry training quite a number went up over the hill side which made them a target for the MG's.'

Farnham went in another direction, and tried to capture a tank by climbing on to it and looking for a hole to fire his pistol through. There were no apertures open so he dived into the scrub and later joined [Colonel Kippenberger](#), who with half a dozen others was making for gunfire noises which he thought came from 20 Battalion rearguard in action. In all approximately forty sappers failed to escape from the

German ambush, the first severe engineer loss in the war.

The sounds of battle in which [Colonel Kippenberger](#) thought his battalion was involved was the defence of the crossroads by a force of Divisional Cavalry and anti-tank guns. Between the contestants Lieutenant Thomas and Sapper O'Malley <sup>35</sup> were waiting to put the finishing touches to a bridge just south of the road junction. These finishing touches were a naval depth-charge and thirty anti-tank mines which it was proposed to use as an overloading charge in the centre of the deck. The last vehicle of A Squadron, Divisional Cavalry, crossed under cover of the anti-tank gunners and Lieutenant Robinson gave the order to fire, remarking at the same time 'The next three are Jerry's'. The pair placed the mines and depth-charge on the bridge; the charges were fired and the bridge disappeared; both abutments vanished and the superstructure was not to be seen.

Their truck was fired on as they dashed towards the safety of the forward two-pounders, but there were no casualties apart from that caused by a missile that went through the truck and wrecked an imperial pint beer mug which Thomas had brought from New Zealand and which he greatly prized.

Their next stop was the gorge half a mile north of [Elasson](#), where five mined charges had been laid on a stretch of road built along a cliff face. As soon as the cavalry and anti-tank outposts were through, a ton of ammonal erased the road. The gap, kept under fire by our artillery, was not repaired and the enemy had to build another road on the eastern side of the hill. Thomas and his sappers then rejoined their unit at [Tirnavos](#).

It was considered imperative, after the experience of trying to share the inland road with the rest of [Anzac Corps](#), that 6 Brigade retire by the coastal road previously reported unusable for any numbers of vehicles. The part between [Larisa](#) and [Volos](#) had been under repair for months and some sectors were unmetalled. In one particularly bad piece water had saturated the foundations, but there had been no rain for twenty-four hours and it was hoped that the surface would hold until the trucks were across. [Colonel Clifton](#) was told by [General Freyberg](#) to get some sappers on to the bad patch. The only sappers available were the two sections with 6 Brigade who were to pass through [Larisa](#) that day, so while [Colonel Clifton](#) inspected the road Lieutenant [Yorke](#) <sup>36</sup> was stationed on the main road to turn any

engineers back—if he could find any.

Lieutenant Chapman and part of his section were intercepted and directed to the coast road, and later some few of No. 2 Section were likewise turned back. They were all much fatigued, but they constructed a ramp around the wet sector before pushing on to rejoin the company near [Lamia](#). Sixth Brigade and supporting arms were able to use the coast road for their retreat to the [Thermopylae](#) position.

There was no intention of trying to use the railway to bring out troops from [Larisa](#), but circumstances beyond the control of those in charge of movement made it imperative that one battalion be so moved. Lieutenant-Colonel [Gentry](#)<sup>37</sup> explains the circumstances:

'I am not sure now of the reasons for the shortage of motor transport to move [26 Bn](#), but I think that it was due to the disappearance of a British MT Coy which I had "acquired" during the move of [5 Bde](#) from the [Olympus](#) area. At any rate we knew during the morning that there was not enough MT to shift the whole of [6 Bde](#) in one lift. Alan [Ross](#),<sup>38</sup> the DAQMG, suggested the train and I went in to [Larisa](#) from [Nikaia](#) about noon to explore the possibility. In the railway station (otherwise deserted) I met two sappers from 19 A Tps, one of whom said he had been an engine driver and gave his opinion that it would not be difficult to organise a train if the dive bombers would allow it. I told him to have a good look at the engines and rolling stock and then went back to Div HQ and got the CRE on the job with verbal instructions to get the train assembled at a suitable siding west of [Larisa](#) ready to move as soon as it was dark. There were progress reports during the afternoon and the DAAG (Brooke-White) was at the train before it departed. I saw the CO [26 Bn](#) myself and together we fixed the destination [Kephissokhori](#) from my 1/1,000,000 tourist map. None of us appreciated how hazardous the journey would be.'

The sappers referred to by Colonel Gentry were Gibson and Lynch, recently returned from the [Pinios Gorge](#). Nineteenth Army Troops Company was standing by its trucks ready to move south when volunteers with railway experience were called for. Sappers L. L. [Smith](#),<sup>39</sup> G. Leuty,<sup>40</sup> O. G. [Bradley](#)<sup>41</sup> and G. L. [Hill](#)<sup>42</sup> stepped forward and were taken in to [Larisa](#). Bradley was uneasy about his personal gear left behind as it contained, amongst other items, a case of purloined whisky. He had good reason to feel apprehensive for he never saw any of it again.

In the meantime Lieutenant Jones had blown the points in the yard but had left the main line clear, so after picking their third engine the crew went south a few miles to obtain trucks and returned with fifteen to a siding just outside [Larisa](#). Twenty-sixth Battalion arrived about 5 p.m. and was asked to help fill the water tender. One of the trucks contained petrol in four-gallon tins, which the troops opened with bayonets and used to form a bucket brigade. The water system was not functioning but there was a well fifty yards away which supplied the deficiency, and at 8.30 p.m. the ' [26 Bn Special](#)' departed. The battalion was taking more risks than it knew for the crew had never been over the line, the track signal system was not working, it was necessary to drive without lights, and the engine brakes were indifferent. The first 40 miles took four hours and involved collisions with jiggers abandoned on up-grades and with a railcar.

The night was pitch black and rain was falling when the ' [26 Bn Special](#)' clattered into [Demerli](#) station and collided with another engine and several trucks. The [Larisa](#) engine stood the impact very well, and though it was possible to move the obstruction to a siding, the difficulty was to decide which fork of the junction went to where. The decision was made and the journey continued with a party going forward to examine such culverts and viaducts as the crew managed to see.

A few miles past [Demerli](#) junction the track ran by the [Larisa- Lamia](#) road, which was a blaze of lights from convoys sacrificing safety for speed. The crew decided that one more light would make no difference and switched on the headlight. No light was forthcoming. The [Demerli](#) collision had wrecked the mechanism but the cab lights functioned, which was some help. Grades became steeper on the climb through the [Dhomokos Pass](#) and the overladen engine's speed dropped, until, on a steep pinch just before first light, it crawled to a stop.

All brakes were applied, five trucks uncoupled, and the troops reseated and squeezed up tighter. Stones were placed behind the wheels while a head of steam was built up. There was no braking system through the train and the hand brakes in the trucks were operated on a set of signals from a torch waved from the engine. The technical problem was to get the maximum pressure of steam without blowing the safety valve. Gibson waited to the last possible moment before he opened the regulator, the wheels gripped on the sanded rails, the couplings drew tight and they

were away again.

The worst appeared to be over with the coming of day, but the steep gradients on the south side of the pass were too much for the engine's brakes. Gibson tried everything he knew but the speed increased until the train was virtually out of control. The engine screamed and lurched around bends faster and faster until only the hand of Providence could save the situation. At almost the last possible moment they collided with a jigger, sent the top flying in one direction, a wheel off an axle in another, while the axle with its remaining wheel got tangled in the brake rods and helped to stop the train. While some of the crew extricated the axle the others worked on the brakes and managed to tighten them enough to keep the train under control. The last hazard was the [Kalivia](#) junction. Were the points open for [Lamia](#)? They were, and the last train from [Larisa](#) pulled up outside the [Lamia](#) marshalling yards. The sapper story stops here after fourteen hours of by guess or by God driving.

Ironically enough, the men who had brought 26 Battalion through to safety were by mischance left behind when the unit moved on, and they had to find their own way to the reinforcement camp at [Voula](#). From there they were taken to the illfated [Kalamata](#) beach, fought as infantry until the beach was surrendered, and only Gibson and Lynch evaded capture.

To return to the battle area. By last light on the 18th 21 Battalion had been bypassed by tanks and forced in to the hills, 16 Australian Brigade had been dispersed, and only the New Zealand Artillery barred the enemy approach to [Larisa](#) when darkness fell and immobilised the enemy armour. Sixth Brigade, still in position near [Elasson](#), was to withdraw that night. Seventh Field Company preceded the infantry, but Major Hanson followed behind with a small demolition party firing road blocks and bridges. As they passed through [Larisa](#) a few hours before dawn, headlights, flares and tracer were seen in the direction of the [Pinios Gorge](#), but they got through without incident and rejoined the company to find that the main body had sustained its first casualties, two killed and three wounded.

Second Panzer Division was in [Larisa](#) at 6 a.m.

By 20 April [Anzac Corps](#) had completed its withdrawal to the [Thermopylae](#) line.

Here the New Zealand Division was on the right from the sea to the mountains, where 6 Australian Division covered the [Brallos Pass](#) where the road and railway wound through the [Pindus Mountains](#).

The New Zealanders were holding an immensely strong position, the classic Pass of [Thermopylae](#) and the gateway to southern [Greece](#). The pass was not as narrow as it was in 480 BC when the Spartan king Leonidas made his stand against the Persians, nor as it was in 353 BC when Philip of Macedon decided that it was too tough a position to force. Nevertheless it posed some problems even for an army equipped with aircraft and armour.

All engineer units were dispersed along the road from [Thermopylae](#) southwards, with squads responsible for lengths of road that just had to be kept open. The system was to dash out whenever the road was cratered and repair the damage before the return of the planes with another load of bombs.

A party of 7 Field Company (Lieutenants Lindell and Hector) went forward by truck to the fishing village of [Stilis](#), at the head of the bay to the east of [Lamia](#), to destroy a fairly numerous fleet of small craft that the enemy might use for a seaborne landing farther down the coast.

The effect of an anti-tank mine on a launch was quite spectacular for it disintegrated, according to Lieutenant Lindell, with a loud bang and threw debris high in the air. The hulls of dinghies were bashed in with picks and hammers and the sappers returned via a side road, accompanied by two platoons of 20 Battalion which had been sent to act as a covering party. They were lucky to escape without a brush with the enemy, for at midday advanced elements of 5 Panzer Division were in [Dhomokos](#), only 15 miles to the north.

The German 12 [Army](#) put a different interpretation on these activities. Its evening report to GHQ included the entry, 'Greek civilians trying to rescue German airmen forced down into the sea east of [Lamia](#) were fired on by the English and all their boats burnt.'<sup>43</sup>

Another detachment, this time from 6 Field Company under Major Rudd, went forward after last light and demolished a bridge on the [Lamia- Volos](#) road. Lieutenant Wildey fired another bridge on the [Lamia- Molos](#) road but the next day

Brigadier Hargest ordered further work to be done on the wreck as he feared that it might still be usable by the enemy. Lieutenant Hector went out after dark and laid more charges. It was tricky work as no covering party was provided and Hector had to wade backwards and forwards carrying his explosives through a strongly flowing current. While he was at his work the infantry behind him opened up and the enemy replied, so that he was between two fires, a most difficult and dangerous position, but he carried on and completed the demolition.

The similarity between the positions of [Anzac Corps](#) and Philip of Macedon was carried a step further. Philip outflanked the Athenians at the [Thermopylae Pass](#) with the aid of Fifth Columnists who led him around the defences by secret paths; the [Anzac Corps](#) was undone by the capitulation of the Greek Army, which presented the Germans with an open left flank.

Before the weighty decisions being taken were implemented, 3 Section, 7 Field Company, was ordered to send a party up to [Lamia](#) and drive three trains down the line towards [Athens](#). Two were got safely away but the work of coupling up the third was repeatedly interrupted from the air. Finally some Australian engineers, working independently, blew the railway viaduct, so that when the train was assembled the crew had nowhere to go. They ran their train on to the broken bridge and watched it crash into the river before they set out to walk back to their lines. They were not expected and very unwelcome. It was too dark to establish their identity and they spent a very cold and miserable night waiting for dawn. An English officer who had joined them went forward waving a white handkerchief, introduced himself, and said that there were New Zealand sappers out in front. It was some hours later before his identity was established and a tired, cold and hungry party of sappers was able to report to its unit.

On the afternoon of the 22nd [Colonel Clifton](#) brought the news—the Imperial Forces were evacuating [Greece](#) and he, to his unconcealed delight, had been given command of the divisional rearguard. Major Rudd became acting CRE and Lieutenant Kelsall, in the absence of Captain Woolcott patrolling the channel between [Euboea Island](#) and the mainland in a fishing launch, took temporary command of 6 Field Company.

The plan for the withdrawal from [Thermopylae](#) along the road [Atalandi-](#)

Levadhia— Thebes, thence either via Khalkis or Elevisis to Athens, was for 4 Brigade to move to a covering position in the Thebes ( Kriekouki) Pass forthwith, while 5 Brigade would concentrate in the area Ay Konstandinos and move on the night 23–24 April to embarkation beaches near Athens. Sixth Brigade would disengage on the night 24–25 April and pass through 4 Brigade en route for its embarkation beaches.

The Movement Order ended: 'Engineer units will carry tools and working stores including truck compressor equipment but apart from personal gear, fighting equipment and transport, everything else will be destroyed. No attempt will be made to salvage vehicles breaking down en route. They will be put off the road and rendered useless but not burned.'

Clifton Force, including a detachment of 7 Field Company under Lieutenant Wildey, would cover the withdrawal of 6 Brigade. The engineer duty was to do urgent road repairs and blow demolitions after the brigade group withdrew.

Sixth Field Company packed up and followed the 4 Brigade column that night. Before first light it was dispersed under olive trees a few miles south of Thebes, awaiting instructions and watching enemy fighter planes sweeping up and down the road. Lieutenant Kelsall was called to Brigade Headquarters and told that Australian sappers were taking care of the Kriekouki Pass and that his company was to move down the road towards Athens until it came to Elevisis, where it was to turn right on to the Elevisis– Megara– Corinth highway. That, he was instructed, was the route 4 Brigade was to take to the embarkation beaches; also it was infested by dive-bombers, and blocked by refugees and their carts making for the Peloponnese.

Sixth Field was to be responsible for the road from Elevisis to Corinth, prepare the bridge over the Corinth Canal for demolition, repair it if damaged if at all possible, and in any case was to see that 4 Brigade could get across by pontoon. Finally the Company would join Clifton Force, blow the road behind them, then send the bridge up, thus placing a sizable barrier between themselves and the enemy.

The Corinth Canal, a sea-level passage with walls 260 feet high, cuts across a four-mile neck of land between the Gulf of Corinth and the Gulf of Aegina and makes an island of the Peloponnese. Corinth itself is situated some three miles from the site of the ancient city which was the address of St. Paul's Epistles to the Corinthians,

and which was destroyed by an earthquake in the middle of last century.

Lieutenant Chapman went ahead to choose a bivouac area, and after dark the thirty-five trucks of the company got on to a road already packed with Australian and 5 Brigade transport making for [Athens](#). Fifth Field Park, 7 Field Company, less Lieutenant Wildey's detachment, 19 Army Troops Company and Engineer Headquarters were in the New Zealand convoy. Nineteenth Army Troops and Headquarters carried on for the 140-mile run to [Porto Rafti](#) beach, but 5 Field Park and 7 Field Company, less No. 3 Section still with 5 Brigade, were detached south of [Thebes](#) to assist the Australians if needed.

The Company dispersed in the area chosen by Lieutenant Chapman about seven miles from the [Elevisis](#) turnoff, but in the morning what appeared to be a very quiet secluded spot was found to be between the edge of the sea, where a still smoking grounded steamer acted as a magnet for every German plane near [Athens](#), and the road, along which enemy planes made progress in daylight almost impossible.

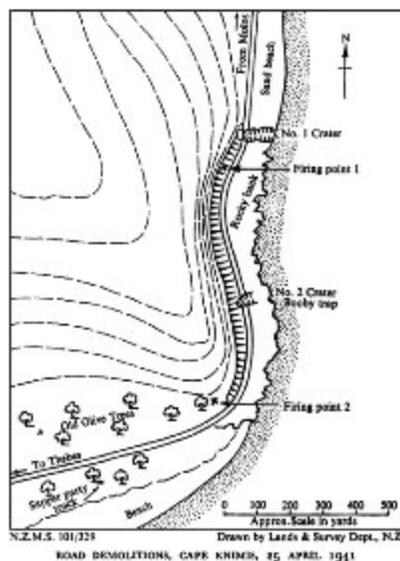
Lieutenant Wheeler's section (No. 2) was detailed to destroy all pontoons and ferry cables on the enemy side of the canal, to repair the bridge if damaged, and at the same time load it with explosives. He made his headquarters in a gully about a mile and a half west of the canal and moved his vehicles over after dark.

Lieutenant Chapman's section (No. 3) had the 30-mile stretch of road between the bridge and the [Elevisis](#) turnoff to keep in order. It worked in two sub-sections with four-hour shifts and, between air raids, manhandled trucks, dead donkeys, dead humans (mostly civilian) out of the long cuttings, as well as sinking demolition holes in suitable places. The survivors of the section caught in the [Servia](#) Pass (No. 1) were held in reserve under Lieutenant [Wells](#).<sup>44</sup>

While 6 Field Company caught up some sleep that night, 19 Army Troops Company and Headquarters embarked for the twelve-hour journey to [Crete](#), where they were to stage while the rest of the Division left [Greece](#); 7 Field and 5 Field Park, not wanted for work at [Thebes](#), went on to [Porto Rafti](#) and again hid up. Sixth Brigade, standing between a New Zealand field gun versus German tank battle, held off its opposite numbers and moved out according to its own schedule after dark that night (24–25 April); 72 Infantry Division Advance Guard earned its commander a

Knight's Cross by capturing the New Zealand position a couple of hours after the last Kiwi had left; Clifton Force waited around Cape Knimis to take over its rearguard role as soon as 6 Brigade passed; and Wildey's demolition party stood by the sites of two projected road blocks that require further explanation.

The first demolition, contrived by 5 Field Park Company under the direction of Captain Pemberton,<sup>45</sup> was at a spot where the road at the bottom of a steep hill was separated from the sea by a narrow strip of sand. Two half-ton charges were so placed that, on firing, the sea would flow in and create a water obstacle. The second demolition prepared by 7 Field Company under Captain Ferguson<sup>46</sup> was about 300 yards farther on at a spot where the road was cut along the cliff face 50 feet above the sea.



**road demolitions, cape knimis, 25 april 1941**

Clifton Force was deployed to cover these points with fire and hoped most earnestly that the German engineers would essay the task of throwing bridges over the gaps which would ensue when the charges were detonated.

Another but more light-hearted obstacle to the forcing of the road blocks was provided by Captain Carrie, who had remained with Colonel Clifton. He had obtained one of the 'No Entry' notices strewn around Divisional HQ areas, added his own composition 'Achtung! Durchang Verboten! Auf Wiedersehen' and proposed placing it conspicuously.

The first troops were due at midnight, but it was hours after that time before anything approached and the worried rearguard thought that perhaps the brigade had been cut off. Lieutenant Wildey is eloquent:

'Was it Jerry or our own troops? That was the difficult question. Col Clifton got me to cover him with my tommy gun while we moved quietly forward and challenged the leading vehicle. There was an argument about a pass word and if I remember correctly some strong NZ cusswords provided reasonable proof of our identity, for all safety catches were forward at that moment and trigger fingers itchy. Col Clifton gave the order for full speed ahead with lights on and with the reminder that the column was crossing a large explosive charge, the trucks moved off smartly, headed for Athens.'

When the last vehicles were past, the charges were blown and then, as Wildey says, evil thoughts came into his mind. He took an anti-tank mine and the 'No Entry' notice and with the help of Sapper McCutcheon<sup>47</sup> did things to primers and wires which would ensure a speedy entry into Valhalla to any warrior who lifted the notice. If some German engineers were rapidly translated from this world to the next they could not say that they were not warned.

The pair rejoined their party and caught up with Colonel Clifton in Thebes, where he directed them to report back to Major Hanson at the embarkation beaches beyond Athens. He himself was going south on a new assignment to arrange final demolitions for the withdrawal into the Peloponnese. They passed through the city at midday and, again quoting Wildey, 'The streets were crowded with people on either side and as we drove our battered truck along with its begrimed and unshaven party aboard, the people cheered and threw us bunches of flowers, saying in poor English "Come again New Zealand".'



The 7 Field and 5 Field Park Companies moved again that night to the [Porto Rafti](#) lying-up area and dispersed for another day of inactivity. A detachment of twelve sappers commanded by Lieutenant C. F. Skinner was sent to [Markopoulon](#), about five miles inland, to cover a road block where they were to remain until dusk. Their offensive armament consisted of two anti-tank rifles and two Bren guns, all the company possessed, as well as their own personal arms, and they were to hold up any patrols that might come from [Khalkis](#) or [Euboea Island](#). After dark the men drained the oil sumps and ran the engines of their trucks until they seized, then formed up with some artillery and other units which were embarking that night. The sappers were spread over three ships, some on the cruiser [Carlisle](#), some on the destroyer [Kandahar](#) and the rest on the transport [Salween](#). Lieutenant Thomas and about thirty of 7 Field Company plus Lieutenant Skinner's party were on the [Salween](#), which sailed direct to [Alexandria](#) while the main convoy went to [Crete](#).

Sixth Field Company, which we left on the road to and on the bridge over the [Corinth Canal](#), did not embark as a company. At the time the others were moving to the beaches, the company was wandering in small groups all over southern [Greece](#). That is, those of them who were not already prisoners of war.

This was the way of it—Lieutenant Kelsall decided to move to a quieter area nearer [Corinth](#) so, leaving Sergeant Jay and a sub-section guarding mined road blocks, the trucks and crews were moved after dark (25–26 April) into a lemon orchard a couple of miles south of the bridge, where it was possible to get some sleep.

The sleep had a sudden termination at daybreak. Kelsall's diary explains why:

`0530 hrs: Heard noise of straffing and was told by sentry that paratroops were landing on the undulating ground to the E. Dumfounded. Started to put the orchard in a state of defence: 1 and 3 Secs running N-S and facing E and S. HQ Sec covering the SW. We could not see the bridge for the trees and we were probably not seen ourselves in the orchard. The paratroopers were jumping from about 500' and fighter planes were skimming the tops of tall pines bordering the orchard. It was possible to see inside the planes thro' the open doors.

`As my troops were not trained infantry, told the sec commanders to husband ammunition and not to fire until the enemy were at least 400x away. No. 3 section a bit eager must have fired at 800x and perhaps let the enemy know we were there.... At 0650 hrs a terrific explosion and it seemed to me that the br had gone up.... The show began with fire from automatics and when our resistance stiffened mortars were brought into action....

`0900 hrs: Decided to make a break, ordered all trucks to be emptied of equipment with the intention of racing trucks out and going south. I climbed a tree ... and saw to my horror blazing tanks of 4H—at least three (men had run to them and then been shot at I think), and Bren carriers in an open field. The Messerschmidts were taking to them very successfully and the rd out was dead straight and ideal for straffing. With 6 wheeled 30 cwt Morris trucks decided to stay and fight....

`1300 hrs: Running very short of ammo—no communication with the bridge. I decided to make a break with the rest of the Coy—140 men. We divided into small groups (NCO and 6 ORs) to fight our way out and make for the coast.

`1430: Decided to order the move....'

No. 2 Section was wakened by the usual morning hate and was preparing for the day's work when, to their paralytic astonishment, they saw parachutes dropping from the sky. Some stood petrified with amazement, others grabbed their rifles and waited for instructions as to what to do next.

Lieutenant Wheeler ordered them to disperse before they were surrounded by the waves of dropping paratroops and to concentrate again behind [Corinth](#) village.

Some made it but the majority did not, for there were Germans all over the area. Major Rudd, who as acting CRE had his small headquarters in rear of 6 Field Company, went forward to see what was happening and collected approximately twenty sappers whom he led to eventual embarkation at [Monemvasia](#). Wheeler with another dozen or so embarked after much marching and hiding at [Argos](#). Lieutenants Kelsall and Wells and party were betrayed, one of the few cases on record; Lieutenant Chapman with twenty others, after island hopping in borrowed and stolen boats, evaded capture; another score or so found various embarkation beaches; still others got as far as [Kalamata](#) beach, where 5000 waited and only 500 could be taken; some escaped even after that, but approximately seventy more sappers of 6 Field Company joined the forty taken at the [Servia](#) Pass.

It only remains to describe the end of the [Corinth](#) bridge, and to do so it is necessary to go back in time a few days.

It was originally intended to embark 4 Brigade from the [Athens](#) area, but force of circumstances had compelled a change of plan and 4 Brigade Group was now to follow 6 Brigade down into the [Peloponnese](#), only a few hours' run from [Crete](#). Lieutenant Wheeler's instructions regarding the canal bridge, pontoon bridges, ferries, etc., ended with the intimation that the order to destroy the bridge would be given in writing by an officer from Force Headquarters, and that he (Wheeler) would ensure that the bridge did not fall into enemy hands intact.

Some time during the 25th and unknown to Wheeler, who was working on the pontoon bridge moored to the far bank of the canal, a staff officer whom it has not been possible to identify added a verbal order that on no account was the bridge to be demolished for another twenty-four hours, during which time 4 Brigade Group would pass across. From the section camp a mile and a half away, Lieutenant Wheeler was sure the bridge had been blown.

'In all the complexity of noise it had been impossible to tell whether the bridge had been fired but I didn't entertain any doubt. The picquet had clear written orders. "Under no conditions will you allow the bridge to fall into enemy hands intact." But the fate of the boys themselves was more uncertain. Their chances would be pretty lean.

'It was not given to me to know that a few hours earlier that a Very Senior Officer had stopped to have a word with the sappers. And that he had firmly impressed on them that there was another convoy yet to pass through. He added that "under no conditions was the bridge to be destroyed for at least twenty four hours". Which put the n.c.o. in charge of the party in rather a spot when the band began to play in the morning. Disobey a written order from a subaltern or a verbal order from a Staff Officer with red braid all around his hat? He did the obvious thing—left the bridge cold, jumped a truck, came out through a hail of lead. Happily ignorant of this development, I watched the fourth or fifth row of parachutes laid neatly across what had been our camp. Not a sign of the lads and another trio of 52's hove in sight. I deemed it high time to head for the horizon.'

<sup>48</sup>

The bridge was thus seized intact, no mean prize to a commander who wanted to push south after the elusive Anzacs. And no mean embarrassment to a commander who had planned to move the rest of his division into the [Peloponnese](#) and embark from beaches there.

The German elation terminated when, with a roar followed by an immense smoke cloud, the structure collapsed into the canal.

A mass of conflicting evidence has been collected regarding the cause of the explosion that wrecked the [Corinth](#) bridge, but there is at least one witness who is quite certain that two New Zealand sappers lost their lives in the attempt.

Here is the testimony of Gunner H. E. [Smith](#)<sup>49</sup> who had been wounded at [Tempe](#), missed embarkation at [Megara](#), and was being taken by truck to another beach:

'We were hardly across the bridge, travelling south, when the blitz started.... we jumped the transport and I made for a clump of rocks. I was still hugging a bren and some ammo picked up the night before. It was here that I first met the two engineers. One remarked that if Jerry hit the bridge she'd go sky high as it was loaded to the gills with TNT. The longer the raid continued the more they remarked on it not getting hit. They couldn't understand it.... I looked up and saw the Parachutists dropping. We jumped up, and being firmly convinced that the parachutists wouldn't take prisoners we decided to sell out as dear as possible. I

made for a mound, followed by the two sappers and it was then we saw the bridge still intact. One sapper said to the other, "They're after that bridge Boss" (It was either Boss or Bossie).... It was here that the idea came to blow the bridge. There was a hurried huddle to see whether the three of us went or one or two. It was decided on two and I'd cover with the bren as the Huns were well on the ground and making things hot. From where I was I could give complete cover as the bridge was plain ahead. The next second the boys were gone and so long as I could I kept them in my sight, but believe me, trying to keep up with the Huns didn't leave much time.

'Quite a fair bunch of Huns were coming in from the northern end and soon apparently guessed what was going on and endeavoured to stop them. Just short of the bridge, one of the boys fell. The other made the bridge for sure as he came right in sight. For a moment I thought he'd been hit as he seemed to fall but the next I saw he was coming back. He looked to have cleared the bridge when it seemed to heave and the next moment she was sky high. Considering the sapper's position it doesn't surprise me to hear there's no trace of his or the other sapper's body as by the blast and the rock that came over they must have been blown to pieces.'

There is an equally convincing account by two British officers who believed that they exploded the charges by rifle fire. But no trace was ever found of Lance-Corporal ('Bos') [Boswell](#) <sup>50</sup> and Sapper [Thornton](#) <sup>51</sup> of 6 Field Company.

[Colonel Clifton](#) with his party, reduced to Captain [Carrie](#), Captain [Macfarlane](#) <sup>52</sup> and three sappers, crossed the [Corinth](#) bridge seven hours before its capture and located [Divisional Headquarters](#) late in the afternoon of 26 April. There he was told that it was essential to blow the road behind the brigade group because the enemy held the [Corinth Canal](#). Sixth Field Company had been caught in an airborne attack; there were no anti-aircraft guns, no engineers and no explosives because the Australian sappers with 4 Brigade were north of the canal.

His own resources were not exactly extensive, for besides his manpower of one medical officer, an adjutant and three sappers, all he had in the car were two pounds of gelnite, a few detonators and a small length of fuse. The answer, the only answer, was depth-charges from the Navy. A dash to [Milo](#) produced a depth-charge from a destroyer that came in after dark and three more were taken from a stranded Greek destroyer at [Monemvasia](#) the next day (27th). Sixth Brigade was to

come into the area that night and lie up until the following night, when it was to be taken off. A suitable length of road and a bridge had been selected for demolition about 16 miles away from the beach, and after the brigade had passed the depth-charges were placed in position and exploded. The road was little damaged but the bridge vanished. For good measure the last charge was placed in a culvert and left to be fired by the Pioneer Officer of 24 Battalion. He set it off at precisely one minute to midnight, 28 April, the last engineer demolition in Greece. Colonel Clifton and party embarked on the destroyer *Hotspur* in the early hours, and at Suda Bay transferred to the *Comliebank* en route for Egypt.

So ended the engineers' first major campaign. In eighteen days they had destroyed almost more roads and bridges than they could build in their collective lifetime. But they had slowed up the enemy advance sufficiently to permit the Division to escape more or less intact from Greece. And this was accomplished in spite of difficulties in securing explosives and a shortage of proper equipment.

Engineer casualties in Greece were:

5 Field Park  
Company

Wounded 2 PW 3

6 Field Company

Killed 11 Died of wounds 5 Presumed killed 2

Wounded 10 PW 104 Wounded and PW 13

7 Field Company

Killed 2 Wounded 3 Presumed killed 1

Wounded and PW 5 PW 14

19 Army Troops Company

PW 10 Wounded and PW 1

10 Railway  
Construction  
Company

PW 1

16

Railway  
Operating  
Company

Killed 1

Divisional

Note: Prisoners of war from all units except 6 Field Company were from the reinforcement camp at [Voula](#) and were taken at [Kalamata](#).

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<sup>1</sup> Report by GOC 2 NZEF, Maj-Gen [Freyberg](#), on 'The Campaign in Greece'.

<sup>2</sup> [Gavin Long](#), [Greece, Crete and Syria](#).

<sup>3</sup> Capt St.G. W. Chapman, m.i.d.; [Christchurch](#); born [Lower Hutt](#), 23 Apr 1915; engineering student; wounded 26 Apr 1941.

<sup>4</sup> Maj-Gen Rt. Hon. Sir Harold Barrowclough, PC, KCMG, CB, DSO and bar, MC, ED, m.i.d., MC (Gk), Legion of Merit (US), Croix de Guerre (Fr); [Wellington](#); born [Masterton](#), 23 Jun 1894; barrister and solicitor; NZ Rifle Bde 1915–19 (CO 4 Bn); comd 7 NZ Inf Bde in UK, 1940; 6 Bde May 1940–Feb 1942; GOC 2 NZEF in [Pacific](#) and GOC 3 NZ Div, Aug 1942–Oct 1944; Chief Justice of New Zealand.

<sup>5</sup> Lt-Gen [Sir Edward Puttick](#), KCB, DSO and bar, m.i.d., MC (Gk), Legion of Merit (US); [Wellington](#); born [Timaru](#), 26 Jun 1890; Regular soldier; NZ Rifle Bde 1914–19 (CO 3 Bn); comd 4 Bde Jan 1940–Aug 1941; 2 NZ Div ( [Crete](#)) 29 Apr–27 May 1941; CGS and GOC NZ Military Forces, Aug 1941–Dec 1945.

<sup>6</sup> Capt [R. J. Collins](#); born [Auckland](#), 7 Nov 1913; architect; p.w. 1 Jun 1941.

<sup>7</sup> More usually [Tsaritsani](#), the version used hereafter.

<sup>8</sup> Lt [L. C. Smart](#); born [Christchurch](#), 22 Mar 1895; mechanic overseer; wounded and p.w. 1 Jun 1941.

<sup>9</sup> Maj [H. C. Page](#), m.i.d.; [Auckland](#); born NZ 26 Jan 1917; civil engineer.

<sup>10</sup> Capt [F. W. O. Jones](#); [Wellington](#); born [Wellington](#), 14 Sep 1911; civil

engineer; p.w. 1 Jun 1941.

<sup>11</sup> [Capt D. M. Patterson](#); Waikari; born [Christchurch](#), 24 Oct 1910; civil engineer; wounded 22 May 1941.

<sup>12</sup> Workers were paid 70 drachmae a day. A drachma was worth approximately ½d.

<sup>13</sup> [Cpl R. Sweet](#); born NZ 10 Sep 1914; timberworker; p.w. 1 Jun 1941.

<sup>14</sup> This section of 9 Ry Svy Coy was evacuated from [Greece](#) on 18 April.

<sup>15</sup> [Maj C. F. Skinner](#), MC, m.i.d.; Westport; born [Melbourne](#), 19 Jan 1900; 14P 1938–; OC 7 Fd Coy Sep 1942-Mar 1943; wounded 3 Nov 1942.

<sup>16</sup> [Maj G. A. Lindell](#), DSO, OBE, ED; [Wellington](#); born [Taihape](#), 26 Nov 1906; engineer; Adjnt, NZ Div Engrs, 1941–42; SSO Engrs, Army HQ, 1943–44.

<sup>17</sup> E and M Section shifted its heavy machinery back near [Ellasson](#) on the 12th.

<sup>18</sup> [The Happy Hunted](#), pp. 74 - 5.

<sup>19</sup> [Maj K. Rix-Trott](#), ED; Uganda, [East Africa](#); born South Africa, 7 Jun 1901; civil engineer; OC 5 Fd Pk Coy Oct 1942-May 1943.

<sup>20</sup> [Maj G. I. B. Thomas](#), m.i.d.; [Wellington](#); born [Christchurch](#), 15 Apr 1899; civil engineer; OC 7 Fd Coy Oct-Nov 1941; p.w. 27 Nov 1941.

<sup>21</sup> [Lt J. R. M. Hector](#), m.i.d.; born [Wellington](#), 17 May 1913; civil engineer; killed in action 20 May 1941.

<sup>22</sup> [Lt-Col N. L. Macky](#), MC, m.i.d.; [Auckland](#); born [Auckland](#), 20 Feb 1891; barrister and solicitor; NZ Rifle Bde 1915–19 (Capt, 1918); CO 21 Bn Jan

1940-May 1941.

<sup>23</sup> Spr L. A. Condgon; Wellington; born NZ 6 Dec 1906; service-car driver; wounded May 1941.

<sup>24</sup> Brig J. Hargest, CBE, DSO and bar, MC, m.i.d.; born Gore, 4 Sep 1891; farmer; MP 1931–44; Otago Mtd Rifles 1914–20 (CO 2 Bn Otago Regt); comd 5 Bde May 1940-Nov 1941; p.w. 27 Nov 1941; escaped, Italy, Mar 1943; killed in action, France, 12 Aug 1944.

<sup>25</sup> Sgt I. Larson; born NZ 23 Nov 1901; mechanic; died Dunedin, 11 May 1955.

<sup>26</sup> S-Sgt J. A. Sangster; Invercargill; born NZ 10 Aug 1901; postal clerk; p.w. Jun 1941.

<sup>27</sup> Letter, Capt J. B. Ferguson.

<sup>28</sup> Spr R. C. Gibson; Wanganui; born England, 16 Mar 1906; locomotive driver.

<sup>29</sup> Spr F. J. Lynch; born Queenstown, 22 Apr 1917; NZR employee; p.w. 1 Jun 1941.

<sup>30</sup> Lt-Col H. G. Carruth, ED, m.i.d.; Whangarei; born Whangarei, 6 Nov 1895; solicitor; CO Div Cav Feb-Jul 1941; Comp Trg Depot Jul 1941-Apr 1942; wounded Apr 1941.

<sup>31</sup> Lt-Col H. A. Robinson, DSO, MC, ED, m.i.d.; Waipukurau; born New Plymouth, 29 Sep 1912; farmhand; troop leader, later 2 i/c, Div Cav 1939–44; CO 18 Armd Regt Mar-Jul 1944; 20 Armd Regt Mar-Oct 1945; twice wounded.

<sup>32</sup> Report by Lt D. V. C. Kelsall.

<sup>33</sup> WO II J. C. Farnham, MM, m.i.d.; Awanui, Northland; born New Plymouth, 21 Apr 1909; farmer; three times wounded.

<sup>34</sup> Sgt B. C. B. Lockett; Te Araroa; born Wanganui, 24 Sep 1911; surveyor's assistant; p.w. 26 Apr 1941.

<sup>35</sup> Spr W. O'Malley; Ikamatua; born Ikamatua, 5 Mar 1917; sawmiller.

<sup>36</sup> Capt H. L. Yorke, m.i.d.; London; born Oxford, 3 Feb 1910; civil engineer.

<sup>37</sup> Maj-Gen Sir William Gentry, KBE, CB, DSO and bar, m.i.d., MC (Gk), Bronze Star (US); Lower Hutt; born London, 20 Feb 1899; Regular soldier; served North-West Frontier 1920–22; GSO II NZ Div 1939–40; AA & QMG 1940–41; GSO I May 1941, Oct 1941-Sep 1942; comd 6 Bde Sep 1942-Apr 1943; Deputy Chief of General Staff 1943–44; comd NZ Troops in Egypt Aug 1944-Feb 1945; 9 Bde ( Italy) 1945; Deputy Chief of General Staff, 1946–47; Adjutant-General, 1949–52; Chief of General Staff, 1952–55.

<sup>38</sup> Lt-Col A. B. Ross, MBE, ED, m.i.d.; born NZ 25 Apr 1899; civil servant; DAQMG NZ Div Mar 1941-Jun 1942; AA & QMG 1–27 Jun 1942; killed in action 27 Jun 1942.

<sup>39</sup> Spr L. L. Smith; born NZ 5 Dec 1911; lorry driver; p.w. 29 Apr 1941.

<sup>40</sup> Spr G. Leuty; born Liverpool, 12 May 1917; fireman NZR; p.w. Apr 1941.

<sup>41</sup> Spr O. G. Bradley; Lower Hutt; born Hamilton, 4 Jul 1916; fitter; p.w. Apr 1941.

<sup>42</sup> Spr G. L. Hill; Motueka; born NZ 26 Jun 1901; labourer; p.w. Apr 1941.

<sup>43</sup> Several German planes were brought down by RAF and ground fire in this area.

<sup>44</sup> Capt J. O. Wells; Horotiu, Waikato; born Wellington, 14 Sep 1909; structural engineer; p.w. 26 Apr 1941.

<sup>45</sup> Lt-Col R. C. Pemberton, MC and bar, m.i.d.; Auckland; born Christchurch, 23 Mar 1915; engineer; OC 8 Fd Coy Dec 1942-Oct 1943; acting CRE 2 NZ Div Jul-Aug 1944; wounded 22 Jul 1942.

<sup>46</sup> Lt-Col J. B. Ferguson, DSO, MC, ED; Auckland; born Auckland, 27 Apr 1912; warehouseman; OC 7 Fd Coy May 1941; CO 18 Armd Regt Dec 1943-Jan 1944; 20 Regt Jan-May 1944; 18 Regt Jul 1944-Feb 1945; wounded 6 Dec 1943.

<sup>47</sup> Cpl W. McCutcheon; Wellington; born NZ 16 Dec 1906; tunneller.

<sup>48</sup> Wheeler, Kalimera Kiwi, p. 188.

<sup>49</sup> S-Sgt H. E. Smith, EM; Wellsford; born Petone, 23 Sep 1917; farmer; wounded and p.w. 26 Apr 1941; repatriated to UK Sep 1944.

<sup>50</sup> L-Cpl C. C. Boswell; born Dunedin, 25 Jan 1915; builder; killed in action 26 Apr 1941.

<sup>51</sup> Spr A. G. Thornton; born NZ 25 Jun 1907; surfaceman; killed in action 26 Apr 1941.

<sup>52</sup> Maj T. A. Macfarlane, m.i.d.; Auckland; born Scotland, 21 Jan 1911; medical practitioner; DADMS 2 NZ Div Aug 1941-Mar 1943.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## CHAPTER 5 – THE CAMPAIGN IN CRETE

## CHAPTER 5

### *The Campaign in Crete*

Headquarters 2 NZ Divisional Engineers, 19 Army Troops Company less a detachment (Lieutenant Page), and No. 3 Section, 7 Field Company, less a detachment (Lieutenant Hector) had wrecked their trucks and embarked on the [Glengyle](#) at [Porto Rafti](#) on the night of 24–25 April, bound for [Crete](#).

By the time the escorts had herded the transports into position there were not many hours of darkness left, but the men were too tired to worry about the organisation of the convoy, its destination, or, after dawn, about the black spots in a cloudless sky. The ships' anti-aircraft armament gave staccato tongue and the German planes did not pry too closely.

Towards midday a mountain range broke the horizon, then headlands, shimmering in the sun, took shape and substance. Little white smudges turned into villages on the hillsides and, later, the now familiar clusters of olive trees could be traced on the lower slopes.

The convoy entered the roadstead of the single-jetty harbour of [Suda Bay](#) already crowded with ships diverted from [Greece](#). Barges and tugs, local craft and Navy boats were weaving in and out of the deep-water channel ferrying men ashore.

The Engineer units were not taken off until late afternoon, and when they reached the quay, the landing staff, at its wits' end over the influx, waved them off the quay and towards a transit camp near [Canea](#), the island's capital city.

They passed through a small town behind the port. It showed its polyglot ancestry by a stone fountain and four guardian lions that could have come from [Venice](#), a Moslem mosque and a Greek Orthodox church. There were cafés with vacant tables and empty chairs spread over the narrow pavements for it was siesta time; the town had watched Greeks, Romans, Saracens, Venetians and Turks march off the same jetty and eventually go away again. Doubtless these strangers would do the same.

Nineteenth Army Troops Company joined the groups straggling along the dusty

road from [Suda Bay](#), halted awhile at a camp where the British garrison provided hot tea—if the sappers could provide something to drink it from—then trudged another four or five miles until they were directed into an olive grove. Here they were issued with a blanket and rations and told that this was the [Perivolía](#) transit camp. A little later Headquarters' sappers, who had been without an officer until Lieutenants [Peacocke](#) <sup>1</sup> and Yorke, after a search that had begun at [Cape Knimis](#) in [Greece](#) and ended at the refreshment stop in [Crete](#), also arrived. No. 3 Section, 7 Field Company, commanded by Sergeant [Hultquist](#) <sup>2</sup> in the absence of Lieutenant Hector, did not get beyond the refreshment stop.

The troops sorted themselves out in the morning and began to take an interest in their surroundings. There was good cover from view under the trees with the gnarled trunks and the green-grey leaves, a factor they had already learned to appreciate at its full value, and only a few miles inland there were steep-sided dove-coloured hills. And there would be villages and cafés if one knew where to look for them.

Sergeant Hultquist's party marched in during the morning, footsore and weary, but glad to meet again some of their own kind. Nineteenth Army Troops had been reorganised but the result was not impressive, for all they possessed was what they stood up in, plus a rifle which they knew little about and had seldom fired.

Major Langbein, acting CRE, <sup>3</sup> returned from a conference confirmed in his previous impression that [Crete](#) was only a resting place for the harried Expeditionary Force and that the ultimate destination was Egypt. A British division was to augment the existing garrison, for [Crete](#), now considered vital to operations in the Eastern Mediterranean, was to be held at any cost. But until shipping to switch the forces was available, the 160 mile long by 36 mile wide mountainous island was to be defended by the troops on the spot. As a start the New Zealand contingent, 5 Brigade and attachments, would defend the [Maleme](#) airfield on the western end of the north coast from any attack coming in from farther west.

Brigadier Hargest, the senior New Zealand officer on [Crete](#), selected [Ay Marina](#) village as New Zealand Force Headquarters, and Lieutenant-Colonel [Falconer](#), <sup>4</sup> commanding 5 Brigade, settled in at [Platanias](#) village. Nineteenth Army Troops Company and attachments were placed in brigade reserve, thereby being transferred

from engineers without equipment into infantry without training. Maleesh! It wouldn't be for long.

These dispositions, expressed in a few words, took most of the day to iron out and the deployment did not begin until the next morning (27 April). For the sappers it meant a ten-mile march which brought them to a bushy gully at [Ay Marina](#), where we must leave them in the meantime and follow the fortunes of the other Engineer companies.

The detachments left behind at [Porto Rafti](#) were taken with some 500 other oddments on a TLC <sup>5</sup> to the small green pinnacle rock of [Kea Island](#), 15 miles off shore. They stayed there until the night 26–27 April, when they were picked up by the same craft and taken to the transport *Salween* en route to Egypt. There was a stiff breeze and a heavy sea, and with both landing craft and transport wallowing and bumping, only a few managed to climb to the decks high above them. The rest were taken to the more sheltered roadstead and divided between the transport [Glengyle](#) and the cruiser HMS [Carlisle](#). The sappers were embarked on the cruiser and went to [Crete](#), together with 5 Field Park and 7 Field Company already on board, while the [Glengyle](#) sailed for Egypt.

‘When we landed in [Suda Bay](#) we had practically nothing except weapons,’ wrote Captain Morrison. ‘We went to some sort of reception depot under the olive trees and had tea and sandwiches, rather like a large open air picnic. Capt Woolcott of 6 Field Company was there. He and I got some bacon and eggs from somewhere and made ourselves a picnic meal with an improvised frying pan. When I collected the Company we marched from [Suda Bay](#) to [Canea](#) and we were first sited with 19 Battalion near Galatos.’

There was still one party of 7 Field Company in [Greece](#). Before embarkation somebody must have remembered that some troops had been sent to [Kea Island](#), and the supposition was that they were there and very likely to stay there. Captain Ferguson was detailed with a party of twenty sappers to go to Lavrion, where he would find, watered and provisioned, a craft which he would take to [Kea Island](#), pick up any men who might be there and then sail for [Crete](#). He found his command, which was neither watered, provisioned nor expecting him, plus a crew of a captain, an engineer, a deck hand, three British officers and a Greek interpreter, so he sent

twelve of his own party back to [Porto Rafti](#). Ferguson's ship was about 35 feet long with a 15-foot beam, two masts and a diesel engine. He sailed for [Kea Island](#) after dark and probably passed the TLC en route. He wrote home later:

'After breakfast I took my batman and the Greek interpreter across the hills to the main harbour where I found six stranded NZ soldiers who had been left there by mistake. I got mixed up with the harbour master and the chief of police, both very nice fellows who invited me to an undrinkable wine which I managed to drink. I then ran into a Lt Commander RNR.... He had a fleet of Faluccas and each evening went over to [Greece](#) to embark troops. I learnt that several of the islands north of [Crete](#) were occupied by Germans so that rather put me off doing too much sailing in their direction. I came to the conclusion that I was doing the same job as this naval chap so I considered it best to hand my falucca over to him.... We sailed at about 4.30 that day for [Porto Rafti](#). We had the deuce of a job to get the capt. of my falucca to sail as he had seen a falucca just come into port with 2 wounded and 8 dead. They had been machine gunned just outside the harbour by aircraft.

'Well we sailed and got attacked by aircraft five times on the trip. The last time by 7 Messerschmidts who circled us 3 times firing machine guns and cannon shells. Why we did not have any casualties I don't know. Probably because it was my birthday. The ship was like a collander and full of holes. My suitcase had five holes in it and my primus was blown to pieces. The incendiary bullets set fire to the ship but we put it out and I can tell you it was pretty exciting. Anyway no one was hurt. Darkness fell soon after that and we breathed again. We then reached [Porto Rafti](#) and loaded about 150 men and took them off to a destroyer where I embarked too with my men, leaving the Falucca to the naval chap and very pleased I was to do it too.'

Captain Ferguson and party rejoined 7 Field Company the day following the landing of its main body.

A further dispositional shuffle set 19 Army Troops and attached sections retracing their steps eight miles eastwards to the vicinity of [Galatas](#). The panorama of terraced vineyards stepping back to wooded foothills, groves of silver-tipped olive trees, tobacco plantations and wheatfields not yet in ear did not compensate them for their apparently aimless wanderings. They had been pushed around [Greece](#) by

the Germans and now they were still being pushed around by their own side.

Engineer Headquarters, Page's detachments, 7 Field and 5 Field Park were already there, and apropos of this Sergeant Hultquist noted in his diary:

'approx 1400 hrs I received info' to the effect that the remainder of our Fld Coy were encamped independently about 2 Miles nth; I promptly gave orders to my personnel to up anchor and contact our Cmpy without loss of time. On arrival we were met by Lt Hector who immediately resumed command of my section.'

There followed a couple of days' real peace for the weary sappers while 5 Brigade deployed around [Maleme](#) airfield, 4 Brigade arrived from [Greece](#) and 6 Brigade went direct to Egypt.

The only duty the sappers were required to perform was to patrol the beach, which was done between periods of swimming and sunbathing. It all ended suddenly. No. 2 Section of Army Troops, living in luxury in a large flat-roofed house, were told to vacate the premises immediately as it was needed for a conference. It was an historic conference for there General Wavell, who had flown in from Egypt, told [General Freyberg](#) that he was to command in [Crete](#); that there was neither time nor ships to bring in new divisions; that he could expect an airborne attack plus a possible invasion by sea; that there would be no additional air support; that the Navy would do what it could.

Nineteenth Army Troops Company was ordered to pack up and retrace its steps to [Ay Marina](#), then carry on until it came to a road junction, where it was to turn left and bivouac near [Modhion](#) village.

Seventh Field Company was not at that stage affected and carried on recuperating, a process which consisted mostly of sleeping and eating oranges.

Fifth Field Park also stayed in the area doing odd jobs:

'I recall going into [Canea](#) to buy some axes for the Division, but axes were sold in one shop and axe handles in a different shop. The shops seemed to open and shut at different times so it was very difficult to tie up the axes with the axe handles. The church bells rang one signal for an approaching air raid and another for the all clear,

but since at least one church bell seemed to be ringing at any time no one was quite clear what was going on and it was very difficult to do business with axe merchants.'

6

Headquarters New Zealand Engineers went into the grenade and mine manufacturing business to help remedy the total lack of these weapons in the New Zealand Division. Major Hanson <sup>7</sup> gives the recipe for making anti-personnel grenades, [Crete](#) pattern:

'What we did make in large quantities in [Crete](#) was a kind of "jam tin" bomb but I believe with improvements on those which I understand were used on [Gallipoli](#) in World War I. Our bombs or grenades were bully beef or jam tins containing a plug of gelignite surrounded by small river shingle and metal chips collected along the road edges. The gelignite was fused with a detonator and a four or five second fuse. The stones and explosives were kept in place by sealing the top of the tin with bitumen which we collected from some road works. Some of the bombs had pull igniters fitted but we kept a number of these to fit to the improvised mines which we had hoped to use on the Maleme Aerodrome. Those bombs which were not fitted with pull igniters had to be lighted by holding a match on the end of the fuse and then sliding the striker portion of the match box along the match. This was much better than using an ordinary lighted match or cigarette. Under test against walls the stones were shot out with deadly effect. Indeed their effect was not unlike that of a German S mine which we were later to encounter in the Desert.

'We distributed many hundreds of the jam tin bombs and it was reported that they were often used with good results. As the battle developed most of our infantry became well supplied with captured hand grenades and therefore there was at this stage no need for further jam tin bombs.'

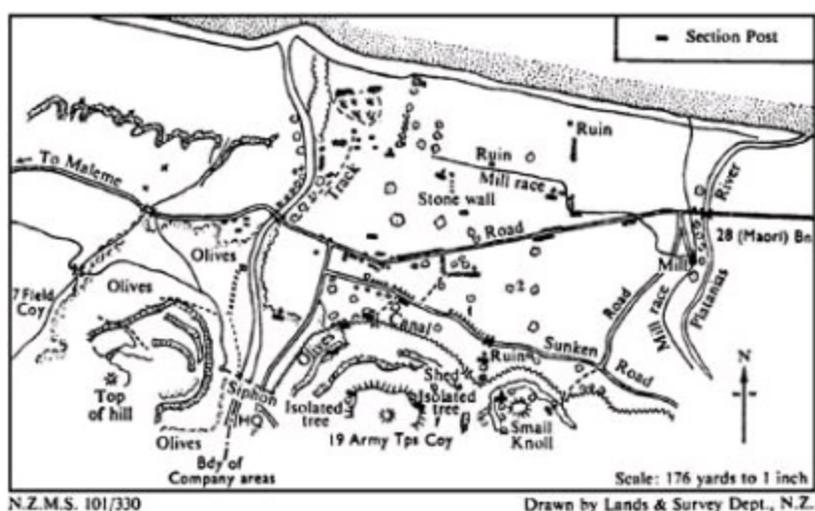
The CRE with some of his staff made 'recces' and appreciations of all likely spots between [Canea](#) and Kisamos Kastelli for seaborne landings, a possibility which had been forecast at the Wavell conference. In addition reports were submitted on likely parachute dropping areas west of [Maleme](#), and particularly on areas suitable for emergency enemy landing strips as well as the time necessary for cutting down trees and preparing runways.

While the pattern of defence was being worked out, Headquarters 5 Brigade did not worry 19 Army Troops Company, who enjoyed another couple of days of peace.

The engineers had been under command of 21 Battalion, which had been assigned the dual role of defending the beach between the [Platanias](#) River mouth and the [Maleme](#) airfield, and also of counter-attacking in support of 22 Battalion defending the airfield. This plan was abandoned because it was realised that a unit that had lost over 50 per cent of its effective strength in [Greece](#), plus a party of specialist troops, would be in no shape to push home a counter-attack.

The final 5 Brigade deployment took place on 3 May, when 21 Battalion was placed south-east of [Maleme](#) airfield and 23 Battalion occupied the lines so vacated. Both units were to be ready to support 22 Battalion. Twenty-eighth (Maori) Battalion in brigade reserve was to move into 23 Battalion's old area around [Platanias](#), while the ground between the Maoris and 23 Battalion was to be held by an Engineer detachment composed of 19 Army Troops Company and 7 Field Company, named for the purpose NZE Detachment.

There was another area suitable for an enemy landing around [Kastelli](#), about 12 miles west of [Maleme](#), where about 1000 newly raised Greek conscripts were camped and, perforce, the defence of that area had to be left to them.



**NEW ZEALAND ENGINEER DETACHMENT'S POSITIONS, 1 - 23 MAY 1941**

**new zealand engineer detachment's positions, 1 - 23 may 1941**

The engineer command on 7 Field Company's arrival was: CRE, Major Hanson;

Captain Ferguson commanded 7 Field Company; Captain [Anderson](#)<sup>8</sup> commanded 19 Army Troops Company; Captain Morrison commanded 5 Field Park Company, and Captain Ferguson commanded the newly formed NZE Detachment.

Before 7 Field Company became part of NZE Detachment Lieutenant Wildey, Sergeant [Solon](#),<sup>9</sup> Corporal Larson and Sapper McCutcheon were sent to [Alikianou](#), south-west of [Galatas](#), where some thousands of Italian PWs<sup>10</sup> were held in camps guarded by Greeks, who in turn were being trained by New Zealand infantry instructors.

The sappers' job was not to instruct the Greeks but to fence in the Italians, and for the assignment they were provided with barbed wire but no labour. The only thing to do was to induce the Italians to fence themselves in, and eventually a bargain was struck whereby for so many cigarettes so many yards of double-apron fence was erected. It was a neat job done in record time and in perfect amity. The prisoners even invited their overseers to an occasional bowl of soup. It was much better soup than the Kiwi variety.

Captain Ferguson, with approximately 370 sappers and two miles of front to cover, was left to make his own dispositions. Nineteenth Army Troops were placed on the right facing the beach and were separated from the Maoris by the [Platanias](#) River, at that point running through a half-mile-wide steep-sided valley. Unlike most of the Cretan rivers, the [Platanias](#) never dried up in summer and varied in depth from ankle to waist deep. On each side of the valley tracks led back into the hills and into the [Aghya](#) valley south of [Galatas](#).

Seventh Field Company, on the left, was separated from the Army Troops sappers by a gully and a watercourse and was in touch with 23 Battalion, while Detachment Headquarters was situated in the rear and on higher ground between the two groups.

North-west from [Modhion](#) and covering the Engineer rear was another composite group of prisoners and guards, both Kiwis, constituting the Field Punishment Centre. The Engineers were not unrepresented in the 'clinic', 5 Field Park especially so on account of residing close to [Canea](#) and thus having more opportunities for tangling with the [Provost Corps](#). One situation, involving a sapper, a Cretan girl, her brother,

a knife and a chair leg was being resolved when the German onfall put an end to the investigation. When the time came both prisoners and guards resumed their vocations as fighting men and did so well that later all mention of their misdeeds was deleted from the records.

The only road between 5 Brigade and [Divisional Headquarters](#), at that period at [Ay Marina](#), was a fairly good metalled one skirting the coast and carrying on eastwards to [Suda Bay](#). A successful enemy landing could therefore cut off 5 Brigade, and to answer the possible threat a composite force, later to become 10 Brigade, was deployed from the coast to [Cemetery Hill](#) near [Galatas](#), and around a road junction by [Lake Aghya](#), in what was known as [Prison Valley](#). Fourth Brigade was farther east in general reserve. The other airfields and important positions were held by Australian and British formations.

Neighbouring units gave advice on the siting of their posts, but like everybody else the sappers were woefully short of tools and supplies were slow to arrive; a few picks had been distributed and 19 Army Troops Company had one solitary shovel which could be used only at night; during the day it was the property of the sanitary squad. The position gradually improved by issues through the ordinary channels—and otherwise. Sergeant Ivan [Dow](#),<sup>11</sup> thumbing a ride back from [Suda Bay](#), found that he had selected a truck loaded with shovels just off a ship. He dropped unobtrusively off the back of the vehicle with two bundles each containing six shovels and returned in triumph with his salvage.

There was plenty of good cover from view, aerial view—the only view that mattered with enemy planes beginning to appear—but the greatest care was taken to leave no signs that positions were being constructed. Camouflage screens made from bamboo were laid over the weapon pits when the air sentries gave the alarm and it is probable that this precaution was responsible for the fact that the engineer positions were not bombed prior to the main attack.

There were more detachments a few days later (5 May). Lieutenant Yorke and WO I Baigent were sent to [Kastelli](#) to join a party under Major [Bedding](#)<sup>12</sup> training the Greeks stationed there.

This was followed by a request from [Divisional Headquarters](#) for fifty sappers

with experience as winchmen, stevedores, etc., to work at the [Suda Bay](#) jetty. Lieutenant Peacocke commanded this party, which will be called for convenience the [Suda Bay Detachment](#). The men began work immediately unloading petrol and oil from a TLC and discharging guns and ammunition from the Themoni into lighters. Lieutenant Peacocke was at the same time interviewing the port officials and naval authorities because no arrangements had been made for quarters and rations, and at one stage it appeared that the Kiwi sappers were supposed to exist on fresh air and scenery. Some time that afternoon the [Suda Bay Detachment](#) came under command of Lieutenant-Colonel [McNaught](#),<sup>13</sup> OC Troops, [Suda Bay](#).

There had been air raids on [Suda Bay](#), and the reason for the recruitment of New Zealand stevedores to join Australian and British parties at the port was the understandable reluctance of Cypriot and Cretan civilian labourers to work ships under fire.

The engineer-watersiders were not molested for the first week, during which time they worked the [Araybank](#), Themoni, [City of Canterbury](#) and Lossiebank, but during the night 12 - 13 May they had a taste of things to come in the form of bombing and something more than a taste the next and following nights.

The NZE Detachment between [Platanias](#) and [Maleme](#) continued a placid life, with [Modhion](#) village conveniently near and the beach not too far away. But on 13 May the seriousness of their situation was brought home to the rank and file, who had been discounting the possibility of a German attack, by a very heavy raid on the [Maleme](#) aerodrome. Thereafter digging and wiring assumed a new seriousness.

That full-moon night 12th - 13th was actually the opening date of the German preparation for the attack on [Crete](#). It had two objects—to prevent the working of [Suda Bay](#) harbour, which did not succeed, and to smother the tiny [RAF](#) formation, which did.

No. 30 Squadron, late of the Greek-Albanian front, was at [Maleme](#), and after a week of being shot up on the ground, where the anti-aircraft defences were of nuisance value only, and in the air, where the pilots died in the best traditions of the [Royal Air Force](#), the survivors were flown out of [Crete](#). For the troops on the ground it was to be [Greece](#) all over again only more so—very much more so.

Seventh Field Company had been trained in the south of England in methods of making airstrips unusable as a precaution against enemy airborne invasion, so when the [RAF](#) departed that seemed to them the obvious thing to do. Captain Ferguson writes in this connection:

'While we were preparing our positions in the Modion area one of our officers—it was either Hector or Thomas <sup>14</sup>—drew up a scheme with a plan for the blowing up of the [Maleme](#) aerodrome by use of anti-tank mines. We found that there were ample anti-tank mines, cordex, as well as electric detonators and f.i.d. <sup>15</sup> and exploder cable. His scheme was based on a principle of laying mines on a grid system across the areas used as runways. This scheme allowed for the aerodrome to be used up until such time as it was desired to blow it up. I passed over the plans to Brigadier Hargest, who I understand passed them on to the General. I was later informed that the scheme was not to be undertaken for the reason that we might be landing more aircraft of our own and this might jeopardise the use of the 'drome. Incidentally, my own feeling is that had this been put into operation it might well have been the turning point in the [Battle of Crete](#), as the major number of German forces that landed came in by troop carrier.'

There are many methods of putting an aerodrome out of action for a period, but the one obstruction that parachutists cannot deal with rapidly is ploughing. Re-compaction is necessary but is not so easy without proper equipment. At the same time as Lieutenant Hector was working out his grid system, the CRE was moving heaven and earth to get permission to plough and mine the runways on [Maleme](#).

He wrote later:

'I did seek permission with all the persuasive powers at my command to plough and mine the aerodrome when it seemed that the German attack was imminent. The Acting Div. Command [Brigadier Puttick] more than nibbled at the idea. He asked me if I could mine the aerodrome without preventing its use by our own planes. He himself suggested loading the runway with charges which could be fired electrically. This I agreed might be satisfactory but some of the wires for electric wiring would almost certainly be cut by initial bombing and strafing, and it would therefore be much better to run a few furrows across the runway with the ample supply of locally available ploughs, and mine with charges which would explode on contact with a

landing plane. The Div. Comd. was certainly impressed and went up with me to look at the 'drome. He agreed to give the proposal of destruction, by whatever means, some thought and he promised to let me know in a day or two. We already had charges and improvised mines ready, but a day or two went by and I could not obtain the permission. I was told that our own Air Force still required the aerodrome. I am almost certain that, had the Div. Comd. been allowed to make his own decision, I would have been permitted to carry out my plan. As it was the enemy arrived before I could gain approval.

'I may say that local type ploughs were readily available and several, along with donkeys, had been "earmarked" and, of course, there were a few motor vehicles which could have provided the motive force for the ploughing. Improvised charges with their pull-trigger fuses could have been quickly laid to operate on trip wires being struck by landing aircraft.

'The ploughing alone, in a very short time, could have put the aerodrome out of operation. It was interesting to us that the ploughing which the Germans did on some North African aerodromes was very effective and was not easily remedied.'

Fifth Field Park Company which, up to this date, had been under command of 4 Brigade and was regarded as a spare infantry company, had been moved to several different areas before it now came under command of the Chief Engineer, [Crete](#), for works and of the New Zealand Division for administration.

Company Headquarters, Workshops and Stores Sections moved to an area a couple of miles east of [Canea](#) and started on a job of excavating an underground shelter for Force Headquarters. Bridging Section (Lieutenant Pemberton) went to [Suda](#), where they worked on dug-in accommodation for the naval staff. In addition, crews were provided for four caiques with the idea, after the engines had been overhauled and the vessels got into sailing trim, of running a coastal service to [Retimo](#) and [Heraklion](#).

Upon the completion of the wiring job (13 May) Lieutenant Wildey, Sergeant Solon, Sergeant [MacNab](#) <sup>16</sup> and Sapper McCutcheon were sent to Headquarters [6 Greek Regiment](#) at [Cemetery Hill](#), at the eastern end of the [Alikianou](#) valley, to instruct the Greeks in simple field engineering. A day or so later Solon and MacNab

were sent to Headquarters [8 Greek Regiment](#) at the top of the valley, where a reservoir separated them from a Divisional Cavalry detachment. <sup>17</sup>

Another week passed quietly enough for the engineer instructors at [Kastelli](#) and in the [Alikianou](#) valley, very busily indeed for NZE Detachment near [Maleme](#), and anything but quietly around [Suda Bay](#) where a non-stop hate on the harbour made cargo-working a chancy business.

'They had to work in total darkness, except for the light of the stars and later of the moon. They had none of the cranes and other unloading tackle of a modern harbour to aid them. They had to use whatever gear they found in the ships they were working to lift and manoeuvre heavy equipment overside into the lighters or on to the pier. When a ship's facilities were inadequate they improvised as best they could.... The German bombers were over the harbour every night. Darkness did not deter them from blitzing the general vicinity, hoping for a lucky hit. They dropped so many bombs that they naturally scored hits in their blind attacks. The number of holed ships lying on the harbour bed steadily increased.' <sup>18</sup>

The list below amplifies the quotation:

14 May	British ship SS Dalesman	Sunk by bombs
16 May	British ship SS Logician	Sunk by bombs
	Greek ship Kythera	Sunk by bombs
	Greek ship Nicolaou Ourania	Sunk by bombs
17 May	British tanker SS Eleonera Maerak	Sunk by bombs
	Greek ship Themoni	Sunk by bombs
18 May	British corvette Salvia	Damaged by bomb
20 May	Minesweeper Widnes	Bombed and beached

It was during this period (on 16 May) that a small craft powered with a single cylinder semi-diesel engine reached [Crete](#) from Spetsai Island. It contained some 56 British, Australian, New Zealand and Greek troops, of whom 21 were 6 Field Company sappers, last-known address the [Corinth Canal](#), who had been harried across southern [Greece](#) and over half the islands in the [Aegean Sea](#). Among the New Zealanders were Lieutenant Chapman, Sergeant Ty [Mandeno](#) <sup>19</sup> and Sapper Jack Farnham, who, it will be remembered, had been caught in the ambush at [Elevtherokhorion](#) and came out with [Colonel Kippenberger](#).

Portions of a letter written to the author by Sapper Farnham follow:

'I started off across the vineyards towards [Corinth](#) and headed for an olive tree for cover but changed my mind after some near ones as I realised it made a sighting mark. I came on Cpl [Duncan](#) <sup>20</sup> of [Waiuku](#) hit in the foot or leg and told him, "Johnny lie there and if I get help I will know where to find you." By a small monument on the crest of the hill above [Corinth](#) came on some more of our chaps, one of them, [Rayner](#) <sup>21</sup> was hit in the body. Told them the same as Johnny, but one of them, I think his name was Chunningham <sup>22</sup> said, "You got out before you might do it again. I am coming with you." We ran down into [Corinth](#), saw a truck full of Jerries and turned up a side street. Met two Aussies who had been directing traffic and they joined up with us then met more Jerries coming the other way. [They were sheltered in the nick of time by a Greek who kept them until dark. After more such encounters they found themselves among pine trees in a range of hills. They were hungry and thirsty and passed an old Greek while looking for water.]

'... heard someone running behind us; got off the road and waited. It was the old Greek with about  $\frac{3}{4}$  of a pound of bread dry and rancid but you never tasted anything better. We took it though we knew it was most likely all he had. I still feel bad when I think of it. [Later Farnham and party met more fugitives] ... it was L/cpl Jennings or Jenkins <sup>23</sup> from the Bay of Islands, one or two sprs, I forget now and an 18th Batt chap [McMein](#) <sup>24</sup> I think, he was shot in the shoulder but was going well. [The augmented party went into a village, where [McMein's](#) wound was dressed and a guide provided to take them to an embarkation beach farther down the coast on the other side of a fairly high range.] ... it was full daylight by now, we saw a man ahead on a donkey. When we got nearer we saw it was Sgt Ty Mandeno of No. 3 Section going the same way as we were. At our request he took charge of us as a group as we had a lot of faith in Ty.' [The party reached an embarkation beach, most likely [Kalamata](#), only to find it in enemy hands; they then pushed on south until they met a Greek who offered to row them to an island (Agisthus) where they might get a fishing boat. They slept that night under some trees on a hill, were fed by the villagers, told there was only one small boat there and were rowed back to the mainland again. So they went on day after day, with more narrow escapes than would fill a dozen thrillers, until fishermen rowed them over to Spetsai Island, where they found the rest of the refugees and the only boat that had not had some vital

part removed.]

The command, and approximate strengths, of the Engineer component of the New Zealand Division on [Crete](#) on 20 May was as under:

Headquarters	Strength 28 ORs
Maj Hanson, CRE	
Lt Rix-Trott, Field Officer	
<a href="#">7 Field Company</a>	Strength 145 ORs
Capt Ferguson, OC	
Lt Lindell	
<a href="#">19 Army Troops Company</a>	Strength 210 ORs
Capt Anderson, OC	
Lt Smart	
Lt Jones	
Lt Patterson	
Lt Page	
Lt Collins	
<a href="#">5 Field Park Company</a>	Strength 116 ORs
Capt Morrison, OC	
Lt Thomson	
Lt Pemberton	
Lt Carlton, Attached LAD	
<a href="#">Suda Bay Detachment</a>	Strength 50 ORs
Lt Peacocke, OC	
With I Greek Regt at <a href="#">Kastelli</a>	
Lt Yorke, WO I Baigent, L-Sgt C. H. W. Adams	
With 6 Greek Regt in <a href="#">Aghya Valley</a>	
Lt Wildey, Spr McCutcheon	
With 8 Greek Regt in <a href="#">Aghya Valley</a>	
Sgts L. A. Solon and D. G. MacNab	
NZE Postal	Strength 23 ORs
<a href="#">2 Lt H. S. Harbott</a>	

The morning of 20 May did not differ at first from those of the preceding fortnight and cooks all over [Crete](#) were either cooking, had cooked, or were about to cook breakfast. Then 19 Army Troops Company from their grandstand seat at the base of the foothills three miles east of [Maleme](#) watched the incredible preliminaries

of a full-scale aerial invasion. A rumbling sound grew rapidly to an ear-splitting roar as planes swept in from the north like a plague of locusts—Heinkels, Dorniers, Stukas, Messerschmitts. Bofors pumped shells into the unending target, machine guns crackled and small-arms fire rose and fell in surging waves. Planes tumbled out of formation and crashed in flames; bombs pounded the earth with terrific detonations; trees caught fire. Finally, smoke hid the [Maleme](#) airfield.

For an hour the hellish din never ceased. Then the Junkers troop-carriers came out of the north-west, many of them towing huge gliders, and disappeared into the smoke cloud; when they emerged again the gliders had been cast off.

Nearer the airfield target 7 Field Company saw the troop-carrying planes dropping parachutes like a destroyer dropping depth-charges. Sergeant Hultquist's diary states:

'Tues. 20/5/41. At 0720 hrs, a Sapper hurried in from his O'pip with the info' that paratroops were literally raining over the Drome. One quick look from his O'pip more than confirmed the report. N.C.O.s and Sappers were immed' automatically in motion, rushing off thru' the olive groves to take up their various MG posts and positions in our sector. Almost simultaneously yellow nosed fighter planes swooped in from nowhere—filling the air with the deafening crash and rattle from the full blast of their MG's as they skimmed the tree tops combing and raking the surrounding ground, spurs and gullys. My complete personnel somehow managed to gain their posts and the comparative shelter of the slit trenches without casualty.

'Approx' 0830 hrs the yellow nosed Mess'ers disappeared, only to be replaced by wave after wave of Junkers paratroop carriers droning in from the sea, appearing to just skim the surface of the water and gaining altitude as they approached the coast line. One by one they passed at a low altitude overhead, slowly circling the spurs at our rear, and as they again appeared overhead, spewing their cargoes of paratroops and equipment over all and sundry as they headed back to sea....

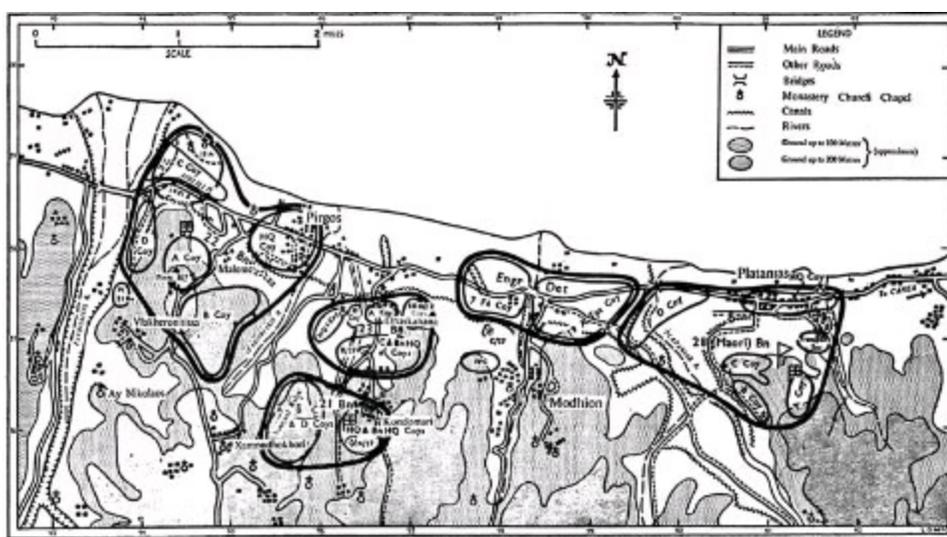
'Troop carriers continuously arriving and making more or less abortive attempts to land and discharge their cargo under a terrific barrage of bursting shells thrown in by our artillery.

'A small NZ Artillery Troop equipped with four French 75m'm guns and

positioned on our section sector just in rear of my bivouac, caused colossal havoc at almost point blank range with direct hits continuously adding to the debris the wreckage of planes on beach and drome.'

Between 100 and 150 paratroops were dropped in Lieutenant Hector's left sector. Seventh Field Company, trained for such a contingency in England, shot many in the air (you knew when they were hit because their heads dropped forward). Others were shot on the ground while they were disengaging from their harness. The troubles of those who had so far escaped attention were far from over because the [Field Punishment Centre](#), in the rear of and above the company, was on to them. So much so that Hector and his Headquarters sub-section had to stop stalking for fear of being shot by the Punishment Centre marksmen. Later in the day when the firing had stopped, Lieutenant Hector again took his patrol out; four Germans surrendered and six more were found dead or dying. Hector then decided to complete the sweep he had had to break off in the morning along the western side of the gully. No live Germans were encountered until the patrol was almost home, when they were fired on from a drain hidden in the undergrowth and two sappers were killed. Sergeant Hultquist's diary carries the story on:

'We immediately jumped for available cover and commenced closing in on the position. Spr. Jefferies <sup>25</sup> was our next casualty dropping with a hole drilled through his chest from side to side. I therefore appealed to Lt Hector for permission to clear the position with hand grenades but he decided to close in yet more—himself setting the example by stepping out from cover and entering the wheat field bordering Jerry's hide out, four of us following suit. A couple of tommy gun bursts from us were promptly retaliated by Jerry with a succession of grenades resembling a fireworks display as they burst around us. Mr Hector suddenly dropped mortally wounded and simultaneously Sprs [Horsfall](#) <sup>26</sup> and [Kennett](#) <sup>27</sup> were put out of action suffering a liberal splattering of surface wounds.



FIFTH BRIGADE, MALEME, 20 MAY 1941

### fifth brigade, maleme, 20 may 1941

'This was followed by a prolonged tommy gun burst by my transport Cpl ( [Dudeck](#) <sup>28</sup>) who had managed to get close enough to completely riddle one of the enemy.'

Of the two remaining Germans, one surrendered and the other escaped. The diary note ends: 'Mr Hector proved himself to be one of the most courageous and conscientious men it has ever been my privilege to associate with.'

The only other enemy to land near the Engineers' area that day were in a glider and a troop-carrier that crash-landed on the beach in front of 19 Army Troops' position. They were dealt with by, first, the guns of C Troop, 27 Battery, referred to in the Hultquist diary, and finally by a fighting patrol from the [Maori Battalion](#).

Near Divisional Headquarters two gliders, probably off course, tried to make a landing and the occupants were all killed or wounded. Headquarters NZE contributed to the shooting up of one glider and had five or six men, including Major Hanson, shot up from the air, but only three of the sappers were seriously wounded and evacuated. The war artist, [Peter McIntyre](#), used this episode in his well-known picture of crash-landed gliders.

The position in 5 Brigade's sector at last light was that 21 Battalion had shot up a small shower of paratroopers and 23 Battalion had dealt with a veritable downpour of enemy; 22 Battalion, after days of bombing and ground strafing, had got some of its own back, but numbers of Germans had landed and consolidated where there was

nobody to hinder their preparations.

Farther west a detachment had dropped around [Kastelli](#), and the Greeks, disdaining the use of cover and forgetting anything they might have learned about tactics, killed about fifty and took prisoner twenty-eight others, fifteen of them wounded. Major Bedding, for the prisoners' own safety, had them locked up in the local jail for they were in a fair way to joining the other fifty. The locals did not appear to like the invaders very much and were very weak in their understanding of the provisions of the Geneva Convention.

[Alikianou](#) was another enemy objective in the plan to capture [Canea](#) and [Suda](#), and two battalions of paratroopers were dropped near [8 Greek Regiment](#), with whom Sergeants Solon and MacNab were working. The Engineer Battalion of 7 Air Division was attacked by the Greek recruits, many of them little more than boys who, for the most part, had never even fired a rifle. MacNab has placed his impressions on record:

'On the morning of 20 May enemy gliders and paratroops landed all round the area. Some paratroops landed in swampy ground north of the battalion's position and were unable to free themselves of their heavy equipment and were drowned. The Greeks immediately undertook mopping up. They attacked with great dash and reckless gallantry with little or no prudence or tactical skill. It was guerrilla warfare in its most primitive form.... They were joined by villagers with shot guns from the little village to the north (Kirtomadhes) and even an old house wife came dashing down the road brandishing the family meat axe with which she did considerable execution on the wounded before the Germans shot her.'

The Germans failed to take [Alikianou](#) and concentrated instead towards the main enemy forces in the [Prison Valley](#). The Greeks had lost many killed and wounded, others had expended their few rounds of ammunition and dispersed, but the rest had armed themselves from dead paratroopers and were holding their positions.

There was a gap, before the attack, of about two miles from where the 6th Greeks were holding the left of 10 Brigade's line from an old Turkish fort in the hills to the Divisional Petrol Company's positions astride the valley road.

The New Zealand instructors had messed together and took turns at cooking. It was McCutcheon's 'day on' so he, with about thirty to forty Greeks who were being instructed in field works, was the only one of them near headquarters. He was making his toilet and was arrayed in boots and shorts when the paratroops began to fall (another battalion of 3 Parachute Regiment). The Greeks soon shot off their half-dozen rounds, whereupon some made for the hills and the rest staged a bayonet charge which drove the enemy towards [Galatas](#). McCutcheon left the charging Greeks at the Petrol Company lines in the hope that Wildey might be around, and saw the Greeks returning to their positions. The two did not meet until some time in the afternoon, when with a following of some thirty Greeks they worked their way back to 19 Battalion and dug themselves in. They stayed there for nearly a week.

A company from 3 Parachute Regiment dropped north-east of [Galatas](#) and with a determined attack captured the undefended 7 General Hospital and 6 Field Ambulance. After some exceedingly one-sided fighting about 500 walking sick and medical orderlies were assembled and marched off under guard to join the main enemy body. It was unfortunate for the Germans that 18 and 19 Battalion patrols were in the way. <sup>29</sup>

A Divisional Postal group was involved in this affair, as the following extract from the Postal war diary dated 21 May describes:

'Report received from Cpl [Brooks](#) <sup>30</sup> that his office in the Hospital area was taken by the enemy during the raid on the 20th May. All equipment, mail, including stamps, Cash and Registered Articles, were taken by the Germans. Cpl Brooks, Sprs [Wright](#) <sup>31</sup> and [Balneaves](#) <sup>32</sup> were taken prisoners but released by 18 Bn. Spr [Yandle](#) <sup>33</sup> in hospital was also taken prisoner and later released. Spr [Farrell](#) <sup>34</sup> was not seen again and presumed killed during the raid. Spr [Sprague](#) <sup>35</sup> who was admitted to 6 Fd [Amb](#), climbed a tree, evaded detection and reported to me the following morning.'

At [Suda Bay](#) the bridging section of 5 Field Park Company stood by and wished the shelters they were digging were much deeper; the sappers who were working on the coastal craft were sent back to their unit; the rest of the company at [Canea](#) manned a ridge and waited for parachute troops who did not come. D Company of a battalion of the [Welch Regiment](#) were close by and advice was obtained from and close liaison maintained with them. Fifth Field Park Company must be considered as

working with the [Welch Regiment](#) until further mention is made of it.

As at [Maleme](#) and [Galatas](#), the German programme was disrupted at [Heraklion](#) and [Retimo](#), where other airfields were located, so that the opening round of the Battle for [Crete](#) might be fairly called a draw.

At first light (21st) the position at [Maleme](#) had altered dramatically to our disadvantage: 22 Battalion, in face of the hostile build-up, was withdrawing, thereby giving the enemy the use of the airfield—if the guns and mortars still in action could be silenced or if the risk was accepted of landing under fire.

There had been little sleep for NZE Detachment for there were still pockets of enemy around; one party tried to enter a post where Corporal [Blakey](#) <sup>36</sup> had taken the precaution of providing himself with a supply of German grenades. The visitors departed, leaving behind a Spandau as a memento of the occasion.

The German Command, making the best of an ugly situation, had decided to concentrate everything on [Maleme](#), where the chances of securing a landing ground seemed less remote. The morning was thus a time of reorganisation and it was not until about 4 p.m. that more paratroops were dropped among the NZE Detachment—this time on 19 Army Troops and the adjoining [Maori Battalion](#).

Nineteenth Army Troops shared about twenty-four plane loads of paratroops with D Company, 28 Battalion, in about equal numbers. The Maoris, not without loss, made a pretty complete clearance of their quota and the Army Troops Company, for line-of-communication troops without much practice in the finer points of personal combat, did not do too badly.

When the attack opened on the previous day Army Troops' forward posts had been withdrawn to reserve positions in rear of an irrigation canal and a secondary sunken road, both of which covered the unit front.

Captain Anderson wrote later:

'Then came May 20 and Jerry in full cry! During all that first day we sat and watched the fantastic sight from our perfect grandstand seat. No paratroops were dropped in our area that day although the 7th Fd Coy caught it pretty heavily. We

sent a detachment of thirty men to assist the 7th on the evening of the 20th. The morning of the 21st was again quiet but just after midday we got our share of bother. They came over in waves similar to those we had watched the previous day and they dropped everywhere. Our fellows behaved well and did some sound destruction. Every man who could handle a rifle did his bit. Officers—cooks—bottlewashers—all were in it. Unfortunately we had only one Bren on the strength but the two chaps using it did a magnificent job.'

Elsewhere the second day passed without much fighting. The enemy landed more troops at [Maleme](#) and preparations were made for a counter-attack to recapture the airfield.

On the outskirts of the battle [Kastelli](#) was still waiting for the supposedly defeated enemy to be driven that way, and at [Alikianou](#) Sergeants Solon and MacNab were prisoners. MacNab did not know much about it for he had suffered a head wound. As a prisoner of war he was a dead loss to his captors, according to the citation for the award of the Engineers' first DCM:

'S/Sgt. MacNabb [ sic] was the leader of an organised escape party which left [Greece](#) for [Turkey](#) in October. Every detail of the escape was carried out by S/Sgt. MacNabb himself. He managed to hire a boat, the money for which he obtained by collection from various Greek helpers. He collected together a party of escapers and sailed for [Turkey](#). The skipper of the boat endeavoured to betray them and MacNabb took charge. He navigated the boat and reached [Turkey](#) successfully.

'The party unfortunately landed in a closely guarded Military Zone. By skilful manoeuvring and forced marching he managed to get his party right through the military area before being captured by the Turks.

'Whilst in [Greece](#) S/Sgt. MacNabb ran an "Intelligence Bureau" in [Athens](#) for the collection of military information. On leaving [Greece](#) he collated all this and concealed it inside the lining of his clothing. It was discovered by the Turks during a thorough search and confiscated. MacNabb later managed to get the papers back and eventually passed them to the Military Attache. Through the enterprise and initiative of this N.C.O. a great deal of valuable information reached G.S.I., [Middle East](#).'

At last light on the second day (21 May) the Engineer position was that both companies were intact in their reserve posts but there were enemy hidden in the country between 19 Army Troops and the sea, while the point on the right flank was also in hostile hands. Captain Anderson was keen to have his front disinfested, but was not fully conversant with the technique and asked the [Maori Battalion](#) if it would mind obliging as night fighting was more in its line of business.

It so happened that Captain Rangi [Royal](#)<sup>37</sup> (B Company) had already been ordered to clean up part of the area that was worrying Captain Anderson, for it was the forming-up place for a counter-attack by 20 and 28 Battalions in an effort to retrieve the position at [Maleme](#). The Arawa Company, only too happy to do the pakeha engineers a good turn, stalked and killed a dozen paratroops who had not, like the other survivors, moved westwards towards [Maleme](#).

The night was further enlivened by the sound of booming guns across the water and a lurid glow on the horizon. The Navy was putting an end to the enemy plan of a seaborne addition to his airborne forces. Apropos of this, OC 5 Field Park Company wrote:

'We do not appear to have figured in a very active role. We didn't, just did what we were told. We were, however, ordered down to the beach at [Canea](#) on the night when the sea-borne attack was expected and prepared to sell our lives dearly, but the navy saved us the trouble.'

In the morning (22 May and the third day of battle) No. 4 Section, Army Troops, decided to return to their position on the hill covering their right flank but lost several wounded, including Lieutenant Patterson, before the attempt was given up. Later Captain Anderson and Lieutenant Page with a detachment tried from another direction. Unbeknown to them Captain [Baker](#)<sup>38</sup> and a party of Maoris had seen movement in the area and were also taking steps. The upshot was that the garrison surrendered. The point must have been a rendezvous for walking wounded, for of the sixty-five prisoners few were without injuries. The serious cases were carried to a small hut in the vicinity and the rest sent to Brigade Headquarters.

Meanwhile the counter-attack, after very heavy fighting, was brought to a standstill with the enemy still in possession of the vital airfield. The afternoon of the

third day wore on and the third sleepless night was interrupted by an order to make ready to move to [Ay Marina](#) before daybreak.

Captain Anderson wrote:

'At some time during the night [22nd–23rd] we got orders to move. Ferguson had gone to 5 I.B. to find out the griff and they were put into something of a flap because the BM had apparently forgotten that he had a few sappers on his strength. However we managed to collect all the outlying pickets except one. This was a picket from the 19 Army Troops Coy that had been serving with the 7th NZ Fd Coy at the time and being with a strange Coy they were overlooked. It is pleasing to report that the men concerned extricated themselves from their position and made their own way through the mountains and eventually rejoined the remnants of the Company at [Sphakia](#).'

This realignment was the result of the mounting threat to [Galatas](#), the failure of the counter-attack at [Maleme](#) and the possibility of the enemy cutting in behind 5 Brigade. Section commanders had only an hour to collect their men before the march commenced. They managed somehow to keep to schedule, but only the danger of not being under cover by dawn kept the troops moving for they were in real need of rest. They didn't get much, for within a very short time odd snipers were potting at them and by 9.30 had become such a nuisance that steps had to be taken, not without loss, to comb them out.

Nineteenth Army Troops on the left of 7 Field Company, which was now facing west, had a small battle all to themselves. The Germans' 100 Mountain Regiment had elements moving through [Modhion](#) towards them, while groups from 3 Parachute Regiment in the [Prison Valley](#) were also feeling in their direction. Actually, it was only the very active right flank of 10 Brigade, plus B Company 18 Battalion, placed there for the purpose, that prevented a bigger battle. As it was an enemy party had occupied a house before daybreak.

'We took up positions on the high ground south of the main road and immediately ran into trouble. One of our men was picked off by a Hun sniper soon after we arrived in our area. This same sniper got a hot time from the 7th boys in whose area he was hiding up. A little later, as we were siting our new positions we

came under very heavy fire from a large farm house some 700 yards south of our positions and the morning was indeed sultry. Casualties were either 14 or 15, I forget the exact number. One of our junior N.C.Os <sup>39</sup> did a very fine job of rescuing a wounded companion under heavy enemy fire and was subsequently awarded the MM.' <sup>40</sup> Enemy casualties were unknown for he remained in possession of the farmhouse.

By dusk on the fourth day (23rd) 5 Brigade, still in a dangerous position, was holding a shaky line east of the Engineer Detachment and west of the [Platanias](#) River, where the critical point was the river bridge half-right from 19 Army Troops' old area. It had been captured and held in spite of efforts to retake it. At [Heraklion](#) and [Retimo](#) the situation remained more or less static, inasmuch as the enemy couldn't take the airfields and the defenders couldn't chase them away. In either case their possession was not now essential to the enemy plans, for [Maleme](#) was safely held.

The sapper companies were moving again by midnight. Fifth Brigade was being withdrawn once more to counter an expected full-scale attack against [Galatas](#) and was moving behind 4 Brigade which, with the remnants of 10 Brigade, was preparing to receive the assault. Tenth Brigade was really a remnant by this time; 20 Battalion had been taken for the [Maleme](#) counter-attack and the two Greek regiments were either dispersed or out of touch, so that all that remained was the Composite Battalion and a Divisional Cavalry detachment.

At the end of a four-mile march nearer [Canea](#), NZE Detachment was directed to an area between the main road and the sea and close to the junction of the [Prison Valley](#)— [Canea](#) and [Maleme](#)— [Canea](#) roads.

There was plenty of cover under the trees, which however did not compensate for the fact that the ground-strafting planes seemed to sense that the Engineers were orphans <sup>41</sup> and attacked them savagely. Soon after the [Luftwaffe](#) departed in search of some more promising targets, [General Freyberg](#) happened along; and to illustrate the fact that even if the sappers were not professional infantry, they were, in spite of fifty-odd casualties, still full of fight, Lieutenant Page vouches for this anecdote:

“Tiny” came along and asked one of our sappers how things were going. “No

bloody good” says sapper. “Why”, Tiny said, “Their infantry are just like rabbits.” “That's all right,” says sapper. “You keep these bloody planes away and we'll manage the infantry.””

It was ‘these bloody planes’ that were winning the island for [Germany](#). The garrison's total casualties to date were approximately 1900, of which the New Zealand share was in round figures 1400. Enemy losses were estimated to be more than 3300, but fresh troops and supplies were to be had for the asking—the sky was theirs.

[General Freyberg](#)'s real appreciation of the situation is expressed in his report:

‘At this stage I was quite clear in my own mind that the troops would not be able to last much longer against a continuation of the air attacks which they had had during the previous five days. The enemy bombing was accurate and it was only a question of time before our now shaken troops must be driven out of the positions they occupied. The danger was quite clear. We were gradually being driven back on our Base areas, the loss of which would deprive us of our food and ammunition. If this heavy air attack continued it would not be long before we were driven right off our meagre food and ammunition resources. I really knew at this time that there were two alternatives, defeat in the field and capture or withdrawal.’

By Brigadier Puttick's orders NZE Detachment was divided and given new tasks. Nineteenth Army Troops came under command of [19 Australian Brigade](#), moved over that evening (24th) and were put into reserve near [Perivolia](#) village.

Seventh Field Company remained in situ ready to support 20 Battalion, which itself was under orders to counter-attack in support of 19 Battalion.

It is convenient at this stage to return to [Kastelli](#), where we left Lieutenant Yorke and WO I Baigent with other instructors under the command of Major Bedding, a body of Greek conscripts and twenty-eight German prisoners. The two engineers were to have given instruction in wiring, but as there was no wire and no likelihood of any, Major Bedding turned Lieutenant Yorke into a musketry instructor and RSM Baigent into a quartermaster. They were, of course, completely cut off from the Division, but wireless reports from the [BBC](#) suggested that the enemy was being driven back from [Maleme](#) and the retreating force was expected daily.

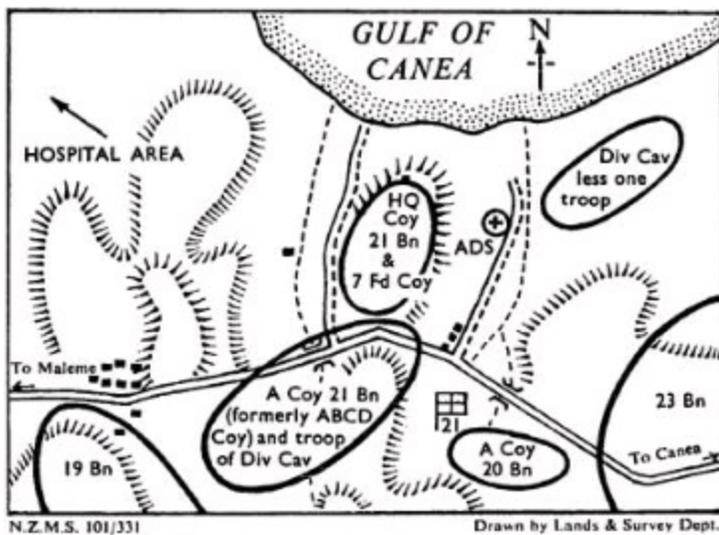
When the Germans did come on the 24th it was in strength and preceded by a dive-bombing attack that hit the jail, whereupon the guards departed, the prisoners escaped, armed themselves and took Bedding and Baigent prisoner. Meantime the Germans dispersed the Greeks, who retired to the hills, where they fought on for some days. Lieutenant Yorke managed to cross the island to [Sfakia](#). RSM Baigent received promotion to commissioned rank in a somewhat irregular manner, for Major Bedding, without a vestige of authority but seeing the need for experienced officers with the Greeks, had given him acting rank as Second-Lieutenant. After the war and when the circumstances became known, the appointment was officially confirmed as from 20 May 1941.

On the left wing 19 Army Troops scratched holes between the roots of the trees with tin hats and bayonets while Australian fighting patrols clashed with enemy pockets. Both companies were ground strafed at intervals, but the expected attack did not come until late the following afternoon (25th).

The sappers were not involved in the fiercest fighting of the campaign, possibly the fiercest fighting of the whole war. [Galatas](#) was lost and retaken at the bayonet's point, but the whole New Zealand line was so weak that there was no alternative but to retire again: to give up [Galatas](#) and any remaining hope of a counter-offensive. Form a new line north from the Australian right to the sea, hold there as long as possible, then fall back to another line. When every move is dictated by the enemy the final result is capitulation or evacuation.

Fourth Brigade was now in pretty poor shape and 10 Brigade in ruins, but 5 Brigade had had a day's comparative rest so it was its turn again. It was 21 Battalion's turn as far as 7 Field Company was concerned, for it had come under command of that unit together with a party of Divisional Cavalry (Major [Russell](#) <sup>42</sup>) and a company of 20 Battalion (Lieutenant [Washbourn](#) <sup>43</sup>).

Twenty-first Battalion Group was placed before dawn on the 26th on the right flank along [Hospital Ridge](#), east of 7 General Hospital. The ridge itself was stony and bare of cover, but in the shallow valley behind there were some trees. Colonel [Allen](#), <sup>44</sup> commanding 21 Battalion Group, made the following dispositions:



HOSPITAL RIDGE POSITIONS, WEST OF CANEA  
**hospital ridge positions, west of canea**

Headquarters Company and 7 Field Company were on the right between the road and the sea; the rest of 21 Battalion, organised into one company plus C Squadron of Divisional Cavalry, held the left. In reserve to the right flank were A and B Squadrons, Divisional Cavalry, and on the left was A Company, 20 Battalion. Nineteenth Battalion, the only reasonably fit unit in 4 Brigade, now under command of 5 Brigade, was immediately south of and in contact with 21 Battalion. When Lieutenant Wildey and Sapper McCutcheon, who by now had lost all their Greeks, heard that 7 Field Company was handy, they set off to find it.

'Lieutenant Wilding [ sic] reported to Capt Ferguson of 7 Fd Coy NZE somewhere near 7 Gen Hospital,' wrote McCutcheon, 'but Ferguson said that he [Wildey] and McG had been detached from 7 Fd Coy and ... ordered them to move back. Ferguson handed W his nominal roll of all 7 Fd Coy and gave McC his camera, saying that 7 Fd Coy would never get out of this position (which was, of course, his reason for ordering W and McC back).... [Wildey] and McCutcheon started to hike back.'

Twenty-first Battalion Group did what digging it could with bayonets and tin hats but the result was not reassuring. Some men built low sangars of loose rock to shelter behind. The usual 'recce' planes were over as soon as it was light enough and the observers must have rubbed their hands at the targets disclosed. It was not long before mortar shells were bursting on the stony ridge and dive-bombers swooping and screaming with all guns firing. Seventh Field Company, about 180 strong on arrival in Crete, had been whittled down by detachments, sickness and

battle casualties to 135 all ranks. Captain Ferguson decided that no good reason would be served by having all his sappers put out of action and pulled the Company on to the reverse slope where there was some shelter. One half of 21 Battalion Headquarters Company had already done this and the other half followed Ferguson's example. Colonel Allen thought that they had been pushed back and brought up reinforcements.

The mixed group of infantry, cavalry and Engineers comprising 21 Battalion lost eighty-four officers and men before darkness brought an end to their sufferings. Once again the line was reeling back towards [Suda](#). 'A line is being formed two miles West of souda at approx the junct of two converging roads. Beyond this line all tps must go. Units will keep close together, liaise where possible to guard against sniper attack. 5 Bde units in general will hide up in area along road between souda and stylos turn-off. Hide up areas for units will be allotted by "G" staff on side of road after passing through souda. Bde HQ will close present location at 2300 hrs and travel at head of column. Will then set up adjacent to stylos turn-off. A dump of rations boxes already opened is situated near the main bridge on main canea road also some still at DID. Help yourself. It is regretted that no further tpt is available for evacuation of wounded. It is desirable that MOs should travel with tps. There is possibility of amn being on roadside near Main Ordnance dump. Take supplies as you pass.' <sup>45</sup>

Nineteenth Army Troops were not called on although the Australians were having a tough time, with the enemy feeling for the flank of the defence line and finding it before the day was out. The Australian brigade was ordered to fall back that night to a position two miles west of [Suda](#) behind 42nd Street, as some humorist had named the sunken road that came down from the hills to [Suda](#).

Captain Morrison, who had not received any orders for 5 Field Park Company since the attack began, sent a patrol with a message to Force Headquarters at [Suda](#) detailing his situation and asking for instructions. The patrol found that Force Headquarters had departed but met General Weston who commanded the area. He ordered the Company to make for [Sfakia](#) on the south coast. Morrison moved his sappers that night to [Suda Bay](#) and bedded down with the bridging section.

Twenty-first Battalion Group formed up on the road. Night-flying planes assisted

them with the latest German parachute flares, the first the troops had seen. They lit up the countryside like lightning, and a man feels very naked under such a light when he does not know how close his enemy is.

The Battalion Group dropped in its tracks behind 42nd Street at 4 a.m. but there was still no rest to be had. The battalion commanders discovered each other but did not know where Brigade Headquarters was, and although they thought they were safe for the time being with a covering force between them and the enemy, they decided to get into tactical formation and, if the unexpected did happen, to open fire and charge. Seventh Field Company was placed in reserve in an olive grove on the right flank. Some of the men were scrounging for food, some were having a long delayed wash, others were asleep when there was a burst of small-arms fire followed by a terrific clamour in front—it was the Maoris leading a bayonet charge without the orders normally initiating such tactics.

Seventh Field Company, supposedly a reserve force, were not far behind. 'At about 11 o'clock the Germans were attacking strongly when an involuntary attack on our part took place. No order was given but we all fixed bayonets and charged. The Aussies howled on our right and the Maoris bellowed awful cries on our left and we all went headlong into it.' Captain Ferguson did not go into details for he was writing home.

Major Hanson, who as senior engineer officer had even less excuse for getting into bayonet affrays, explains how he was led astray. He was looking for a truck, the only vehicle with Engineer Headquarters. It had been filled with sappers with sore feet, others who had been wounded but not evacuated, and some sick for the move behind 42nd Street and could not be found. (It never was found, which accounts for most of HQ NZE personnel taken prisoner in [Crete](#).)

'I was still with the Maori Bn,' he writes, 'when men began to go over the top (the road was slightly sunken at this part) and the charge from 42nd developed. I think "developed" is the right word. As far as I know there was no definite order although there may have been some previously prepared plan. Sapper Les [Adams](#) <sup>46</sup> who was with me called out: "Come on Boss, let's be in", so with my tommy gun and Adams with his rifle we participated in the charge of 42nd Street.'

So fiercely did the Australians and New Zealanders express themselves in this spontaneous gesture of disapproval that I Battalion of 141 Mountain Regiment ceased to exist as a fighting unit. Seventh Field Company suffered only three casualties and the Battalion Group claimed seventy dead Germans on its front. The rest of the day was peaceful.

Early in the afternoon 19 Army Troops was on the way south:

'Just after noon I reported to 19 Bde HQ and was told to make for the village of Stylos—in small parties of three or four. We pushed off in small groups on an extremely hot afternoon. We managed to evade a few prowling Stukas and on arriving in sight of Stylos found a very savage air attack in progress. I arrived in Stylos just before sunset and took post beside the road in order to collect any Coy personnel passing through. Lt Page met the CRE in Stylos and he sent word to me to move the Coy back over the island that night. Page and I collected between 70 and 80 men of the Coy and about 2100 hrs we took the road. We kept going until about 0300 hrs—dumb slogging up hills and in completely foreign country. At about 0300 hrs we found a small well and decided to camp until morning and at daylight on the morning of the 28th we found enough tea among the boys to get a decent brew. After a bit of a rest we pushed on over the divide and when reaching the summit overlooking the Askipho plain we were met by an LO from 4th NZ Inf Bde who asked me to put the Coy on a Parachute watching brief down on the plain. That little incident got the remnants of the Coy out of Crete. Because we were brigaded and became part of an organised force. We camped by a farm house on the west wide of the plain and put out pickets while most of the men rested.'

<sup>47</sup>

Withdrawal orders already issued had not, owing to the chaotic conditions prevailing, reached either the Australians or 5 Brigade, but with secondhand knowledge that a retreat was in progress over the mountains to Sfakia, where it was hoped to embark, the two brigadiers gave themselves orders. The Aussies went first to cover a crossroads at Neon Khorion and 5 Brigade followed with the intention of holding the far end of a pass at Stilos—if the enemy did not get there first. In a way it was Larisa over again, for if Jerry got to Stilos before the Anzacs were through, it was the end of the penny section as far as they were concerned. It was a fairly tough march, about 15 miles, up hill and down hill, but the affray at 42nd Street had

put new life into bodies that had not had a hot meal or a drink of tea for over a week.

The general conditions prevailing are described by [General Freyberg](#), who is not prone to exaggeration:

'There were units sticking together and marching with weapons ... but in the main it was a disorganised rabble making its way doggedly and painfully to the South. There were thousands of unarmed troops including the Cypriots and Palestinians. Without leadership, without any sort of discipline, it is impossible to expect anything else of troops who have never been trained as fighting soldiers.... Never shall I forget the disorganisation and almost complete lack of control of the masses on the move as we made our way slowly through that endless stream of trudging men.'

Along some part of the road and among the rabble described by the General were 19 Army Troops, who had been instructed to break up into small parties of three or four, Headquarters New Zealand Engineers who were in the walking party of [Divisional Headquarters](#), Postal Unit, [Suda Bay Detachment](#) and the rest of 5 Field Park Company. Only the last two maintained contact and formation. The other units lost men who could march no longer and dropped out on the side of the road. They largely account for the PW lists at the end of the chapter. The chaos grew worse each day.

The dog-tired troops were roused before daylight to line ditches and walls against troops of II Battalion of 85 Mountain Regiment, who we know now were making for [Retimo](#) in the mistaken appreciation that the New Zealand and Australian forces were moving to that area, where the investing Germans were more attacked against than attacking.

There was quite a minor battle before they were chased away, but though 21 Battalion Group sent the Divisional Cavalry and A Company, 20 Battalion, to assist 23 Battalion which was most involved, the engineers were not called on. The question arose, however, and was debated at a brigade conference, whether to hold on and march at night or disengage and risk a day-march nearer the embarkation point. It was decided to march at once and chance the enemy planes shooting up

the road and its occupants.

Twenty-first Battalion Group was last out and marched by sections in file, keeping to the sides of the road, British Commando units and the Australians sealed the road behind them, and 7 Field Company began the hardest march in its career. From Stilos to the [Askifou Plain](#), which was the next halting place, is only 15 miles, nothing to fit infantry, five hours' marching at the most. But this road went over a mountain range with 3000 feet of zigzags and hairpin bends, with false crest after false crest, fifteen thirsty, hungry, straining, panting miles. And the engineers were men who normally rode in trucks.

'For fresh men even in peacetime to cross this barrier would have been an exacting march. It came now as a cruel culmination to a battle which had ended in defeat; and not to be able to cross it was to become a prisoner.... The natural savage grandeur of the mountain road was overprinted with the chaos of war. Every yard of the road carried its tale of disaster, personal and military. The verges were strewn with abandoned equipment, packs cast aside when the galling weight had proved too much for chafed skin and exhausted shoulders; empty water bottles ... steel helmets half buried in the dust; all the grotesque and unpredictable bric-a-brac of withdrawal, the personal property treasured till it became an impediment and then discarded so that its owner could keep up with his desperate urge for life.'<sup>48</sup>

The Battalion Group rested for a few hours at [Vrises](#) before the really tough ten-mile section of the climb began. Some tins of meat had been found by the Quartermaster (Captain [Panckhurst](#)<sup>49</sup>) and were distributed, one tin to seven men, who ate the meat and washed it down with cold water.

At dusk the weary troops hoisted themselves on to sore and blistered feet for the climb up a road already crowded with strays who had hidden from planes during the daylight. They made [Sin Kares](#) on the edge of the upland plain of [Askifou](#) by 2 a.m. Captain Panckhurst produced from God knows where a mug of steaming hot tea and the exhausted troops settled under the scrub on the hillside and slept for twelve hours.

The Battalion Group moved again late in the afternoon through 4 Brigade, where 19 Army Troops Company was doing anti-parachute duty, to the edge of the

upland plain where they again dispersed. From their position a winding track took three or four miles to drop 2000 feet to the embarkation beach at [Sfakia](#).

Captain Anderson, with the sappers of 19 Army Troops Company he had managed to collect, attached himself to 20 Battalion in the morning (29 May) and marched with it to a position above the road just south of the [Askifou Plain](#). There was fighting behind them but they were not involved. It was the affair of the rearguard (23 Battalion) who were quite competent in such matters and the sappers left it to them.

That night they moved again to 4 Brigade's last bivouac area and were under the scrub on the west end of the road overlooking the coast in the early hours of 30 May. Tentative arrangements for embarkation that night did not include 19 Army Troops Company, who were transferred to 5 Brigade and put under command 21 Battalion, so that in effect the Engineer Detachment was together again. Fifth Field Park Company was not far away. Captain Morrison had gathered the sections from the different areas by the 27th (the day of the charge at 42nd Street) and about midnight started the march to [Sfakia](#). On arrival, after experiences the reader will now be able to visualise, the sappers bivouacked in some caves near the beach and freshened up with a swim.

In the early morning of 31 May the augmented 21 Battalion Group marched down into a wadi near the beach. Colonel Allen was ordered to send 150 men 'under good officers' to picket the 2000-foot-high hilltops and help the defence until nightfall. Captain Ferguson was one of the officers detailed and of that climb he wrote:

'The climb was so steep and difficult that by the time I reached the top I had only 25 men left—the others could not make it. I expect that had it not been for the biscuits and marmalade and cup of hot tea which was the first we had had for several days that was given us prior to climbing this ridge we would never any of us have got there.'

After dark 21 Battalion Group 'formed up for the last march in [Crete](#). After a few more tense moments when half a dozen Stukas machine-gunned the head of the long column, the crocodile writhed, spread out, and bunched along the gully and on

to the beach.... Assault landing craft and strings of lifeboats arrived like ghosts from the blackness over the sea, were filled, and disappeared again. The [21st Battalion's](#) turn came at 11.30 p.m. and there were ready hands to help them on board the [Phoebe](#).

‘Steaming hot cocoa and white buttered bread were passed around and, when the ship was fully loaded, 21 Battalion sailed and, in the terse report of the battalion war diary, “Arrived [Alexandria](#) 1630 hrs June 1. Arrived Amiryra transit camp 1830 hrs.”’<sup>50</sup>

Captain Morrison describes 5 Field Park Company's last hours on [Crete](#). ‘We had no exact information but a good hunch that the next night would be the last, so I organised the Company in single file so that we could tail on after the [Maori Battalion](#) of “5” Brigade. However there was a string of guards at the top of the steep track down to the port of [Sphakia](#) and an inner guard around the beach. Both sets of guards wanted to get off themselves and discouraged stragglers or unauthorised bodies of men with rifle fire and grenades. They would not allow the Company to pass so I went down to the beach with my DR, Wallie [Eckert](#).<sup>51</sup> After some bargaining with “Q” I got a chit from Brig. Hargest just as he was stepping on to a landing craft. I then left Wallie with my gear, ate the whole Company ration for two days—being one tin of M & V, and struggled up the steep path against a profane stream of Australian Infantry coming down, to collect the Company.

‘When we got near the beach there was more trouble with the inner guard. We got off 60 men, then 30 more and I was quite pleased when Sgt Len. Morris appeared. He had the strictest orders to stay at the tail and prevent straggling.

‘By the time all the chaps were on the way across the beach it was quite dark. I slapped Lt. Pemberton on the back and said, “Well, that's the lot”—but he stumbled in the sand and by the time we got dusted we had lost the Company! So Dick and I got onto another landing craft and eventually a destroyer. We slept on deck and in the morning the Navy gave us a wonderful breakfast of cereal, peaches and cream, and large cups of tea. So to Egypt—and the unbounded hospitality of an Aussie transit camp at Amyria.’

Engineer casualties in [Crete](#) were:

HQ 2 NZ Divisional Engineers

PW 13, of whom 2 were wounded

5 Field Park

Company

Wounded 2

PW 11

6 Field

Company

Wounded 1

PW 2

7 Field Company

Killed and died of wounds 24

Wounded 22

PW 24, of whom 12 were wounded

19 Army Troops Company

Killed and died of wounds 16

Wounded 31

PW 86, of whom 7 were wounded

Postal Unit

Wounded 1

PW 16

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<sup>1</sup> Lt J. F. B. Peacocke; born [Gisborne](#), 10 Aug 1909; contractor.

<sup>2</sup> Sgt R. N. Hultquist, m.i.d.; Westport; born Aust., 9 Aug 1905; carpenter; wounded 23 May 1941; p.w. 27 May 1941.

<sup>3</sup> Maj Rudd had become ill in [Greece](#) and Lt-Col Clifton was still there organising road blocks behind [6 Bde](#).

<sup>4</sup> Brig A. S. Falconer, CBE, DSO, MC, ED, m.i.d.; Dunedin; born [Mosgiel](#), 4 Nov 1892; tobacconist and secretary; Otago Regt 1914–19 (BM 2 Inf Bde); CO [23 Bn](#) Jan-Aug 1940, Mar-May 1941; comd 7 and 5 Inf Bdes in [UK](#), 1940–41; NZ [Maadi Camp](#), Jun 1941-Oct 1942; [5 Div](#) (in NZ) Dec 1942-Aug 1943; Overseas Commissioner, NZ Patriotic Fund Board, Nov 1943-Feb 1945.

<sup>5</sup> Tank Landing Craft.

<sup>6</sup> Letter, Capt Morrison.

<sup>7</sup> Now acting CRE in place of [Col Clifton](#), who had gone on to Egypt, and of Maj Langbein who had been evacuated sick.

<sup>8</sup> [Lt-Col J. N. Anderson](#), DSO, m.i.d.; [Te Awamutu](#); born Okaihau, 15 Apr 1894; civil engineer; OC [5 Fd Pk Coy](#) Sep 1941-Oct 1942; [6 Fd Coy](#) Oct 1942-Aug 1943; CRE Apr-Nov 1944; OC Engr Trg Depot 1945.

<sup>9</sup> [Sgt L. A. Solon](#); born NZ 10 Apr 1910; surveyor; p.w. May 1941.

<sup>10</sup> From the Albanian front.

<sup>11</sup> [Sgt I. M. Dow](#), m.i.d.; [Christchurch](#); born Dunedin, 28 Jan 1913; mechanic.

<sup>12</sup> [Maj T. G. Bedding](#), ED, m.i.d., MC (Gk); [Pauatahanui](#); born [Eketahuna](#), 18 Nov 1909; school physical instructor; p.w. 24 May 1941.

<sup>13</sup> [Lt-Col G. J. McNaught](#), DSO, ED; [New Plymouth](#); born [Wanganui](#), 26 Nov 1896; schoolmaster; NZ MG Corps 1916-19 (2 Lt, 1919); CO 29 Bn ( [UK](#)) Jun 1940-Mar 1941; [25 Bn](#) Sep-Nov 1941; wounded 23 Nov 1941.

<sup>14</sup> Lt Thomas went direct from [Greece](#) to Egypt.

<sup>15</sup> Fuse, instantaneous detonating.

<sup>16</sup> [Capt D. G. MacNab](#), MC, DCM; [Wellington](#); born NZ 15 Jul 1916; commercial artist; wounded and p.w. 23 May 1941; escaped Jul 1941; with Special Service unit in [Italy](#) and in [Balkans](#); wounded, [Albania](#), 6 Oct 1944; now Recruiting Officer, [RNZAF](#).

<sup>17</sup> There was a cadre of infantry instructors with the Greeks, commanded respectively by [Capt H. M. Smith](#) and [Maj C. Wilson](#).

<sup>18</sup> [John Hetherington](#), *Airborne Invasion*, p. 36.

<sup>19</sup> [Lt W. H. Mandeno](#), m.i.d.; born NZ 20 Nov 1915; surveyor; wounded May 1941; wounded and p.w. 28 Jun 1942; repatriated Apr 1943.

<sup>20</sup> [Cpl J. F. Duncan](#); [Pukekohe](#); born [Pukekohe](#), 23 Apr 1916; carpenter; wounded and p.w. 26 Apr 1941.

<sup>21</sup> [Spr F. W. Rayner](#); [Mangakino](#); born [Mangonui](#), 31 Dec 1911; works overseer; wounded and p.w. 26 Apr 1941.

<sup>22</sup> [Spr W. Cunningham](#); [Lower Hutt](#); born England, 25 Nov 1911; tinsmith.

<sup>23</sup> [L-Cpl P. A. Jennings](#); born [New Plymouth](#), 16 Jul 1905; labourer; wounded 2 Nov 1942.

<sup>24</sup> Not traced.

<sup>25</sup> [Spr G. W. Jefferies](#); [Eketahuna](#); born NZ 8 Nov 1913; labourer; wounded 20 May 1941.

<sup>26</sup> [Spr N. D. Horsfall](#); [Wellington](#); born [Wellington](#), 19 Aug 1918; fireman NZR; wounded 20 May 1941; p.w. May 1941.

<sup>27</sup> [Spr G. H. Kennett](#); [Belfast](#); born [Kaiapoi](#), 11 Apr 1917; labourer; wounded 20 May 1941.

<sup>28</sup> [Sgt W. E. Dudeck](#), DCM, m.i.d.; [Hamilton](#); born NZ 17 Sep 1910; tunneller; twice wounded.

<sup>29</sup> For a discussion of the question whether the enemy was genuinely

mistaken about the uses to which the area was being put see [D. M. Davin](#), [Crete](#), [Appendix III](#).

<sup>30</sup> [Cpl T. M. Brooks](#); born NZ 27 May 1913; clerk; p.w. 1 Jun 1941.

<sup>31</sup> [L-Cpl J. C. Wright](#); [Auckland](#); born England, 16 Feb 1912; civil servant; wounded 23 May 1941; p.w. 1 Jun 1941; repatriated Sep 1944.

<sup>32</sup> [L-Cpl A. J. Balneaves](#); born NZ 23 Mar 1918; factory hand; p.w. 1 Jun 1941.

<sup>33</sup> [L-Cpl R. J. Yandle](#); [Pukearuhe](#); born NZ 22 Jun 1909; labourer; p.w. 1 Jun 1941.

<sup>34</sup> [Spr A. E. L. G. Farrell](#); [Wellington](#); born NZ 15 Jan 1914; labourer; p.w. 1 Jun 1941.

<sup>35</sup> [Spr R. R. Sprague](#); [Dunedin](#); born NZ 8 Feb 1913; labourer; p.w. 1 Jun 1941.

<sup>36</sup> [Sgt E. H. Blakey](#), MM; [Maungaturoto](#); born [Auckland](#), 30 Jun 1901; barrister and solicitor; three times wounded.

<sup>37</sup> [Maj R. Royal](#), MC and bar; [Wellington](#); born [Levin](#), 23 Aug 1897; civil servant; served in Maori Pioneer Bn in First World War; [28 \(Maori\) Bn](#) 1940-41; wounded 14 Dec 1941; 2 i/c 2 Maori Bn (in NZ) 1942-43; CO 2 Maori Bn May-Jun 1943.

<sup>38</sup> [Lt-Col F. Baker](#), DSO, ED, m.i.d.; born [Kohukohu](#), [Hokianga](#), 19 Jun 1908; civil servant; CO [28 \(Maori\) Bn](#) Jul-Nov 1942; twice wounded; Director of Rehabilitation, 1943-54; Public Service Commissioner, 1954-58; died [Wellington](#), 1 Jun 1958.

<sup>39</sup> [L-Sgt E. H. Elliott](#).

<sup>40</sup> Letter, Lt-Col J. N. Anderson.

<sup>41</sup> At this time NZE Det was in 5 Bde area and under command 10 Bde, which itself was under command 4 Bde.

<sup>42</sup> Lt-Col J. T. Russell, DSO, m.i.d.; born Hastings, 11 Nov 1904; farmer; 2 i/c Div Cav 1941; CO 22 Bn Feb-Sep 1942; wounded May 1941; killed in action 6 Sep 1942.

<sup>43</sup> Maj G. W. Washbourn; Wellington; born Timaru, 13 Jul 1916; bank clerk; p.w. 15 Jul 1942; now Regular Force.

<sup>44</sup> Lt-Col J. M. Allen, m.i.d. born Cheadle, England, 3 Aug 1901; farmer; MP 1938-41; CO 21 Bn May-Nov 1941; killed in action 28 Nov 1941.

<sup>45</sup> Signal from HQ 5 Bde sent at 10.15 p.m.

<sup>46</sup> Spr L. R. Adams; Ashburton; born NZ 25 Mar 1908; linesman; wounded Apr 1941.

<sup>47</sup> Letter, Lt-Col Anderson.

<sup>48</sup> Davin, Crete, p. 402.

<sup>49</sup> Maj G. H. Panckhurst; Waianakarua, North Otago; born Westport, 1 Nov 1906; accountant; twice wounded.

<sup>50</sup> Cody, 21 Battalion, p. 107.

<sup>51</sup> Spr W. W. Eckert; born China, 12 Dec 1912; storeman.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

# CHAPTER 6 – NON-DIVISIONAL ENGINEER UNITS IN MIDDLE EAST AND ENGLAND, JUNE - DECEMBER 1941

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## SURVEY AND RAILWAY OPERATING AND CONSTRUCTION COMPANIES

### *SURVEY AND RAILWAY OPERATING AND CONSTRUCTION COMPANIES*

The haven where, after a period of leave, the harried New Zealand Division began to refit, train and absorb reinforcements was not the safe retreat the troops thought it was. In addition to the German-Italian menace, halted on Egypt's western frontier by the necessity of reducing **Tobruk** before advancing further, the Arab states were also a source of anxiety.

In **Iraq** dissident elements, encouraged by enemy propaganda, overthrew the government (1 May), invested the British air base at **Habbaniya** and seized the pumping stations on the oil pipeline to **Haifa**. But Germany, having first declared eternal friendship with **Russia**, and now preparing to invade her friend, <sup>1</sup> was unwilling to assist the insurgents with more than words and some material. The revolt was put down within the month and a friendly authority installed.

French-mandated **Syria**, after declaring for Vichy France, had permitted German planes to refuel on Syrian airfields and allowed stores for the **Iraq** rebellion to be carried on Syrian railways. A Free French and Australian force, bent on clearing hostile leadership out of the **Levant**, was getting into position to attack.

Part of the planning for the offensive was the sending of two officers (Captain D. A. **Clarke**, <sup>2</sup> second-in-command 17 Railway Operating Company, and Captain J. N. **Nicholson**, <sup>3</sup> Adjutant, HQ Railway Operating Group) as early as 20 April 'to report on length of unused Railway as to its suitability to operate in case of extreme urgency.'

A little Levantine railway geography is essential at this point Traffic from Egypt was over the standard gauge Palestine system as far as **Haifa**, <sup>4</sup> where the line ended. **Haifa** was also the terminus of a narrow gauge line to **Damascus** <sup>5</sup> via **Deraa Junction**, which connected with **Amman** <sup>6</sup> and **Nagb Ashtar**, of which more anon. Connection between **Haifa** and **Beirut** <sup>7</sup> was by a good motor road and from **Beirut** another narrow gauge line ran to **Damascus**, with a branch at **Rayak** to **Homs** and thence to **Turkey**, but that system does not concern us at the moment.



**chief railways of the levant in 1941**

Yet another line, the one to be reported upon, built by the Turks during the 1914 - 18 war to avoid the coast and the British naval guns, went from [Tulkarm](#) on the [Kantara- Haifa](#) line to [Affule](#) on the [Haifa-Deraa](#) system. Some sections of this line had been derelict for years but were being put in order by Australian engineers.

The report, with appendices, covering nineteen pages and worded in terminology intelligible only to a railway man, said that there was sufficient engine power and rolling stock available for requisition, and that the permanent way had been brought up to a usable standard.

Major Poole was ordered to concentrate his 17th Railway Operating Company at [Geneifa](#), from which place, less some detachments not yet available, it left partly by train and partly by MT on 1 June to operate the [Tulkarm- Affule](#) railway in Palestine. On the same day Railway Operating Group Headquarters moved from [Moascar](#) to [Geneifa](#) and Lieutenant-Colonel Sage began the difficult job of administering his command with one half in the [Western Desert](#) and the other in Palestine. To overcome the obstacles of distance and slow communications the powers of a detachment commander were conferred on Major Aickin, who was then authorised to deal directly with higher formations.

This assignment was the first real railway work that the 17th Company had been offered since its arrival in Egypt nearly eight months earlier. This is how Major Poole saw it:

'We were more or less a "nuisance" so our companies were split up and some put on to wharf labouring work at [Tobruk](#), [Sollum](#) and other hot spots to keep us steadily employed. Others were retained to "shadow" the Egyptian engine drivers, guards, and station masters, in case they left their posts when any bombing started. That seldom happened however.

'As a very great proportion of our men were too old to draft into the infantry other jobs had to be found for them. By degrees we were found jobs for most of the remainder (those not on dock labouring jobs) at the ASC depots at [Port Tewfik](#), [Tel el Kebir](#), [Abu Sultan](#) and [El Kirsh](#) in the canal zone on shunting duties. The 16th Company were more fortunate as they had plenty of work up in the [Western Desert](#).'

An operating company is capable of staffing a complete working railway, with fitters, stationmasters, guards, shunters, drivers, firemen and clerks, so when Major Poole was offered, after settling in at [Affule](#) (3 June) some old engines that had seen better days, the fitters and drivers soon had them in going order.

Strict anti-malaria precautions had to be enforced in the new area. 'Those in [Affule](#) camp had to take tiny quinine pills every day. It was amusing to see men standing around acting like the ostrich at breakfast endeavouring to swallow two small pills while an NCO stood by watching and waiting to certify on the company that pills, two, malaria for the prevention of, had been duly swallowed by the aforesaid ORs.... several parties of soldiers each man armed with a container holding a measure of Condys crystals, sandfly fever for the prevention of, gargling their throats and expectorating into tins that had a different use after dark.

'We discovered considerable musical talent not always under reasonable control. Evening visits to the local wine shops and occasional calls at communal farms I fear did much to undo the work of the "gargle parades".'<sup>8</sup>

The first train, preceded by a pilot and with two engines running tender first, made a trial run over the [Affule- Tulkarm](#) section on 6 June, two days before the offensive against Vichy France was launched. For the following four months three trains ran daily each way carrying army supplies. The Company was pleased to be doing the job it knew from years of experience in New Zealand how to do very well.

Its operations were soon extended for on 9 June the 17th was called on to take over and operate within twenty-four hours the line from Samakh, on the Palestine-Syrian border, to Deraa.

The invasion force was not operating in that area but Free and Vichy French adherents began skirmishing, while the Druses from the [Jebel Druse](#), with a strict eye to the business of looting, were firing on the contestants impartially. It was rather like a South American revolution where nobody knows who is fighting whom. A party of drivers, shunters, firemen, guards and tradesmen, 31 all told, went to Samakh—the whole line from Samakh to Deraa inclusive had been deserted—and took over station by station to Deraa. Minor damage caused by the warring factions, blown crossing points and the like were replaced by Workshops staff, and even a damaged water tower at Deraa was repaired within a couple of days. A glittering prize was a beautifully equipped workshop at Deraa which was immediately 'liberated' and staffed. The Company received a small accession to its strength at Deraa, where two French drivers who would not be separated from their diesel engines were put on the New Zealand payroll.

[Damascus](#) was occupied by Free French forces on 21 June and on 11 July General Dentz accepted armistice terms for a cease fire in [Syria](#). Two months later the sappers handed back the Syrian section of the line to the French, the [Affule](#) line was closed on 13 October and the Company returned to the Canal Zone.

General Rommel did not advance beyond the Egyptian border and 16 Railway Operating Company, working the [Daba- Matruh](#) section of the Egyptian State Railway system, settled back into routine and shared the running of trains with the Egyptian regular staff. Eight trains daily were all that were needed for the requirements of the attenuated desert force, but Major Aickin had other things on his mind.

There were frequent conferences with the Assistant Director of Railways, a lieutenant-colonel representing GHQ Middle East, where the Company share of the schemes for advancing and retiring, with emphasis on the former, were worked out. Additional crossing loops were put in to provide flexibility in train movement and suitable areas in the rear of [Alamein](#) were selected as railheads in the event of a further withdrawal. An Australian engineer unit was speeding up construction on the [Amiriya](#) supply base, which would be needed in either case, and a procedure was

worked out for the destruction of rolling stock in the event of a hasty retreat.

Rommel, besides ground troops, had been provided with the makings of an air force, a fact soon noted by the Kiwi railwaymen, accustomed by now to the high-flying and cautious Italians who flew around on moonlight nights. Early in July a train, picking up a small change-of-air leave party at It Nooh above the [Baggush](#) escarpment, in railway language the [Fuka](#) bank, was ground strafed by seven Messerschmitts. There were casualties in the coaches, while in the engine three of the crew of two Egyptians and two New Zealanders were wounded, one fatally,<sup>9</sup> The driver, Lance-Corporal [Padlie](#),<sup>10</sup> hit in several places, managed to apply the brakes and instructed an English officer who had boarded the loco how to shut off steam and save a possible runaway down the steep [Fuka](#) bank. Part of the citation for his immediate Military Medal runs:

'His action in applying the brakes so as to bring the train to a standstill, and subsequently instructing Captain Brown how to complete the operation and shut off steam which his own failing strength did not permit him to do, while suffering from at least four body wounds, showed courage of a high order and devotion to duty worthy of recognition.'

As the weeks passed reinforcements and replenishments began to alter the balance of forces on the frontier, a fact that the enemy air forces were quick to realise and to take steps against.

Standing at [Fuka](#) early in October were twenty or so wagons loaded with bombs up to 500 lb weight, a rake of ammunition wagons and some twenty-five wagons of aviation spirit. A well directed attack certainly produced results. First the petrol went up and the heat set fire to the wooden ammo wagons. The resultant explosions threw bomb fragments, unexploded bombs, parts of wagons and lengths of rail over a wide area of desert. It took two days to repair the damage, during which time 4 Reserve Motor Transport Company, which was camped nearby, ferried troops and urgent goods between trains halted at a safe distance on each side of [Fuka](#) station.

It was not wholly a bad thing (for this raid was distinguished from many others only by its success) because it produced antiaircraft protection at [Daba](#) and [Fuka](#).

'At [Fuka](#) a fortnight later an Egyptian engine driver who was at the throttle of a

heavy goods train failed to notice, first, that he had arrived at [Fuka](#), and secondly that there was a petrol train standing on the main line at the station. The accident cost us one of our young firemen <sup>11</sup> who was killed instantly. The brakesman of the standing petrol train, a 16 Company man, did a few somersaults in company with his brake van which immediately caught alight, having been sprayed with petrol. Without knowing exactly how it came about the brakesman stepped unharmed from the blazing and derailed vehicle. His escape was miraculous as the brake van took the first blow from the heavy engine of the colliding train, the total weight of which was over 800 tons. As mentioned previously there were no signals at stations, no headlights on engines and no tail lights on the brake vans....' <sup>12</sup>

The enemy viewed the accelerating build-up with increasing rancour and all through October and early November some part of the line came in for nightly attention, while saboteurs did their best by placing stones on the rails and by inserting explosives between the points. Two engines were derailed in one night and a water train was damaged while unloading. The drivers and firemen, both Kiwi and Egyptian, earned the admiration of front-line troops who realised that they had no protection and could not jump for cover. The Egyptian railway High Command, who were not the men their train crews were, at last gave express approval to the Kiwis, already operating the trains sub rosa, to do so with their official sanction.

On 6 November 17 Company took over station by station the [Daba- Matruh](#) length of Egyptian railway from 16 Company; the newcomers were welcomed by the enemy, who after a year of near and not so near misses landed a bomb fairly on the [Daba](#) station.

Sixteenth Company began to operate a new line from [Similla](#) to a temporary terminus at [Mazhud](#) (Lieutenant [Hayman](#) <sup>13</sup>), 68 ½ miles south-west in the Egyptian wilderness of sand, rock, stones and desert scrub. As on the main system, engines could not use headlights nor could the brake vans carry tail-lights; there were no signals and the only communication was through a three-exchange circuit, [Matruh-Sidi Barrani-Sheiba](#). This is an opportune time to explain how that desert railway came to be there. But first it is necessary to bring 9 Survey Company into focus.

The Transportation Directorate, GHQ Middle East, was anxious to improve the line of communication along the Nile Valley by linking the [Sudan](#) and Egyptian

railway systems; another urgent project was a rail connection between Upper Egypt and the [Red Sea](#).

While the campaign in [Crete](#) was being fought Major Pack-wood, Captain Halley, Lieutenant [White](#) <sup>14</sup> and the Chief Engineer of the [Egyptian State Railways](#) were looking for a route to the [Red Sea](#) from [Qena](#), <sup>15</sup> where the [Nile](#) takes a big sweep to the east.

[Safaga](#), where a British company was working a phosphate deposit and had built a small jetty, was eventually chosen as the seaward terminal of the new line. It took a vivid imagination to see a port and facilities being built on the dismal stretch of desert between the sea and the encircling gaunt limestone tableland. Utterly lifeless and waterless, oven-hot [Safaga](#), 250 miles south of [Suez](#), is in a bay two miles wide and hidden from the view of passing ships by a sand spit covering an outcrop of coral.

A route along the wadis and through the hills was located after some trouble, whereupon 9 Railway Survey Company was directed to survey both the railway for construction and the port for development.

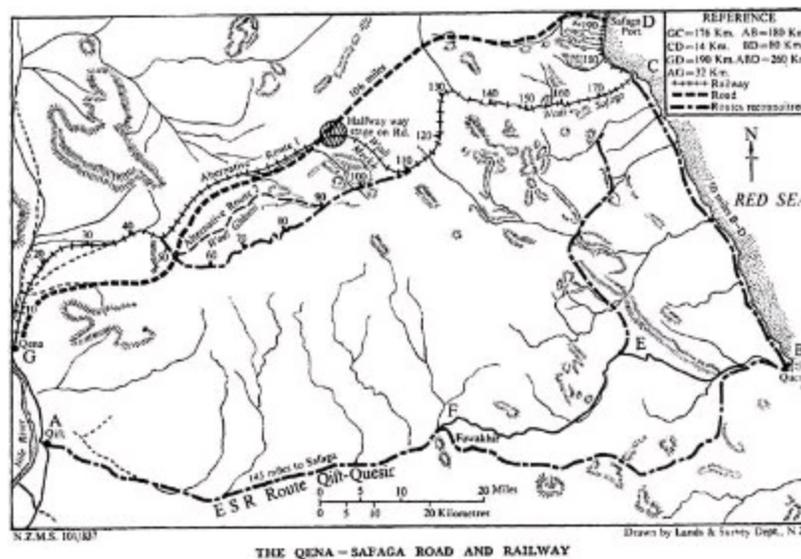
Captain Halley, Lieutenants [White](#) and [Macky](#), and No. 1 Section went by road to [Qena](#), then across country to [Safaga](#) and set up camp near the beach, where Sergeant [Jim Douglas](#) <sup>16</sup> and [Hori Diamond](#) <sup>17</sup> found a plentiful supply of crayfish. The phosphate company welcomed the newcomers and made its club and canteen available to the men.

Captain Halley describes how to survey a railway line in a hurry, for over-all strategy, in the event of the [Nile Delta](#) being lost, envisaged the forces of Egypt retiring up the Nile Valley. Some of the planners also envisaged [Safaga](#) as the scene of a beach evacuation.

The first job was to traverse and level the proposed route and the section split up into several parties, each party taking a section of the 110 mile route. The pegging gangs kept well ahead of the theodolite and level parties, who enjoyed being carted from point to point by truck. Even the Staff-men travelled by truck. Surveying at this rate, from dawn to dark, it is not surprising that the route was

traversed and levelled in about three weeks. No. 1 Section was thought as still on [Long Range Desert Patrol](#) scale of rations—which included a generous rum ration, so perhaps it was.

'After the [Qena- Safaga](#) route had been traversed, the final alignment was drawn in and pegging for construction started, construction being carried out by the Egyptian Railway Department. The baby of the Survey Party at [Safaga](#) was [Curley Neame](#),<sup>18</sup> who, to the horror of the older PWD chainmen, did all his chaining at the double—the hotter the day the faster he ran. When the job was over, Curley packed up with a poisoned foot which he had had the whole time without letting on—his work at [Safaga](#) got him a well deserved Mention in Dispatches. One feature of the [Qena- Safaga](#) Railway worth mentioning is that owing to the steep grades necessary to get over the [Red Sea](#) mountains, at several stations special rail spurs were constructed up side Wadis to take care of possible run-a-way trains. The line fortunately, never had to fulfil its planned function, and after the War was pulled up.'



**the qena – safaga road and railway**

By this time it was the end of August and there had been several changes in the command of 9 Railway Survey Company. Major Packwood transferred to the Directorate of Works, [Middle East](#), on 16 August. Captain [Young](#),<sup>19</sup> promoted major, left 10 Company to command the Survey Company. Lieutenant Marchbanks, promoted captain, replaced Captain Young as second-in-command 10 Company. Captain Nevins with his No. 3 Section was kept busy until December on a 'recce' for a line to close the [Wadi Halfa- Shallal](#) 190-mile gap between the [Sudan](#) and the

Egyptian railway systems. <sup>20</sup> They had also to locate a line from [Wadi Halfa](#) to [Toshka](#), a river distance of about 63 miles, where a series of sandbanks made the river unreliable for three months each year. This was a No. 1 priority for an increasing amount of war material, including much of the troops' mail, was being sent to the Canal Zone via rail from [Port Sudan](#) to [Atbara](#) on the [Khartoum- Wadi Halfa](#) section of the [Sudan](#) railway system, thence by rail, river boat and road for a thousand miles to [Alexandria](#).

The rail link between [Wadi Halfa](#) and [Toshka](#) would make the passage of warlike goods more secure—if we remained in Egypt. But the return of the enemy to the border of Egypt, better armed and reinforced with German troops led by German generals, suggested that we would be thrown out of North Africa unless something was done about it; something dynamic, like throwing the enemy out first.

Captain [Clark](#) <sup>21</sup> and No. 2 Section left work along the [Suez Canal](#) for a survey project in the [Western Desert](#).

An offensive to clear North Africa could not be supplied by sea for the enemy had practical command of the Western Mediterranean and even to maintain [Tobruk](#) taxed the resources of the Navy. Nor could an army of the size needed be wholly administered by lorry; the thousands of tons of water and petrol used daily ruled that out.

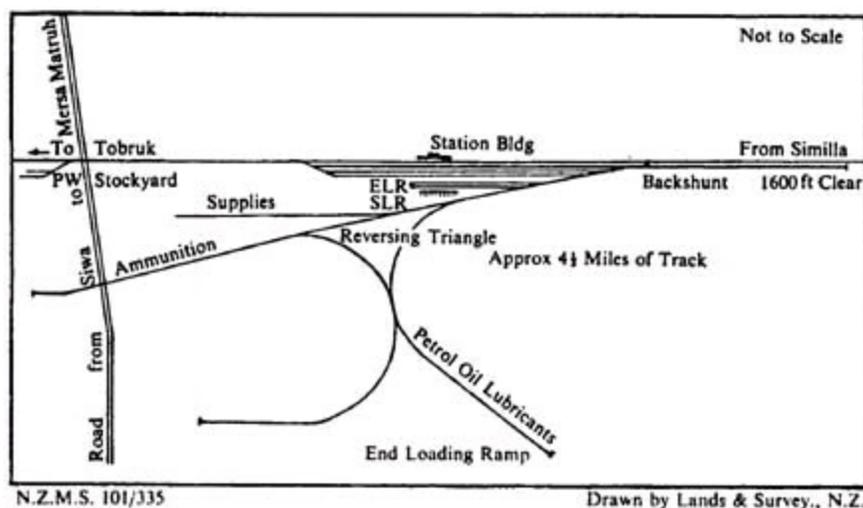
Administration must therefore be carried out at least partly by railway. Beyond [Matruh](#) there was no railway. Very well, one must be built. That was the position when the New Zealand Division was landing at [Alexandria](#) from [Greece](#) and [Crete](#). British generals needed to be lionhearted in those dark days. But though they did not know it, they had a tool to their hands that could build railways at a speed little short of fantastic, providing supplies of labour, plant and material were made available, as and when wanted.

Colonel Anderson and his officers had been working out drills for track laying and designing gear to implement the drill. The military textbooks on the subject envisaged one mile per day 'end on' track laying, but the Kiwi engineers thought they could double that rate.

Tenth Railway Construction Company, less 2 Section on its way back from the **Tessenei** bridge job in the **Sudan**, made a camp at **Similla** and on 26 June restarted work on the line to **Charing Cross**, 19 miles away on top of the escarpment dominating **Matruh** from the west. Incidentally, although the Army always called the place **Charing Cross**, the Egyptian Government took a dim view of unbelievers christening railway stations in the land of the faithful and insisted that the correct name was Mohalafa. <sup>22</sup> **Charing Cross** was always Mohalafa to the Railway Group, but later, when the line ran into **Libya**, it got its own back with **Killarney** and, out of respect to the Aussies who had held **Tobruk**, **Gundagai**. It would hardly be necessary to describe the sign indicating the **Gundagai** station.

The job was begun with almost no equipment; the first three miles of track was laid by trucking sleepers and dragging rails with tractors because there was no locomotive. By 21 August rails had been laid only to Mile 7 and formation completed to Mile 9, less than a mile a week.

A new formation soon to be known to fame as the Eighth Army was in the process of formation. <sup>23</sup> Some of the repercussions were the arrival of Headquarters Railway Construction and Maintenance Group at **Qasaba**, following instructions to Major Rabone to have the Mohalafa depot completed and operating on 14 September. Material suddenly became available and two Indian units, 1209 and 1212 Pioneer Companies, were attached to 10 Company.



**MOHALAFA DEPOT**  
**mohalafa depot**

The unit was split, half the Company and one Indian company platelaying and the other half and the second Indian company working partly on formation and ballast and partly on loading banks and shunt lines for the Mohalafa depot. The line was completed from the seven to the nineteen mile peg in ten days, an average of 1.2 miles a day.

This was the first attempt at fast platelaying and the drill perfected during the period was used in all future work. On 3 September 10 Company's diarist must have penned the following lines in the war diary with satisfaction:

'Railhead at Mohalafa this evening. 1 Mile 2480 feet of track laid today. For the seven day period including today 7 miles 3630 feet of steel sleeper track was distributed, laid and linked, representing an average of 1 Mile 519 feet per day for the period.'

On 6 September advice was received that, commencing on the following day, 140 truckloads of pipes for the extension of the [Western Desert](#) pipeline which would service Eighth Army were to be taken by construction train beyond Mohalafa and unloaded as near as possible to the road running south to the [Siwa](#) oasis <sup>24</sup>—the Railway Construction sappers' first job for Eighth Army.

Much of the petrol, ammunition and other warlike stores now went to the new railhead and enemy 'recce' planes were not slow in reporting streams of vehicles in what used to be an innocent piece of desert—with the usual nightly consequences.

Thirteenth Company's arrival at Mohalafa in mid-September completed the concentration of C and M Group. It was warmly greeted, for the next objective was [Piccadilly](#), 64 ½ miles away, and the target date was 25 October, which meant improving on the already fast time put up by 10 Company Group. Two miles per day was aimed at and was first attained on 24 September, when two and a half miles of formation and two miles, 860 feet, of track were completed.

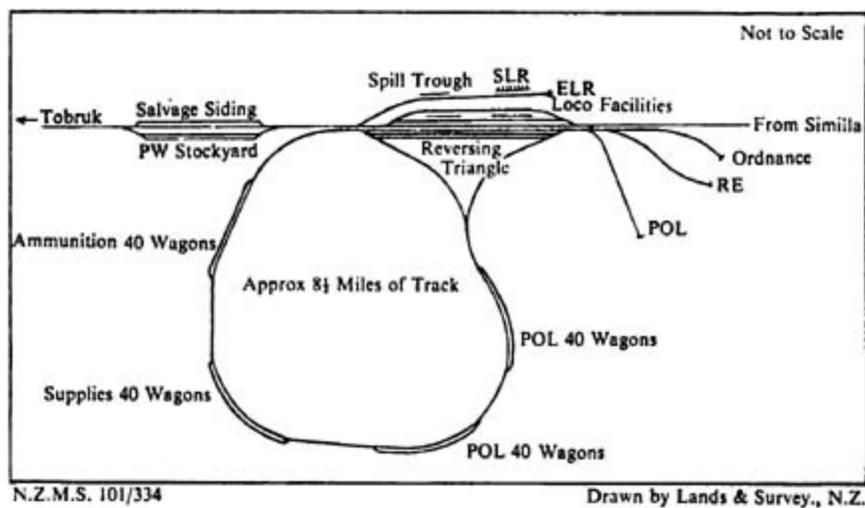
It was some compensation to the toiling sappers, whose first shift on the earthmoving plant was roused at 4.30 in the bleak desert morning and whose second shift stopped the discordant noise of their diesels at 6.30 p.m. Mention might be made at this point of the way the material was sent forward from [Alexandria](#).

Two miles of track required a train of eight doublebogied cars for rails and from 30 to 35 single-bogied trucks for sleepers and fastenings. There were five trains, one at railhead, one on the way up, one on the way down, one being loaded and one spare. Sometimes the trains were not properly balanced and brought up the wrong numbers of components, but it says a great deal for the RE Railway Stores Company and the Railway Operating Companies that, in spite of enemy action, the construction sappers were kept supplied from dumps 350 miles back.

Colonel Anderson had, since 1 September, taken over command of all railway construction in the [Western Desert](#). It was not long before the Kiwi construction expert had to show his quality. He was called to Eighth Army Headquarters and told that the line would have to go 12 miles past [Piccadilly](#) to [Misheifa](#), where a depot, marshalling yard, sidings for all services, vehicle recovery and ambulance train sidings, locomotive facilities, watering and coaling must be completed by 16 November. All told, 86 miles of track in 57 days, otherwise 5000 motor lorries would have to be scraped up to do the work.

'Eighth Army promised to make it a Priority 1 job if we could guarantee it, and to give us valuable plant and motor transport. We said we could, and set off with our new organisation. They were difficult days. There was never enough of anything to give us a feeling of security. The motor lorries given us were old and in short supply. There were not enough compressors, there was not enough earthwork plant, and there were too few trucks and locomotives. Spare parts and tools were inadequate—for instance there were several delays because there were no augers for sleeper boring.'<sup>25</sup>

By the middle of October the job was 12 miles behind schedule and Cain was being raised with the harassed authorities about defective vehicles and slow deliveries. In spite of shortages, over two and a half miles of rail was spiked by 13 Company on 19 October, an achievement hitherto unequalled in the desert and not unremarkable in the history of military railway construction. Transport breakdowns and shortage of augers notwithstanding, over two and three-quarter miles were laid on the 23rd and an attempt to break the three-mile barrier was defeated by the fact that the permitted grade was too much for the construction train, which had to be split.



**MISHEIFA DEPOT**  
**misheifa depot**

Besides the actual line, a depot had to be constructed for unloading all the necessities of an army. Colonel Anderson had already submitted a novel but practical plan for a circular depot instead of the orthodox type and gave his reasons, largely technical and without meaning to the layman.<sup>26</sup> The Air Force said that such a set-up would be harder to put out of action and the 'Ack-Ack' people said it would be easier to defend. Everybody having to do with transportation chewed the idea over and approval was finally given on 27 October. The depot was required to handle six trains daily—one passenger, three stores, one water and one ambulance.

The importance the extension had now assumed was shown on 3 November, when all the generals concerned with the battle about to be thrust on the enemy inspected the New Zealand job.

Were the line and extras finished by 16 November? Let us take a look at the war diary of 13 Railway Construction Company, who were working ahead of 10 Company during this period:

4/11 Fine day, Formation completed to 86M3000. Track completed to 85M3800 (2.35 miles today). Material did not arrive at trackhead until 1045 hours. Brigadier Miller, Eighth Army, had arranged for special supply of beer to men which arrived today and assisted in assuaging the accumulated thirst of about 10 days, the last three being particularly hot and dusty.

5/11 Formation completed to 88M. Track completed to 87M1255 (1.50 miles

today). 0.88 miles of track was tacked down in first 2 ½ hrs work this morning, but track was chasing material distribution so closely that laying was knocked off at noon.

6/11 Completed to 89M3000. Three shifts being worked on formation now. No tracklaying because of material shortage.

7/11 Formation completed to Depot (93 ½M).... Tracklaying completed to 89M2400 (2.22 miles today).

8/11 Formation of depot 30 per cent complete. Track laid out to 91M2630 (2.04 miles today). Shunting delayed arrival of materials.

9/11 Formation for depot 45 per cent complete. Main line complete to 91M4000.

10/11 Depot formation 55 per cent complete. Main line of depot loop complete.... (1.8 miles today).

11/11 Depot formation 70 per cent complete. Main line track completed through marshalling yard and up to materials siding turnout. Water siding complete (1.16 miles today).

15/11 Depot formation complete and formation for main line complete to 93M3000. Main line laid to 93M2200.... (1.11 miles today).

First train to use [Misheifa](#) railhead arrived this evening when a water train was taken into the water siding.

[Misheifa](#) was staffed by fifty other ranks commanded by Lieutenant G. L. Hayman and eventually had full terminal facilities for locos, coaling, water and running repairs.

From Colonel Simner, Director of Transportation, GHQ, [Middle East](#), to Colonel Anderson:

`... I am just writing to express ` my personal appreciation and thanks for the first class show put up by you and the whole of the NZE group officers and men, in pushing through the Western Desert Extension to the new desert railhead in record

time, ahead of time table, and, I am certain, ahead of the original expectations of the powers that be. The first step to [Capuzzo](#), I hope!

'While construction work was going on I frequently had many anxious moments but never as to your ability to complete the job to programme, only as to our ability to keep you supplied with the necessary materials at the required rate. I know you will convey these congratulations to all working under you.'

The Kiwis were quick to pass the congratulations on to the Indian pioneers, who were excellent workers and took a keen interest in the race against time. Sappers will no doubt strongly deny that there was any connection between the negligible sick parades of that period and the desire to see the job through on schedule; nevertheless the MO had a very slack time.

One unforeseen consequence of building a railway in the desert was the effect on the nerves of sundry drivers who, on returning from convoy duties along the route made on the outward journey, were confronted by a set of rails complete with train that had certainly not been there before.

As early as 6 November Eighth Army had approved an idea for the protection of [Misheifa](#) railhead. The scheme, based on the supposition that the enemy would not recognise the circular depot for what it was, was to build a dummy depot of regular design on a likely prolongation of the route, but far enough away for any air attack not to interrupt traffic. 'No. 2 Desert Railhead' became the joint affair of the NZE who built it, a camouflage section of the [RAF](#) 253 Wing who photographed it daily to see that shadows were in the right places, and the Mobile Section of 85 South African Camouflage Company who provided dummy fuel and ration depots, accommodation and slit trenches for straw soldiers, goods trains of timber and black cloth with furnace glow effects, wooden Bofors guns, cloth lorries and an erection whose sole claim to be a water tank was that it looked like one. Not all the Bofors were wooden for the success of the deception relied on the keeping of inquisitive planes at a respectful height. The job must have been convincing for, besides the usual attentions to the whole line in general and [Misheifa](#) in particular, the [Luftwaffe](#) gratifyingly plastered No. 2 Desert Railhead heavily and often. No doubt both Generals Rommel and Cunningham were completely satisfied with the damage reported as being inflicted on No. 2 Desert Railhead.

There was a break in railway construction during December when the sappers worked on strengthening the fillings and reballasting the line.

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<sup>1</sup> Germany invaded Russia on 22 Jun 1941.

<sup>2</sup> Maj D. A. Clarke, MBE; born Palmerston North, 7 Dec 1895; clerk.

<sup>3</sup> Capt J. N. Nicholson; Lower Hutt; born Napier, 25 Jul 1895; locomotive inspector.

<sup>4</sup> Chief port and one of the principal cities of Palestine (now Israel).

<sup>5</sup> Capital of Syria and reputedly the world's oldest inhabited city.

<sup>6</sup> Capital of the Kingdom of Jordan.

<sup>7</sup> Capital of Lebanon and formerly of Syria as a whole before the partition of Lebanon and Syria.

<sup>8</sup> Letter, Cpl J. Dangerfield.

<sup>9</sup> Spr W. J. McCown.

<sup>10</sup> Cpl H. Padlie, MM; Maungaturoto; born Kaikohe, 14 Aug 1909; enginedriver; wounded 7 Jul 1941.

<sup>11</sup> Spr H. S. B. Leighton.

<sup>12</sup> Lt-Col F. W. Aickin, manuscript history of 16 Railway Operating Company.

<sup>13</sup> Capt G. L. Hayman, m.i.d.; born Kaiapoi, 26 Jul 1905; stationmaster.

<sup>14</sup> Maj D. U. White, DSO; Napier; born Kaituna, 2 Mar 1908; civil engineer; twice wounded.

<sup>15</sup> Qena, with a population of 43,000, is the capital of Qena province, on the eastern bank of the Nile.

<sup>16</sup> Lt J. S. Douglas; Temuka; born NZ 8 Mar 1914; engineer's assistant, PWD.

<sup>17</sup> Spr G. T. Diamond; Okaihau; born Pakanae, 10 Sep 1906; chainman.

<sup>18</sup> Spr G. Neame, m.i.d.; born NZ 14 Jul 1919; labourer.

<sup>19</sup> Lt-Col W. F. Young, m.i.d.; born NZ 6 Jan 1902; civil engineer; OC 9 Ry Svy Coy 1941-42; 10 Ry Constr Coy 1942-43; CO NZ Ry C and M Gp Jun-Nov 1943; Deputy Commissioner of Works, 1955-59, and Director of Roading; died Rotorua, 17 May 1959.

<sup>20</sup> Appendix III.

<sup>21</sup> Lt-Col C. Clark, m.i.d.; Wellington; born NZ 9 Aug 1906; civil engineer; OC (in turn) 10 and 13 Ry Constr Coys, 7 and 8 Fd Coys; wounded 28 Mar 1944; Chief Civil Engineer, NZR.

<sup>22</sup> Also spelt Mohalfa.

<sup>23</sup> Eighth Army started as Headquarters Western Army on 9 September and was redesignated Eighth Army as from midnight 26 - 27 September, when it took over operational command of all troops in the Western Desert.

<sup>24</sup> Siwa is one of the five great oases in the Libyan Desert and is situated about 400 miles west of Cairo. It lies 50 feet below sea level, is inhabited chiefly by Berbers and produces fruits, olives and vegetables.

<sup>25</sup> 'Military Railway Construction in [Middle East 1941–43](#)', by R. Trevor Smith, OBE, AMICE.

<sup>26</sup> A balloon type depot was laid out by 3 Section on its first assignment at [Wadi es Serar](#) in Palestine during September-October, 1940. See



# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 18 ARMY TROOPS COMPANY

### *18 Army Troops Company*

While the remnants of 19 Army Troops Company were disembarking at Alexandria from Crete (1 June) Headquarters 18 Army Troops Company was moving from Mex Camp into a block of flats in the Rue Sidi Metwalli, incidentally an 'Out of Bounds' area. This change of address, hailed with enthusiasm by the sappers, was the result of taking over the Italian-owned workshop referred to in

Chapter 3. The location had its drawbacks for Alexandria underwent some heavy bombing in June, and as the war diary puts it: 'After seeing what bombs can do to Alex buildings HQ personnel hurriedly dug themselves a shelter trench in the workshops yard.'

From June to August was a quiet period for the pipeline detachments based on Amiriya, Daba, Baggush and Matruh. General maintenance was carried out and some of the more intricate pipe systems relaid. There were still leaks, and water meters were installed until the shortage was reduced to one main in the Matruh sector. The line was searched yard by yard, and where it passed through a minefield one of the wonders of the desert ('Bondi') was found. Some very enterprising South Africans had discovered how air valves worked and how it was possible to draw off water into a large masonry bath they had built.

There were, however, other water worries after August as Major Lincoln illustrates:

'With increased duties, the policing of the pipe line became a problem and by arrangement with the Egyptian Police Dept., members of their force kept guard over our pipe line thus releasing our troops for other urgent work. However the police were quick to realise that their job was a money spinner, as by tapping the line they were able to sell water to the Wogs. We then had to make snap inspections of the police in an endeavour to control them.'

Much WD <sup>27</sup> equipment was transported by train to Mersa Matruh and with each trainload special tanks of Alexandria water were included, so that suitable water was available at the destination for use in the engine boilers. Under the 'guard' of the Egyptian police, this was also a source of supply and finance when sold to the wandering masses at the different stations at which the trains stopped. In fact, many tanks arrived at their destinations empty, with valves fully opened.

In order to deceive the enemy in their bombing raids and with a view to protecting the pipelines and pumping stations in the desert, existing buildings were camouflaged and dummy buildings erected some hundreds of yards distant. The dummy pipeline was marked with patches of oil to simulate water leaks along the line. It worked effectively and was bombed on several occasions.

In September the Company barge fleet had grown to five, two based on [Matruh](#) and the others in [Alexandria](#) harbour. The maddening shortage of even the commonest tools began to ease at this time, although three-quarters of the requisitions for parts for petrol and diesel engines had still to be filled with improvisations and adaptations.

The percentage would have been greater had not Sergeant Jack [Jardine](#)<sup>28</sup> been 'cobbers' with the Navy and used his contacts on the naval base workshops ship [Medway](#) to good purpose.

It was a red-letter day for the Company when the first workshop truck arrived (9 September), a Canadian built 3-ton Ford equipped with an Atlas lathe, a Black and Decker electric drill, a Delta grinder, a Kellog air compressor, a battery charging set and an electric welding plant. Power was derived from a generating plant driven from the truck engine. The truck crew was Lance-Corporal [Penny](#)<sup>29</sup> in charge with Sapper G. T. [Johnstone](#)<sup>30</sup> as his assistant, and only the most urgent jobs on the [Daba](#) and [Baggush](#) sections were to be handled.

The first indication that something might be afoot in the not too distant future was contained in a secret memorandum to Major Lincoln dated 15 September 1941, the relevant portion of which is as follows:

'Subject: Water Containers.

O.C. 18 A T Coy.

N. Z. E.

'Traffic in these containers may suddenly assume large proportions in the near future. Please arrange now a scheme for inspecting, cleaning and stencilling "Water" on drums at the rate of 1000 a day.

'The drums are likely to arrive at Wardian tainted with petrol. It will be necessary therefore to prepare a steaming scheme. Please investigate the methods of cleaning petrol drums used by the E.S.R. at Gabbari a few months ago and report what you need to steam-out drums at the rate of 1000 a day, using a drum filling platform and piping for steam instead of water....

'Any necessary paint, paint brushes, ropes and piping must be put forward soon in detail, as the drum cleaning arrangements will probably have to be complete by the end of September.'

A job for the Eighth Army that was begun when the railway sappers delivered 140 truckloads of pipes forward of Mohalafa ( [Charing Cross](#)) was continued when No. 4 Detachment, 18 Army Troops Company, started on a major extension of the [Western Desert](#) pipeline. Work commenced on 6 September with the unloading of about 40 miles of pipes, duplicating the 4-inch line from Matruh Triangle to [Charing Cross](#), laying a new 6-inch pipe from [Charing Cross](#) to [Kilo 60](#) on the [Sidi Barrani](#) road, and building a new pump station at [Matruh](#) railway spill tank. All three tasks were completed by the first week in October. An extract from the 18 Army Troops war diary of 28 September is illuminating:

'4? line now complete except for connecting up. At this stage the 6? Victaulic line was being laid at the rate of 3 ½–4 miles per 7 hour day in a trench 18 inches deep. (The pipes were laid out alongside the trench.) The labour consists of 7 parties each containing 1 NZ sapper and 15 pioneer Indians. The Indians had no previous experience of pipe laying. These figures are approx. 25 per cent better than those laid down in RE Manual of Field Engineering.'

In Major Lincoln's judgment, 'This was a very creditable effort by Lt Bruce Wallace and his section Sergeant Ron Ryan <sup>31</sup> in spite of two instances of attempted sabotage when some of the pipes were plugged centrally with wood and straw.'

October for 18 Company's sappers had only one topic—water. Again quoting the war diary:

'30 Oct. General. The majority of the work of HQ and Workshops was in connection with the most urgent dispatch of water to [Western Desert](#) by all available means. The putting in operation in short time and then the running and maintenance of the two drum cleaning plants was a particularly strenuous test of organisation and energy with only a limited number of men available to carry it through. It is gratifying to say that as far as the cleaning and filling of drums was concerned no unit or transport was held up on account of the Coy not being able to keep up supply.'

Because of troop movements forward of [Daba](#) the capacity of the pipes was barely sufficient to fill the requisitions. No. 1 Section (Lieutenant Mackersey) was working flat out on duplicating an 8-inch pipe to [Alamein](#), but owing to the couplings having been consigned to [Alexandretta](#) instead of [Alexandria](#), practically all the joints had to be welded. One electric and one gas welding set were in continuous operation.

The responsibility of 18 Army Troops for the operation of the water pipeline ended at [Charing Cross](#), inclusive. From there westward 36 South African Water Company took over and their estimated requirements were 500 tons daily. To supply this amount as well as meet the local demand it was necessary to build up the storage in [Matruh](#) to the maximum. Deliveries by water ship were 8100 tons and by rail 9468 tons.

By the middle of November the Line of Communication troops had done their part and Eighth Army was ready to take the field. From then until the end of the year 18 Army Troops Company's role was general maintenance and the operation of the [Western Desert](#) pipeline and pumping plant. One last transcript from the war diary:

'19 Nov. News came through that Eighth Army had started its push. Gratification was felt by all that all the hard work of the last few months had gone to help the Eighth Army in making its drive.'

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<sup>27</sup> War Department.

<sup>28</sup> [Sgt J. Jardine](#); Grey Lynn; born NZ 25 Apr 1897; engineer.

<sup>29</sup> [Sgt A. B. Penny](#), BEM; born [Gisborne](#), 28 Jul 1901; clerk.

<sup>30</sup> [Spr G. T. Johnstone](#); born NZ 5 Sep 1913; mechanic.

<sup>31</sup> Not traced.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 19 ARMY TROOPS COMPANY

### *19 Army Troops Company*

By the end of July 19 Army Troops Company was again ready to operate as a specialist unit—it had spent all its accumulated pay, overstayed its leave and paid the appropriate penalty, been re-equipped and brought up to strength. On 15 August it left the New Zealand Division to come under command of British Troops Egypt, and four days later had taken over duties from 8 Field Company in [Mena Camp](#) at the foot of the Giza pyramid. The command at that date was: Major C. Langbein, OC; Captain J. N. Anderson,<sup>32</sup> second-in-command; Second-Lieutenants H. C. Gayford, R. A. Nicol, R. N. Thomas, J. S. Berry (attached). In addition Lieutenant [Malt](#),<sup>33</sup> from 13 Railway Construction Company, and Lieutenant H. C. Page, ex-Training Depot, [Maadi](#), were taken on strength on 28 August.

The bombing of [Alexandria](#), the fact that the [Mediterranean Fleet](#) was so crippled after [Crete](#) that it had difficulty in protecting the sea communications with [Tobruk](#), and the virtual closing of the [Mediterranean](#) to British convoys meant that the only way to reinforce Egypt was by the three or four weeks' extra travel 'the long way round' via the Cape of Good Hope. Supplies from [India](#), New Zealand and [Australia](#) kept [Port Suez](#) fully occupied without the extra traffic, and the possibility of the enemy sinking a vessel in the Canal itself was a recurrent nightmare.

A General Headquarters memorandum of 30 May 1941 stated the position and the remedy: 'The possibility of the [Suez Canal](#) being permanently closed to ships has made it necessary for us to be prepared to receive all [Middle East](#) supplies at ports south of the Canal.'

A conference at General Headquarters on 19 August confirmed that [Safaga](#) should be developed, that it should be regarded as an insurance against the partial or complete closing of the [Suez Canal](#), but that it would not be used to maximum capacity while other Egyptian ports could handle the traffic now diverted to the [Red Sea](#) route.

Major Langbein was advised that 19 Army Troops Company was to work on the project, that it would supervise the contracts and manage the native labour, and that it would be entrusted with the more difficult work requiring a high technical skill. The full strength of the company would not be required immediately as a great deal of preliminary work would have to be done before a real start could be made on the port construction projects.

No. 4 Section (Lieutenant [Gayford](#)<sup>34</sup>) was the first to move out (25 August). Six sappers and two trucks went by road and the others by rail to [Qena](#) and thence by MT to [Safaga](#), arriving two days later.

No. 2 Section (Lieutenant Page) left [Mena](#) on 5 September for [Aqaba](#) in [Transjordan](#), 160 miles south-east across the [Sinai Desert](#), where 21 Mechanical Equipment Company was opening up a somewhat similar project. E and M Section (Lieutenant [Thomas](#)<sup>35</sup>) joined No. 2 at [Safaga](#) during September. By the end of October the Company, less No. 2 Section, was located at [Safaga](#).

Company Headquarters and No. 1 Section (Lieutenant [Berry](#)<sup>36</sup>) had been retained in camp supervising the contractors, but No. 3 Section (Lieutenant [Nicol](#)<sup>37</sup>) and, until they left for [Aqaba](#), No. 2, had been caught up in the 'flap' that the return of the enemy to the Egyptian border, followed by the defeats in [Greece](#) and [Crete](#), had precipitated among the holders of offices surrounding General Headquarters. A defence scheme for [Cairo](#) was thought up but no machinery was made available, and the sappers, besides supervising the native workers, had many hours of hand-mixing concrete to finish lines of trenches that the Egyptians immediately took over as dwellings. Eighth Field Company had built pillboxes covering the roads entering [Cairo](#) and all these had to be camouflaged.

No sooner was the end of the work in sight than somebody with real authority must have heard about it for the sappers got orders to fill in the trenches and remove the sandbagging from the pillboxes. They carried out the orders so effectively that when the real flap in June-July 1942 came along, the extensive and expensive preparations for defending [Cairo](#) could not be located.

The first jobs at [Safaga](#) were the building of a camp and the unloading of bulldozers, carry-alls, rollers and other heavy gear needed for the projected work on

the new harbour. Use was made of the Phosphate Company's jetty for the landing and assembly of the plant. The better part of six weeks was occupied in this and in setting up camp, during which period rations were very hard in quality and very light in quantity. Other troops and labour units were also moving in, together with the usual services such as a mobile bakery unit and a [NAAFI](#), so that when the main body of the Company arrived in October conditions were as reasonable as could be expected.

The sappers were settling in to the new camp when it was discovered that the site was needed for port works. Another camp was built nearer the escarpment where, with dug-in tents, concreted floors and walls the Company made its home for more than a year.

Water was the biggest worry in those early weeks for every drop had to be brought by tender from [Suez](#), and with the steady influx of Imperial troops and native labourers it was soon necessary to make other arrangements.

In November a Merrylees Watson water distillation unit with a capacity of 25 tons per day was sent down by steamer and lightered ashore. No assembly instructions accompanied the plant, and to complicate matters further the engine slipped out of the ship's slings into deep water and could not be recovered. Nineteenth Army Troops Company thus possessed a water distillation plant minus an engine and minus directions for assembling it. By the time a replacement engine arrived Sergeant [Adamson](#) <sup>38</sup> had unscrambled the omelette. A second water plant was in operation by the end of the year, when it was possible to install ablution benches and the other amenities usual in a standing camp.

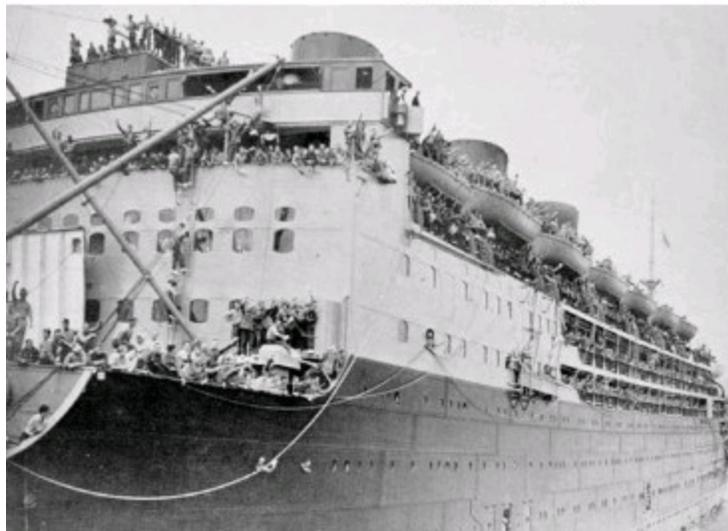
Another project that the sappers found themselves working on was the 106-mile-long road from [Qena](#) to [Safaga](#) being formed by REs and native labour. Instructors were detached to teach the operation and maintenance of the 'dozers and other heavy equipment used in roadmaking, for the Royal Engineers' skills did not lie in that direction. There were New Zealanders working on the road for the full eleven months it took to form and seal its length.



Mess parade at Hopu Hopu, 1939

**Mess parade at Hopu Hopu, 1939**

*The Strathaird* leaves Wellington, 5 January 1940



**The Strathaird leaves Wellington, 5 January 1940**



19 Army Troops building a road in the Olympus Pass

**19 Army Troops building a road in the Olympus Pass**

The railway bridge across the Pinios River demolished by 19 Army Troops Company



**The railway bridge across the Pinios River demolished by 19 Army Troops Company**



Sappers rest by the roadside in Crete

**Sappers rest by the roadside in Crete**

Exhausted sappers await evacuation at Sfakia



**Exhausted sappers await evacuation at Sfakia**



Surveying in the Western Desert

Surveying in the **Western Desert**

9 Railway Survey Company in Eritrea



9 Railway Survey Company in **Fritrea**



Field Park men change an engine in the Western Desert

Field Park men change an engine in the **Western Desert**

Laying the oil pipeline  
to Lake Timsah



**Laying the oil pipeline to Lake Timsah**



Dragging rails from the railhead for the Western Desert railway  
extension

**Dragging rails from the railhead for the Western Desert railway extension**

Indians lift a rail on to the sleepers



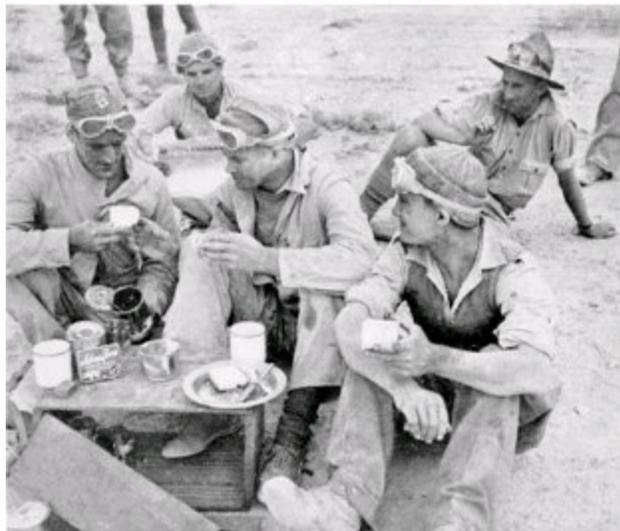
**Indians lift a rail on to the sleepers**



At work on the new line

**At work on the new line**

Lunch-time



**Lunch-time**



Langrish Mill, near Portsmouth

**Langrish Mill, near Portsmouth**

Loading spruce near Petersfield, September 1941



Loading spruce near **Petersfield**, September 1941



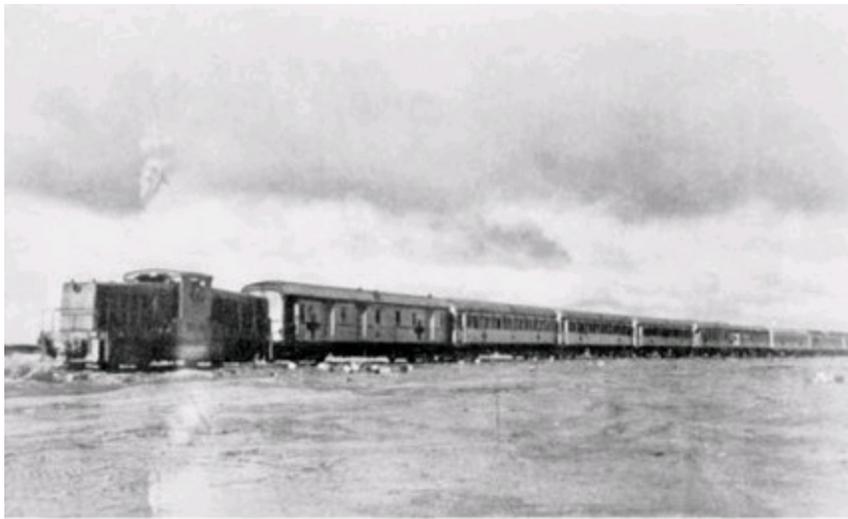
Port Safaga in the early stages of construction

**Port Sataga** in the early stages of construction

Stoking the boiler for the pile-driver at Aqaba—see p. 190



Stoking the boiler for the pile-driver at **Aqaba**— see p. 190



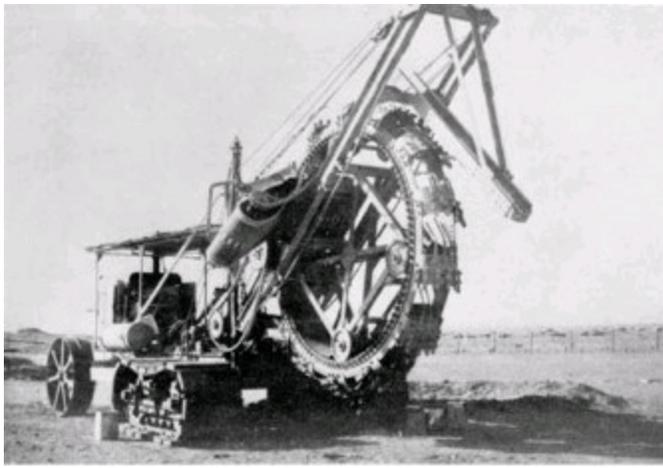
An ambulance train operated by New Zealand engineers

**An ambulance train operated by New Zealand engineers**

A Braithwaite tank reservoir at Umm er Rzem, near Derna



**A Braithwaite tank reservoir at Umm er Rzem, near Derna**



'Buckeye' ditcher and, *below*, 'Side-boom crane' tractor used by 18 Army Troops Company for laying the water pipeline in the Western Desert

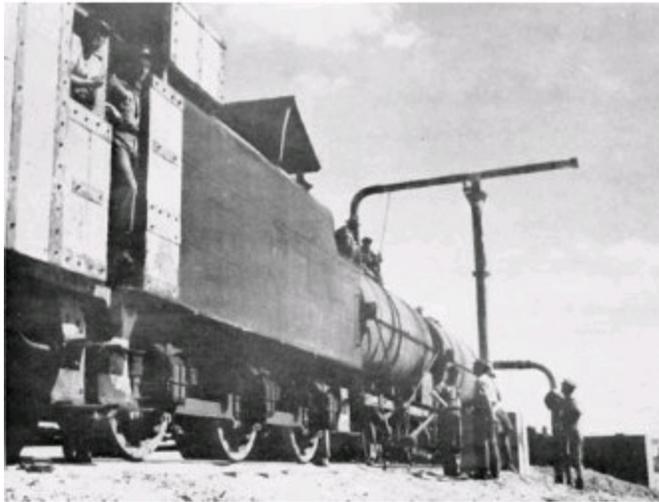
'Buckeye' ditcher and, *below*, 'Side-boom crane' tractor used by 18 Army Troops Company for laying the water pipeline in the **Western Desert**



Constructing a headquarters on the Alamein front, August 1942

Constructing a headquarters on the **Alamein** front, August 1942

The first train to go forward after the November 1942 breakthrough arrives at El Alamein station



The first train to go forward after the November 1942 breakthrough arrives at **El Alamein** station



Christmas mail at the Maadi Camp Post Office, December 1942

Christmas mail at the **Maadi Camp** Post Office, December 1942

Christmas dinner, Nofilia, 1942



Christmas dinner, **Nofilia**, 1942



Bridge near Nofilia, built by New Zealand engineers

**Bridge near Nofilia, built by New Zealand engineers**

Sweeping the roadside for mines



**Sweeping the roadside for mines**



After removing a Teller mine, a sapper probes with his bayonet for a possible second mine beneath

**After removing a Teller mine, a sapper probes with his bayonet for a possible second mine beneath**

The Spanish Mole at Tripoli under repair, January 1943



The Spanish Mole at **Tripoli** under repair, January 1943



Sappers work on the road between Tarhuna and Azizia

Sappers work on the road between **Tarhuna** and **Azizia**

Model of the Enfidaville line made for General Freyberg



Model of the **Enfidaville** line made for **General Freyberg**

Among other preliminary jobs was the straightening of 500 tons of reinforcing steel which had been salvaged from a wreck and was badly tangled. The sappers rigged up bending benches and taught Egyptian labourers the knack of using them while another urgent job, building beds and wooden shuttering for pouring concrete piles, was got on with.

Ten beds each with a capacity of six piles were constructed, the number considered necessary for the production of a continuous supply of piles and their 'curing' in the sea before use without holding up operations once pile-driving commenced.

A concomitant to the pile making was the laying down of a Decauville rail track for the operation of two Goliath cranes. These were designed by Lieutenant Nicol and constructed by E and M Section for lifting the piles and moving the reinforcing fabrications into position before pouring the concrete.

Prior to Christmas the Company learnt that it was urgently necessary to manufacture twelve 47-foot reinforced piles for a temporary jetty. The beds had been laid and the first batch of fabrications was ready before the order came, but a difficulty was the shortage of fresh water, for only [Portland](#) cement was available and the second distillation plant was not yet working. The use of salt water with [Portland](#) cement was frowned on in Army specifications, but if the piles were to be ready on time there was no alternative. They were completed and cured by 27 December and proved to be entirely satisfactory.

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<sup>32</sup> [Capt Anderson](#) marched out to command [5 Fd Pk Coy](#) on 7 Sep.

<sup>33</sup> [Maj L. C. E. Malt](#), DSO, m.i.d.; [Wellington](#); born England, 22 Feb 1904; civil engineer; OC [5 Fd Pk Coy](#) 1944–45.

<sup>34</sup> [Capt H. C. Gayford](#); Tokoroa; born [Christchurch](#), 30 Dec 1913; building supervisor.

<sup>35</sup> [Lt R. N. Thomas](#), m.i.d.; [Palmerston North](#); born [Christchurch](#), 6 Oct 1900; civil engineer.

<sup>36</sup> Maj J. S. Berry, m.i.d.; born NZ 20 Sep 1915; civil engineer; wounded 23 Mar 1943.

<sup>37</sup> Lt R. A. Nicol, m.i.d.; Auckland; born Waimate, 3 Apr 1911; structural engineer.

<sup>38</sup> Sgt F. Adamson; Wellington; born NZ 1890; NZR platelayer.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 21 MECHANICAL EQUIPMENT COMPANY

### *21 Mechanical Equipment Company*

The end of the rebellion in [Iraq](#) and the occupation of [Syria](#) lessened the danger of German domination of the [Middle East](#) oilfields and of yet another threat to the [Suez Canal](#).

The hazard of an enemy thrust at Egypt through [Turkey](#) or through the Caucasus into [Persia](#) would not become acute until a decisive German victory was won against the Russians, who were proving no easy opponents, and it was decided that the best defence against the first contingency would be the construction of a series of fortresses astride the main routes through [Syria](#). (The Kiwis were to know one of them, [Djedeide](#), very well indeed.)

The work was begun by troops already there, but the vulnerable position of the Canal as a supply route to the ports of [Jaffa](#) and [Haifa](#) and the menace of [Crete](#)-based aircraft made it important that an alternative to the present rail and sea communication from Egypt be provided for the Ninth Army, with its headquarters in [Jerusalem](#).

The possibilities of [Aqaba](#), at the head of the gulf of that name, were apparent. Within striking distance of the Hejaz railway, Colonel Lawrence had built a jetty there and used the locality as a base for his operations against the Turkish line of communications in the 1914–18 war. [Aqaba](#) is on or near the site of the Old Testament city of Eloth, with nearby its twin city of Ezion-geber, both of which places are mentioned in the sojourn of the Jews in the Wilderness. The rulers of Edom, which was part of [Transjordan](#), were even in those days either pro-Egypt or anti-Israel, for they refused the Jews passage and the Chosen People had to move south of the Dead Sea, thence eastward of the ranges bordering [Transjordan](#).<sup>39</sup>

[Aqaba](#) must have been quite a place nearly three thousand years ago because King Solomon 'made a navy of ships in Ezion-geber, which is beside Eloth, on the shore of the Red sea, in the land of Edom.'<sup>40</sup>

[Aqaba](#)'s glory had faded since those far-off days and it was now only a fishing village. Even the caravans that for a thousand years had carried Moslems from Egypt, [Tunisia](#) and [Morocco](#) to the tomb of the Prophet at Mecca had forsaken it. [Aqaba](#) village was sufficiently important, however, to have one street lamp which was lit only when important visitors were expected. The globe had been painted blue for blackout purposes.

Headquarters 21 Mechanical Equipment Company and Repairs Section left [Maadi](#) and established themselves on 3 July at [El Hamma](#), where Major Tiffin was in closer touch with his field sections which were scattered in small parties from [Port Said](#) to [Sidi Barrani](#). The policy of splitting sections into penny packets made administration difficult, but it was recognised that mechanical equipment companies were of recent origin and that experience would indicate where changes might well be made.

While the [Aqaba](#) project is taking shape, this is a convenient time to bring the sections into prospect again.

No. 4 Section, after completing its jobs around [Matruh](#), had taken over from No. 1 the blasting of a 25-mile line of anti-tank ditch out of the rocky desert at [Baggush](#). The dimensions were 18 feet wide tapering to 6 feet at a depth of 6 feet, with a perpendicular face on the enemy side. By the time it was finished somebody discovered that the work of days could be undone in an hour by a sandstorm and that mines were more effective. Early in October the section returned to [Maadi](#), ostensibly to undergo the two months' basic training it had missed on arrival in Egypt, but actually the Company was to be organised on a three working-section basis and No. 4 Section was to be disbanded. On 3 December the sappers were sent to RE base depot at the [Delta Barrage](#), where they were employed until 7 February when disbandment took place. Lieutenant Bryant remained at the workshops as second-in-command.

No. 1 Section (Lieutenant A. F. Allen) were the next to move off. They were to be marched out to Palestine, destination unknown, and were to leave on 27 September. They detrained at [Haifa](#), and after their months in the desert were sizing up the feminine section of the population of that modern city with some interest when they were informed that they were bound for GE1. GE1 could have been a Palestinian town or an army inoculation like TAB1, but further inquiries disclosed it to

be a pumping station of the [Kirkuk- Haifa](#) oil pipeline situated in [Iraq](#), 450 miles due east.

They left by bus the next morning and all went well until they crossed the Jordan, a muddy creek that an Aucklander likened to the Avon and almost started a free-for-all. Late afternoon found them near the broken country of the [Jebel Druse](#), and the Palestinian drivers who knew what a simple pleasure it was for the inhabitants of the [Jebel Druse](#) to cut an unwary throat could be induced to proceed only by threats that they would die even more horribly if they didn't step on it and get smartly to the transit camp at [Mafraq](#).

In the morning they carried on through valleys strewn with large boulders, the road being where the boulders weren't, then through an Iraqi frontier post into the Arabian desert and finally to GE1, which was as uninspiring as its name implied.

The Area CRE gave Lieutenant Allen his instructions next morning. He was to take over immediately from 138 Mechanical Equipment Company, RE, and to maintain all road plant and machines, including MT. In addition he was to arrange with the OC 121 Road Construction Company for spare sappers to be employed on road work. Further instructions sent a party to H3, another pumping station 30 miles farther east, to take over a crushing plant there and work it with native labour.

Administrative headquarters were at [Rutbah](#), still another 30 miles deeper in the Arabian desert, and consisted mostly of a well which was guarded by Iraqi troops to prevent the indiscriminate use of its water by the nomad Arabs of the district.

The [Baghdad- Damascus](#) road, pioneered as a trans-desert bus service by the New Zealand brothers Nairn after World War I, passes through [Rutbah](#), and the main project was to build a good road from [Rutbah](#) to Palestine and so improve communications between Ninth Army Headquarters at [Jerusalem](#) and Tenth Army at [Baghdad](#).

The sappers built themselves a workshop to house their plant and thereafter commenced a busy period, for the machinery was in a deplorable state through lack of understanding and care. One truck was brought in with a cylinder head cracked through being run without water.

By the end of November the plant was in good order, the quarries were delivering reasonable quantities of metal, and a start was made on surfacing the road to [Rutbah](#). The month was notable for the number and severity of its dust-storms and for the lesson that in the Arabian desert summer ceases one day and winter starts the next. Within four days work ceased twice, first for a dust-storm, then a snowstorm. On 20 February the section was withdrawn for more urgent work in Egypt.

No. 2 Section did not move out of the [Western Desert](#).

Chapter 3 relates that they were on road repairs at [El Alamein](#). It would be more accurate to say that most of the sappers were at [Alamein](#) with the balance spread over a large part of the Canal Zone, but by August the section was practically complete and located 20 miles inland from [Alamein](#), working on tank traps around the top of the escarpment that was part of Fortress A. Fifth Brigade and 7 Field Company of the Division were also engaged in work on the Fortress and many old friends and acquaintances were met. It was with regret that the sappers, from their vantage points, watched the brigade move out in desert formation and fade impressively westwards in a billowing haze of dust, while the throb of a thousand truck engines was like the roar of a distant sea.

The same afternoon there was the clearest proof that infantry battalions had been in residence, for enough empty beer bottles worth a piastre a time were collected to keep the thirsty sappers in that soldierly beverage for many days.

In October a detachment took over from No. 3 Section the preparation of an emergency landing ground. There was great excitement when a plane circled over the ground several times before landing. The pilot had lost his course on the way from [Malta](#) and was almost out of petrol when he noticed the landing ground.

Another job that took some time was the laying of a water pipeline to Fortress A. The detachment's part of the project was to cut the trench line with a roter, no easy task in hard rock country. Many other such roter lines were made in the area, some as dummies, while others were for communication cables.

Directly south from [El Alamein](#) station along [Springbok Road](#), four large metal crushers, which became the responsibility of the section, were situated at different points. The metal was spread on [Springbok Road](#) by Egyptian labour.

At the beginning of December the sappers were patching up the verges and filling the potholes on the [Western Desert](#) road. Nobody was sorry when word came of a new job far to the west of [Matruh](#), perhaps near the border of [Libya](#) itself, and that they were to leave on 29 December.

[Aqaba](#) became the affair of No. 3 Section, plus a section from 19 Army Troops Company. As early as 10 August an advance party (Lieutenant [Barnes](#)<sup>41</sup> and 11

sappers) left for that locality, 160 miles across the [Sinai Desert](#). Deserts, like watered country, differ widely in their topography. The Western Desert that the sappers had previously known was largely flat, featureless wastes; stony stretches dotted with foot-high camel scrub alternating with patches of soft sand; shallow depressions and steep escarpments with wind eroded wadis that are watercourses maybe once or twice a year. On the contrary the [Sinai Desert](#) over which they were passing, once they had crossed the sand dune area along the Canal, was an elevated limestone plateau with nearly 9000-foot-high peaks and not much sand. About 21,000 nomad Arabs subsist on its 23,000 square miles that contain the traditional site of the Giving of the Law by Moses.

It was not until they came to the descent from the 4000 or more feet high country to the [Aqaba](#) coast that they met anything unusual, and here the unit diarist waxes eloquent:

'The road goes up and down for a couple of miles and then turns downwards. Not quite straight down, but that road is nearer to the vertical plane than most motorists would like to find themselves. The rugged granite <sup>42</sup> peaks tower round us, the truck in low gear strains against compression, backfiring violently. Far, far below we see a blue sheet, the sea. Down and down we wind round hairpin bends. At last the grade becomes easier, the driver moves up a couple of gears and we roll out of the hills and the bay of [Aqaba](#) is before us and a typical journey from Egypt is complete.'

More particularly, [Aqaba](#) is a mile-long oasis at the mouth of the [Wadi Araba](#), a corridor through limestone and sandstone ranges to the Dead Sea and situated on the northernmost point of the [Red Sea](#). Scattered groves of date palms, a strip of white sand, a village of mud huts and a little mud-brick fort garrisoned by a detachment of the [Transjordanian Army](#) formed the permanent part of [Aqaba](#). The temporary part was a collection of 'odds and sods' of various units preparing for other units that have to do with building harbours and making roads. Camp was pitched in a date grove right on the beach and hard by a well of good drinking water. In front of them was the [Red Sea](#), around them a dead, dusty, desolate plain containing (as the troops had it) 'Miles and bloody miles of sweet damn all', behind them the towering range down which the road spiralled and coiled at a hair-raising grade—and a temperature that hovered for months around 130 degrees.

'I took the main convoy across the [Sinai](#) desert, comprising 28 overloaded lorries. I was so appalled at the road down into [Aqaba](#) that I wasn't game to watch the convoy come down the hill and drove on a few miles to wait for them hoping that they would all get down safely—they did. The grade for quite a distance averaged 1 in 41/2.' <sup>43</sup>

Originally a well watered and fertile country, the Prophet Jeremiah foretold its fate when he put on record, 'Edom shall be a desolation; everyone that goeth by it shall be astonished, and shall hiss at all the plagues thereof.' <sup>44</sup>

Jeremiah wasn't exaggerating for the number of snakes, scorpions, tarantulas and man-eating flies that crawled into the sappers' food and belongings was truly phenomenal. Verily the sappers 'hissed at the plagues thereof.'

Urgent work was waiting, for a temporary trestle pier had to be built to unload plant that was to come by sea. Lieutenant Barnes and party had almost finished thirty yards of concrete rubble-filled jetty that was to be the base of the pier, and on the arrival by road of timber cut to measurement according to soundings taken previously, the sappers set about building the wharf extension.

The *Lapeski* with bulldozers, carry-alls, graders, bridging timbers, sheet piles and steel girders arrived from [Suez](#) on 20 September. It was a memorable day because the *Lapeski* was the first ship of any size to visit [Aqaba](#) for twenty-one years and the local Arabs turned out in force to watch the proceedings.

After the ship was unloaded the concreting of the Victoria pier, as the structure had been named, was pushed on. Two power operated concrete mixers were used and native labour employed. The sappers considered the Arabs better types all round than the Egyptians and Bedouin for they worked willingly. The job was finished on 16 October, the same day as Major Tiffin arrived with the balance of No. 3 Section, Repairs and Company Headquarters.

The main project at [Aqaba](#) and the responsibility of the New Zealand sappers was the building of a lighter wharf and basin 200 yards west of Victoria pier, with one wall 218 feet long, then parallel with the shore for 426 feet, then turning at right angles back to the beach again with an outlet in the west wall. The eastward wall

was to form a 78-foot-wide wharf while the south and west walls were to be 45 feet wide, thus giving all-weather protection to tugs and lighters.

As all unloading would have to be done by lighters a small squat diesel-driven vessel, called by the sappers 'The Tug' and captained by a Maori, Johnny [Tatana](#),<sup>45</sup> was delivered to the Company. As was usually the case, it was in a state of dilapidation and Repairs had to do a considerable overhaul before it was really serviceable.

Prior to the wharf being started it was necessary to assemble a pile-driver, which had to be based on a staging and moved along the line of piles as they were driven. Work was to begin on 4 November, and before commencing such an important undertaking the Arab labourers asked if they might invoke Allah's blessing on the project. Permission was gracefully granted by Major Tiffin for the ceremony to be performed in the Army's time. The Arabs were not at all certain what was the purpose of the Infidels in bringing all the material and men together. Maybe they would build a jetty like the great Lawrence did a generation ago and then leave it to be taken away piecemeal by themselves. Allah was great and his ways beyond knowing. These strangers were a stupid people but they paid well and regularly and, Allah be praised, they were lenient taskmasters. And had not the village recalled its sons who were tending sheep in far off Hejaz and Yemen to come home and earn more money? Clearly it was a matter of great moment and Allah's mercy must be supplicated by sacrifice. The local sheik produced his oldest and most useless camel, which was led to the waterfront and made to kneel while the sacrificial butcher poised his knife to strike. Upon a signal the pile-driver dropped the weight on the first pile and simultaneously the butcher slew the camel. The carcass was divided up amongst the villagers, and Allah was now presumably wholeheartedly in favour of the project.

From September until the end of the year the Army Troops section was employed on operating a quarry to supply spoil for the lighter wharf, supervising Arabs in the sinking of wells, constructing a breakwater to protect the Victoria jetty from the heavy seas that frequently swept up the Gulf of [Aqaba](#), and building a temporary lighter jetty in a sheltered cove a mile or so down the coast. About this time a detachment of the New Zealand Mobile Dental Unit arrived, and not only did

it work on the sappers' teeth but it was instrumental in obtaining a nice set of chromium-plated roses for the hot showers. It had long been known that these items were held in the RE stores, but nothing could induce the officer in charge to produce them. Lieutenant Page was able to persuade the Unit to remodel the tight-fisted Tommy officer's troublesome dental plate—for a set of chromium-plated shower roses.

Equally as important as the harbour works was the building of a good road into the hinterland, for the reason of [Aqaba](#)'s neglect was the almost inaccessible country lying between it and [Amman](#), the capital of [Transjordan](#). There was a road of sorts between [Aqaba](#) and [Nagb Ashtar](#) ('the Nagb' to the sappers) on top of the mountain buttress of [Transjordan](#), thence on to Ma'an, the second city of the country, but it was no main highway. Twenty-first Mechanical Equipment Company's diarist puts it more plainly. 'A road had existed between [Aqaba](#) and Ma'an but a journey along it was a most horrible bone-shaking nerve shattering experience to say nothing of the battering which the vehicle had to absorb. In short it was very rough and consequently very slow.'

An Australian railway construction company was building a line from Ma'an on the [Transjordan](#) railway system to the edge of the Nagb, and communication between railhead and [Aqaba](#) was to be improved forthwith. From [Aqaba](#) to the foot of the escarpment was fairly straightforward, but the spirals, hairpins and crazy grades up the side of the Nagb were beyond all reason. Looking down on the Kuweira plains from the top of the Nagb, one saw pure Walt Disney country where the Wizard of Oz would have been entirely at home. Scattered around the base of the cliff like the candles on a birthday cake, and of very much the same shape, were sharp-pointed hills around which the road writhed before entering the [Nagb Ashtar](#) pass. An RE attachment had tried for six weeks, without success, to find a grade, and a start was made by No. 3 Section and a party of REs to widen the old road.

Lieutenant Barnes went with the road party and thereby caused a scarcity of labour at [Aqaba](#). He was something of an amateur watchmaker, and after mending an Arab labourer's watch he had found practically every timepiece in [Transjordan](#) on his table the next morning. He had a way with Arabs and they would do anything for him. When he went up the Nagb almost the entire working population of [Aqaba](#) followed him and it was with the greatest difficulty that they were constrained to

return.

It was fortunate that a party of 36 NZ Survey Battery was in the vicinity. Since August they had been tying up the [Transjordan](#) survey with that made across the [Sinai Desert](#) by South African surveyors. In September they were asked by Lieutenant-Colonel Hammond, RE, CRE [Baghdad- Haifa](#) road, to assist in locating a road deviation through the pass. On 8 November the job was done but it took the better part of a year before a road with reasonable grades and well-banked corners connected [Aqaba](#) and the Nagb. It was No. 3 Section's job and they were very proud of it.

About the middle of November Repairs Section were ordered to make a camp and shift themselves and gear to [Nagb Ashtar](#), where they were to maintain all mechanical equipment employed on the railway route to Ma'an as well as that on the Nagb road. [Nagb Ashtar](#) had become a busy centre, for besides Repairs Section there were Australians, British, Cypriots, Pales- tinians and several hundred Arabs camped there. And with the onfall of winter they often worked in snow, while only 48 miles away the Kiwi sappers were wondering what a shower of rain would feel like.

Although the sections were scattered over hundreds of miles and in several different countries, administration had become simpler because, instead of having twos and threes in many different jobs and places, the sections were working on projects large enough to employ the whole sub-unit.

[Haifa](#), being central and having rail communication with most of the section bases, was decided upon as the locality for Company Headquarters, and so after nearly two months in allegedly the third hottest place on earth, 21 Mechanical Equipment Company headquarters moved to [Haifa](#). It shared a billet with the Australian military police—an excellent arrangement that ensured a trouble-free existence for the sappers.

At the end of 1941 the company dispositions were:

- Company Headquarters — in [Haifa](#).
- No. 1 Section — in [Iraq](#) on [Haifa- Baghdad](#) road construction.
- No. 2 Section — in the [Western Desert](#) on the desert railway extension.
- No. 3 Section — in [Transjordan](#) on [Aqaba](#) port and road construction.

No. 4 Section — in Egypt at Barrage base workshops.  
Repairs Section — at Nagb Ashtar in Transjordan.

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<sup>39</sup> Numbers 20: 17–21.

<sup>40</sup> 1 Kings 9: 26 and 2 Chronicles 20: 36–37.

<sup>41</sup> Lt-Col C. E. Barnes, DSO, MC, m.i.d.; born NZ 30 Jan 1907; civil engineer; killed in accident, Aust., 22 Jun 1952.

<sup>42</sup> The diarist is mistaken here. There is no granite but only limestone or sandstone peaks.

<sup>43</sup> Letter, Capt K. Christie.

<sup>44</sup> Jeremiah 49: 17–22.

<sup>45</sup> Dvr J. Tatana; Taumarunui; born NZ 30 Apr 1917; tractor driver.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## THE FORESTRY GROUP

### *The Forestry Group*

Increased production of home-grown timber was vital at this stage of the Battle of the [Atlantic](#), the long and bitter fight against U-boats and surface raiders that began in September 1939.

Methods of obtaining greater output were discussed with the Home Grown Timber Production Department by Colonel Elliott and his company commanders upon the resumption of milling (2 July), when the following points were made. First, it was thought that it might be possible in some instances to operate more mills per company <sup>46</sup> and in others to work double shifts or a longer working week. Secondly, in order to economise in the use of skilled labour the companies should be relieved of pit-prop preparation and the cleaning up of bush after felling. This had long been a bone of contention as it was necessary to use about five men clearing up to one man felling and was considered a waste of skilled workers. Thirdly, the companies should also be relieved of clerical duties as these were much greater than was envisaged when the establishment was drawn up.

Nos. 14 and 15 Companies immediately changed from a 44 to a 48-hour week while 11 Company began double shifts. They were stopped after a fortnight, chiefly owing to shortage of trucks and the piling up of timber through lack of yard gangs. Thereafter all companies worked a 48-hour week.

The Prime Minister, the Rt. Hon. Peter Fraser, visited the groups and talked with representative sappers from each detachment. The most consistent request made to him was for transfers to the fighting forces in the [Middle East](#). The Prime Minister promised to see what could be done and [General Freyberg](#) replied to Colonel Elliott's earlier letter, saying he would be very happy to have the Forestry Group in Egypt. And that was as far as it went.

Savernake, 14 Company's third mill and the Group's eighth, commenced cutting late in July, but owing to lack of equipment the logs were not being measured for

the comparison of log volume, output and waste. The supply of unskilled workers was still a live issue. As mentioned in an earlier chapter, it was originally intended that each Company should have a pioneer company attached, but in the event only one, consisting of Jewish refugees from the Continent, was supplied, and after about ten months it was withdrawn. The Kiwi bushmen just couldn't get along with them, and Colonel Elliott asked for their removal and the substitution of a British pioneer company. The withdrawal of the Alien Pioneer Company was hastened by a fracas in which six sappers and seventeen aliens were involved.

Fourteenth Company was now well spread with three mills operating, and it asked for a British pioneer company for unskilled labour. The Ministry of Labour replied that very little, if any, civilian labour would be available for cleaning-up operations,<sup>47</sup> while the chances of securing a British pioneer company to work with 14 Company were very uncertain. The War Office amplified the Ministry of Labour's letter with advice (28 August) that five sections of a Spanish pioneer company were available, but for security reasons they were not to be billeted or set to work within three miles of Savernake forest or the main works at Corsham, the sites respectively of munition dumps and chemical warfare supplies. A further suggestion, which of course was really a command, was that 14 Company should move to [Chippenham](#) and that the pioneers should take over the servants' wing and the much abused [Grittleton](#) stables.

Some new records were established in August; [Langrish](#) mill broke the record for a week's output with 5285 cubic feet, and in the same period the Group lifted its output to 26,020 cubic feet, while the total for the month of sawn timber, 116,617 cubic feet, was 40,000 feet higher than the previous best month. This result was due partly to the 48-hour week and partly to the 14,000-odd feet contributed by Savernake mill.

September was an unsettled month. After getting the Savernake mill running nicely the Company received instructions from the Forestry Commission that, beyond cutting the logs already felled, no felling was to be done in Savernake. Logs would be obtained from adjoining forests.

Eleventh Company was also running short of timber at [Cirencester](#), and it appeared likely that the Company would have to build another mill of a type suitable

for cutting beech.

Group Headquarters had been told that shortly the New Zealanders would be moved to [Scotland](#), where Canadian forestry groups were operating. Canadian type mills, considered most suitable for the class of timber grown there, would probably be used, but as it was not known whether further Canadian units were arriving in the [United Kingdom](#) or what sawmill equipment would be available from [Canada](#), the New Zealand type of mill might have to be used. It was all very unsettling. And, of course, in the event the New Zealanders stayed where they were.

The Spanish Pioneer Company, 130 all ranks, marched into [Grittleton](#) on 15 September and the Kiwis very cheerfully handed over their stables and moved into [Grittleton](#) House. They were a different type from the Central Europeans 11 Company had had so much bother with, and good relations were quickly established.

The most important event in October as far as the bushmen were concerned was the notification that the British Government had agreed to the importation, duty free, of New Zealand tobacco. Up to this date the sappers had to pay almost civilian prices for tobacco, while Canadians were able to purchase their requirements at a very much cheaper rate. About the same time as the reduction in tobacco prices was announced, the [National Patriotic Fund Board](#) provided £380 worth of radios, billiard tables and electric irons.

Headquarters New Zealand Forestry Group moved on 24 October from Castle Combe to a more convenient location at Greenways, [Chippenham](#), Wilts., and two days later 14 Company moved from [Grittleton](#) House to a hutted camp at [Chippenham](#). It should be mentioned that the Ministry of Supply had asked for help in building a mill at [Chilton Foliat](#), near [Hungerford](#) and about 15 miles from Savernake. There was no suggestion of the Group working it, but on 3 October a memorandum said in effect that 14 Company would operate the mill and would the New Zealanders please get on with the erection of same? Felling and hauling would be done by civilian labour and the sappers would continue to be billeted at [Chippenham](#).

This mill appears in the production tables for the week ending 1 November with 1695 cubic feet for five days' operation, in spite of time lost in travelling and in

raising steam, this being the only steam-operated plant under the Group's administration.

With four mills to work, 14 Company was very short of men and was grateful for the Spanish pioneers. They learnt quickly and were eventually operating [Chilton Foliat](#), [Grittleton](#) and Bowood mills under the direction of a key staff of sappers. Savernake, of course, was operated by New Zealanders only.

December was notable only for the information from the Ministry of Supply that arrangements had been made for 220 (Alien) Pioneer Company, consisting of about 225 men, to be attached to 11 and 15 Forestry Companies.

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<sup>46</sup> 11 Coy was operating mills at [Hailey Wood](#) and [Overley Wood](#); 14 Coy at [Grittleton](#) and Bowood; 15 Coy at [Langrish](#), [Arundel East](#) and [Arundel West](#).

<sup>47</sup> Pioneer companies, alien and Canadian, were attached from time to time to help with this work and large areas were cleared, although it was never completely brought up to date.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## CHAPTER 7 – THE CRUSADER CAMPAIGN

## CHAPTER 7

### *The Crusader Campaign*

The last New Zealand engineer unit evacuated from [Crete](#), 5 Field Park Company, arrived at [Alexandria](#) on 1 June and went to [Helwan](#), where new clothing and other essential items were drawn. Half the Company then departed on seven days' 'survivors' leave', and were followed in due course by the other half; meanwhile, between parades for the issue of stores and equipment, reorganisation was carried out and reinforcements marched in.

The end of the month saw the sappers at [El Kirsh](#) on the Canal, where they trained and worked until the middle of September, when they returned to the [Western Desert](#) and took over their old duties at [Sidi Haneish](#) in what was now called the [Baggush Box](#) or [Baggush Fortress](#).

General Rommel chose the same day as the Company moved from the Canal (14 September) to stage a reconnaissance in force. Its code-name was the German for Midsummer Night's Dream, but by and large it turned out to be something of a nightmare to the German tank crews, some of whose vehicles were battered into urgent need of tank recovery unit services.

The action was fought a long way from [Baggush](#) and did not concern 5 Field Park Company; <sup>1</sup> Field Stores Section again operated the Divisional RE Stores Dump, and Workshop Section found plenty of employment offering; Bridging Section spent its time on water pipeline renovations, alterations and extensions.

Since its near miss in accompanying the Division to [Greece](#), 8 Field Company had been kept from brooding by employment on the [Cairo](#) Defence Scheme. This, for the sappers, involved the construction of pillboxes and rifle and machine-gun emplacements over the several square miles of country bounded by the [Nile](#) on the east, the desert on the west, the Mohammed Ali Barrage on the north, and a line some miles beyond the Mena Road on the south. Other measures about which it did not seem necessary to advise the Egyptian Government included the drawing up of plans for the demolition of every bridge in the area, including those over the [Nile](#) in [Cairo](#) and the Mohammed Ali Barrage. During this period the sappers' chief relaxation was looking for Trixie.

‘It was at [Mena](#) that Trixie, a fox terrier bitch, disappeared. Trixie came into the unit at [Trentham](#) camp as a very small puppy and travelled with the men around New Zealand, when they were on leave, and overseas with them. It was suggested that she was stolen by the Wogs, though of this I am not sure. Anyway constant reports were brought in that a dog like her was seen in various parts of the Egyptian Delta, and for a while I was prevailed on to let parties go in search. I think I was being imposed upon! <sup>2</sup>

It was also at [Mena](#) that 8 Field Company Transport Section had an illustration of South African duplicity. An abandoned 12-cwt Commercial Ford with South African markings was brought in from one of the canal roads and repaired with the idea of presenting it to the CO as his own private PU. <sup>3</sup> A complete overhaul, including new tyres and wheels, had been completed and the unit identification signs were being painted on when a South African officer called and asked if a truck for which he quoted the chassis and engine number had inadvertently been included in the Company transport. It was discovered later that the Springboks had known all the time where their truck was, had watched its repair, and had only waited for the work to be completed before claiming it.

The Company was, however, more fortunate in other vehicle deals. The sappers were not satisfied with their water cart and at [Amiriya](#) had made friends with a Polish unit guarding a vehicle park. The guard did not have a key to the park gates, but at the price of a few cakes of chocolate obligingly lifted the gates off the hinges. Two water carts were taken for a trial run but neither was satisfactory. One had a poor engine and the other a broken chassis. At Mena an English well-boring company camped alongside the Company—and they possessed a welding plant. A patrol suitably provided with cakes of chocolate returned to [Amiriya](#). The upshot was that, with the help of the Tommy welding outfit, 8 Field Company possessed a good water cart plus an extra 15-cwt truck which was not shown on the Vehicle Returns.

On 18 August the Company handed over to 19 Army Troops Company and joined 5 Field Park Company at [Ismailia](#), where they camped on what was known as ‘The Island’—a small, shady, tree-covered island joined to the mainland by a bridge. There they were employed in building a leave camp and a jetty. Piles were driven by a Heath Robinson style pile-driver of Kiwi design wherein the motive power was

provided by five sappers hauling on a rope. Incidentally, there was a big derailment a mile or so from the camp and some fast work by predatory sappers enabled the Company to supplement the ration scale by several sacks of flour and other scarce liquid commodities before guards were posted to prevent further such activities.

In the middle of September 8 Field Company left the Canal area under orders to join 6 Brigade at [Mena](#) before travelling by the desert road to [Baggush](#). The newcomers still had something to learn, for the leading trucks got mixed up with a 6 Field Regiment convoy leaving [Mena](#). By the time the mistake was straightened out everybody knew the difference between a regiment of artillery and a brigade of infantry. On arrival at [Baggush](#) the Company camped first in the [Burbeita](#) oasis which, it will be remembered, was 5 Field Park's home the previous September, and later at [Kilo 60](#), halfway between [Mersa Matruh](#) and [Sidi Barrani](#).

Engineering work on water points and reservoirs both elevated and on the ground was mixed with minelaying exercises with 4 Indian Division and field exercises with the infantry battalions. The sappers consoled themselves for the loss of Trixie by adopting a baby camel that had fallen into a disused well. It was hard work finding food for the new pet and it made horrible noises at them. When they moved on the camel was left behind.

Sixth and 7th Field Companies followed much the same pattern of activities; the 6th at [Garawi](#) and the 7th at [Helwan](#) went on survivors' leave, staged reunions with recovered wounded, sick and others who had escaped from [Greece](#) and [Crete](#) by divers means, absorbed reinforcements and began to feel like engineer units again.

Both left for the [Ismailia](#) area in the last week of July. Sixth Field Company had acquired a new commander (Major Woolcott) and the 7th was soon to do likewise (Major Thomas).<sup>4</sup> The sappers underwent a course of combined training—landings on defended beaches, pontoon bridging, underwater demolitions, building floating pierheads and suchlike activities peculiar to engineers.

In early September 7 Field left for the desert, with 6 Field and Headquarters NZ Engineers ( [Lieutenant-Colonel Clifton](#)) following a day or so later, en route for [Baggush](#). The engineering component of the Division was again ready for battle.

Seventh Field Company's destination was the already mentioned partly

constructed box near [Alamein](#) known as Fortress A, or more generally as [Kaponga](#). It was situated halfway between the sea and the swampy [Qattara Depression](#)—the corridor through which the enemy would have to pass to reach [Cairo](#).

The sappers worked for a month with the infantry of 5 Brigade Group on the excavation of posts and anti-tank obstacles. They also helped 5 Field Regiment with gunpits and 5 Field Ambulance with a dressing station. To use a few figures so dear to the heart of an engineer, approximately 30,000 feet of holes were drilled and 100,000 feet of primer cord used on 800 detonations of 9250 Ib of ammonal and 2900 Ib of monobel.

Another 'miracle while you wait' job, like the assignment given the Mechanical Equipment sappers at [Aqaba](#) to dredge a harbour without a dredge, was asked of 7 Field Company during this period.

There was need of a road from [Alamein](#) to [Kaponga](#) and Major Hanson was instructed to supervise the work with his Company. As mentioned in the previous chapter, South African engineers were already constructing the road from [Alamein](#) southwards, but at the rate of progress, a few chains a day, it would take months to finish—and it was wanted within weeks. At the [Kaponga](#) end there were no quarries, stone crushers, graders or bulldozers and no possibility of getting them, at least for several weeks.

'We were set a really first class problem to which none of the Chief Engineers of Army, Corps or Line of Communication had an answer. It just happened that in pre-war days I had made some study of what is called soil stabilisation and the actions of chemicals such as gypsum, calcium chloride and various salts in binding certain gradings of soils into a tightly compacted mass.

“Laboratory” tests of desert soils appearing to contain a concentration of hygroscopic salts were made by moulding small briquettes of different soil mixtures and drying them by a primus. They were then tested for stiffness or toughness and a mixture worked out for roadmaking. A trial patch was put down, a car run backwards and forwards over it, and, as hoped, a tight compaction was achieved without the addition of water.’<sup>5</sup>

Kiwi ingenuity had found an answer to the [Alamein](#) roading problem; all that remained to be done, with the help of infantry working parties, was to mix the soils in the right proportions, spread the mixture and compact it by running lorries over it. Thousands of tons of stores and materials were carried over that road into [Kaponga](#) during the months that followed.

On 6 October 7 Field Company returned to the Division, now concentrated at [Baggush](#). The journey was made in the new 'desert formation', whereby every vehicle in a gigantic draughtboard pattern had a fixed place in relation to every other vehicle in the unit and was spaced 200 yards in every direction from its neighbour. At dusk they closed to visibility distance.

In the [Base Post Office](#) Captain [Shelker](#) <sup>6</sup> had been placed on the New Zealand Roll and Lieutenant A. V. Knapp appointed Assistant Director of Postal Services. The Divisional Postal Unit, now commanded by Lieutenant [Coupland](#), <sup>7</sup> was operating post offices at each brigade headquarters and at the supply point.

Sixth Field Company, camped at [Ras Hawala](#) in [Baggush](#), worked on reservoirs at [Sidi Haneish](#). Two 500-gallon tanks had been excavated by South African sappers and the job was to finish them with a bitumen lining and fill with water.

The importance of anti-tank obstacles in a campaign where fast-moving armoured vehicles had taken the place of cavalry was beginning to be realised. In this branch of their trade the New Zealand sappers were as advanced as any, for their training included a thorough knowledge of mines, enemy and friendly, what made them go off and how to stop them going off.

It could hardly be otherwise when it is remembered that the Field Companies had served under a CRE who had smuggled naval depth-charges into [Greece](#) in lieu of other missing supplies. Further, they were now serving under a CRE who as a company commander had smuggled anti-tank mines out of England, in and out of Egypt and finally into [Greece](#)—the only anti-tank mines available in the New Zealand sector.

Every section of the New Zealand Field Companies spent a week with 4 Indian Division to further its education, for the CRE of that division had introduced a novel

and fast method of minelaying. This method was known as 'The Indian Rope Trick' and was officially adopted throughout the [Middle East](#). Its essence was to define a datum line with long pickets and to mark points along this line with short pickets driven flush with the surface of the ground. Tapes knotted at intervals were looped over the short pickets, stretched in the required direction and mines buried under each knot. The distance between the lines varied but the density aimed at was one mine per yard of front. Knowing the combination it was possible to locate the mines quickly if necessary.

The corollary, of course, for no wars are won by armies on the defensive, was training in methods of breaking through minefields. A piece of equipment developed by each side from the necessity of having to locate mines was the magnetic detector. Essentially, a magnetic mine detector is a piece of radio apparatus connected to a pair of earphones and to a looped aerial or search coil. The set, complete with batteries fitted into a small box, was carried on the back of the mine-detecting sapper who, with earphones fastened, carried the search coil on a shielded rod and waved it from side to side as he advanced. When switched on the set went into a state of oscillation which could be heard on the earphones. If the search coil passed close to a metal object the oscillation was damped down or stopped altogether. The early detectors,<sup>8</sup> made locally and urgently, were inferior in design and construction to the German sample, which incidentally was branded 1940 and which suggests that the enemy had at least twelve months lead in this respect.

During October and early November sections trained in rotation with the infantry battalions in assaults on defended areas. The exercise usually consisted of an assembly and night march to a forming-up place, followed by an attack on an enemy position. The sappers were required to clear lanes through the protecting minefield and, when the operation was successfully concluded, to lay another minefield for defence against enemy AFVs.

This tactic of clearing lanes to, and then erecting a barrier in front of a position resulted in the Engineers, as an arm, forsaking the rear of a battlefield and working ahead of the infantry. It also resulted in the sappers' active-service life being very considerably shortened.

The drill for clearing a passage through a minefield, as practised by the New

Zealand Field Companies at that period, was as follows:

The first sapper of the team inserted a Bangalore torpedo under the outer line of wire and blew a gap, and the next man went through the field clearing trip-wires or booby traps. Two sappers followed with mine detectors, sweeping a 10 foot lane while another cleared the mines as located. The demolition party ran out a line of cordtex detonating fuse across the field and over the tops of each mine in the lane. A stick of gelignite, already split open, was gripped to the cordtex and laid on top of each mine. The detonation of the cordtex fired all mines simultaneously, thus clearing a lane and enabling the tanks to pass through after the limits of the track had been taped.

On 11 November the Division began to leave [Baggush](#) for 'Exercise No. 4', an 'exercise' that ended in the relief of [Tobruk](#) and the second clearance of the enemy out of [Cyrenaica](#).

The Engineer command in the Crusader campaign was as follows:

Headquarters New Zealand Engineers

[Lt-Col F. M. H. Hanson](#), CRE

Capt G. A. Lindell, Adjutant

Lt P. B. Wildey

Lt K. F. Jones

[Lt T. W. Bowes](#)

Capt C. E. Watson, MO

[Lt S. T. Taylor](#), LAD attached

5 Field Park Company

[Maj J. N. Anderson](#), OC

[Capt R. C. Pemberton](#)

Capt D. G. Thomson

Lt T. St. H. Acland

## 6 Field Company

Maj H. C. S. Woolcott, OC

Capt B. S. Smythe

Lt C. M. Wheeler

Lt D. F. McFarlane

Lt P. W. de B. Morgan

Lt P. H. G. Hamilton

## 7 Field Company

Maj G. I. B. Thomas, OC

Capt C. F. Skinner, LOB<sup>9</sup>

Lt W. S. Ross

Lt W. A. Scott

Lt F. E. Foster

Lt N. R. Brady

## 8 Field Company

Maj A. R. Currie, OC

Capt H. M. Reid

Lt M. A. Andrew

Lt M. A. Craven

Lt R. M. Page

Lt R. A. Pickmere, LOB

Preparations for an offensive have been glimpsed in the employment given 18 Army Troops Company and the Railway Operating and Construction Groups. Each did vital work and was commended by Authority for doing, without fuss and up to time, everything asked of them.

A brief glance backwards and forwards in order to bring the [Middle East](#) situation into perspective is appropriate at this point.

Campaigns fought almost simultaneously and with an exiguity of force that is breathtaking had been successful in [Libya](#), [Eritrea](#), [Abyssinia](#), [Iraq](#), [Syria](#): unsuccessful in [Greece](#) and [Crete](#). New Zealand sappers had taken some part on all fronts excepting [Abyssinia](#) and [Iraq](#). The enemy had regained the initiative in North Africa and, in spite of attempts in May and June to dissuade him, was preparing to reduce the besieged port of [Tobruk](#) and present Egypt, with due and appropriate ceremony, to Der Fuehrer and Il Duce.

The Eighth Army had been created. <sup>10</sup> Headquarters Middle East Forces, devoutly thankful for the lull while General Rommel took thought about [Tobruk](#), completed its plans for yet another offensive and considered that 'The time was blessedly lost wherein such preparation was gained.' When the Division was concentrating for 'Exercise No. 4' the enemy was making finally ready for the fall of [Tobruk](#). It was thought that we might be preparing a diversionary attack, but as it was estimated that we would need three days to deploy and that the [Tobruk](#) affair would take only two days, everything, Teutonically, was just fine.

It is not in the character of an Engineer history to probe deeply into relative strengths of fighting formations; it is sufficient to say that the infantry was considered adequate, the [Royal Air Force](#) had a plentiful supply of planes and forward landing grounds, and that the [Royal Navy](#) was taking an interest. Our tank gun was inferior in penetrating power but it had better control and rate of fire—an [Achilles](#) and Graf Spee set-up, in a situation that had many of the characteristics of an ocean: no flanks, few landmarks and a wide choice of routes.

The Eighth Army plan may also be briefly summarised. Thirtieth Corps, containing most of the armoured units, was to destroy the enemy tank formations wherever they might be. Thirteenth Corps, consisting of the New Zealand Division, 4 Indian Division and 1 Army Tank Brigade, was to isolate and later destroy the strongpoints along the frontier. A third force, the [Oasis Group](#), had the minor role of creating diversions in southern [Cyrenaica](#), while the [Tobruk](#) garrison at the appropriate moment was to break out of the surrounding ring, consisting mostly of Italian formations.

In [13 Corps](#), 4 Indian Division had the task of engaging enemy attention from the coast to the Omars, and of covering the New Zealand right flank as it wheeled and advanced northwards to isolate the enemy in the [Bardia- Sollum- Halfaya- Sidi Omar](#) areas. The Army Tank Brigade was to come under New Zealand command.

The nature of the terrain was not unknown to the senior officers, for the CRE had had a scale plaster model made of the whole area from [Sidi Barrani](#) to [Tobruk](#). This was the first of many topographical models built by Headquarters Divisional Engineers for [General Freyberg](#). Although it served the purpose well enough it was too heavy to be readily moved and later models were made in sections of convenient size and weight. They were bolted together, and when the General moved the whole thing was dismantled and slipped into a cabinet and moved with him.

The transfer of the Division to the assembly area, about 30 miles south-west of [Matruh](#), took three days, with one brigade moving each day. Seventh Field Company was under command 5 Brigade, 6 Field Company with 4 Brigade, Headquarters NZE and Divisional Postal Unit with Divisional Headquarters Group, and both 8 Field Company and 5 Field Park Company <sup>11</sup> with 6 Brigade.

When the sun rose on 14 November the radiators of nearly 3000 vehicles, all at 200 yards' interval, were pointing to the west, with the wheels of the rearmost just off the [Siwa](#) track. For the first time in its history the New Zealand Division was about to move as a single body. It covered almost one hundred square miles. Far to the south other hundreds in the tens of thousands of square miles of desert were occupied by formations in [30 Corps](#).

Officers attended conferences and returned with the news that was no news—

we were going to chase Jerry right out of North Africa. In actual fact preparations for battle had already begun, for the [RAF](#) was taking care that as few as possible enemy planes saw as little as possible of what was going on below. Remember Greece and [Crete](#) where a man was scared to look up in case a German pilot saw the whites of his eyes?

The first stage in the New Zealand approach march was made by day and ended near [Misheifa](#), where the Kiwi railway sappers had built the railhead. Two night marches, ending south of [Buq Buq](#) and [Sollum](#) respectively and about 20 miles in length, brought the Division close to the frontier, where a barbed-wire barricade separated the sands of Egypt from those of [Libya](#).

How did thousands of vehicles move by night across the desert without the benefit of tail or head lights? They snarled along in low gear on an axis already surveyed by Headquarters Divisional Engineers. The drivers develop a sixth sense and the whole mass moves as inexorably as a plague of locusts— with internal variations. Fifth Field Park Company was carrying its small box girder set (SBG) on large Albion lorries which were not designed for moving in soft sand. There were few four-wheel-drive vehicles in those early days, and the only way to avoid bogging in such patches was to open the throttle, surge forward and risk a collision.

Lieutenant [Bowes](#) <sup>12</sup> of Headquarters Divisional Engineers surveyed the axis of advance by sun-compass and mileage meter and then checked on known points by oil compass. He travelled with a section of the [Provost Company](#) which marked the route with blue flags at half-mile intervals. For night marches the flags were replaced with shaded lights sited to give the maximum range of visibility.

'On Monday 17 Nov,' Lieutenant [Brady](#), <sup>13</sup> 7 Field Company, wrote, 'we were lying somewhere south of [Sofafi](#) when I was informed that I was to move west that night with No. 1 Section, and to meet the Div. Cav. at 0800 hrs the following morning, and if necessary put a patrol out ahead of us. Our job was to cut a 300 yd gap in the Border wire at a given map reference and without fail at that exact point. This was for the Division to pass through later that day.... The wire presented quite a problem to remove, being of very heavy gauge and with steel standards set in concrete. Quite a problem to climb through it, but who was keeping who out of where we had no idea. However with the aid of our trucks we were able to pull out

the standards and drag the tangle of wires to either side. The main excitement came when a couple of vicious looking snakes were discovered at the base of one of the standards.'

The Division passed into [Libya](#) through the gap in the wire (18-19 November); farther south [30 Corps](#) was making a gigantic right wheel; General Rommel, convinced that the movement reported in the south was only a 'recce' in force, gave orders to exert sufficient strength to take care of the situation while he dealt with the really important job of reducing [Tobruk](#).

The Division did not move on the 19th. The only events of sapper note were that 5 Field Park Company left 6 Brigade and reverted to the command of the CRE; more gaps were cut in the wire. Captain Pemberton, with twenty men from Bridging Section and a few trucks of wire, departed to erect a cage on the Egyptian side of the border for the accommodation of prospective prisoners of war. They built one, as suggested, 100 yards square, then having some wire left over erected a smaller one for luck just in case business was brisk. They rejoined the Company the following day.

A short move nearer the desert track [Trigh el Abd](#) was made before nightfall. The Indians were closing in on the Omars and there was a rumble of distant gunfire. Advanced armoured elements were already in contact, but to the German commander it was still only a reconnaissance in force, though maybe too great a force for comfort.

Panzer Group Africa issued the instruction: 'Afrikakorps will destroy the enemy battle groups in the area between [Bardia](#), [Tobruk](#) and [Sidi Omar](#) before they can offer a serious threat to [the assault on] [Tobruk](#).'

For two more days the Division teetered around on its toes like a keyed-up runner waiting the starter's signal. Inconclusive battles were fought elsewhere and inaccurate appreciations were made of enemy tank losses. They were very like the estimates made in early infantry actions before it was realised that an enemy who dives for cover is not necessarily a casualty; neither is a tank commander who moves back on his reserves fleeing the field. The armoured fighting had moved to the west and so given [13 Corps](#) some elbow room. The Division began to move on

21 November towards [Sidi Azeiz](#), a spot where several important desert tracks converged on the [Trigh Capuzzo](#), itself the inland main highway, a series of rutted tracks wandering across the desert. It had not moved far, however, when the code-words MARS, JUPITER, TAURUS were received. Their purport was to begin immediately the tasks originally allocated to the brigades, which were, shortly:

5 Brigade to advance to the [Trigh Capuzzo](#) and contain the enemy forces in the [Bardia- Sollum](#) area;

4 Brigade to cut the [Bardia- Tobruk](#) road;

6 Brigade to be ready to move to the assistance of [30 Corps](#) in the [Gambut](#) area.

General Rommel, finally convinced that his opposite number was engaged in no diversionary thrust but on a large-scale offensive, shelved his plans for [Tobruk](#) and began considering how best to destroy the British forces now in the [Sidi Rezegh](#) area and uncomfortably close to [Tobruk](#).

The immediate tasks of 5 Brigade were: 21 Battalion Group, which included 3 Section (Lieutenant [Foster](#) <sup>14</sup>) 7 Field Company, was to reconnoitre [Hafid Ridge](#) <sup>15</sup> and [Bir Ghirba](#) in the rear of the enemy fortress line; 22 Battalion Group (no engineers) was to capture and dig in at the [Sidi Azeiz](#) road junction; a patrol from 23 Battalion was to 'recce' a route to [Fort Capuzzo](#); 5 Brigade, less detachments, was to take up an all-round defensive position three miles south of [Sidi Azeiz](#).

Twenty-second Battalion met no opposition at [Sidi Azeiz](#). A section of Divisional Cavalry had already swept the area and scooped up the few resident Italians.

Twenty-first Battalion moved on to [Hafid Ridge](#) without trouble but had a very different reception at [Bir Ghirba](#). That is always liable to happen when information is not accurate and a battalion is unwittingly sent upon a brigade-sized job. The attack was called off at dusk (22nd) and the sapper section returned without being employed.

The 23 Battalion patrol, which included No. 1 Section, 7 Field Company, took the honours in 5 Brigade.

'... during the afternoon (21st) Major Thomas told me to prepare for a move with a detachment of [23 Bn](#), our job being to cut the water pipeline from [Bardia](#) to [Halfaya](#). I was supplied with an aerial photograph of [Capuzzo](#) which clearly showed the trench in which the pipeline was laid. After tea we joined up with [23 Bn](#) and set off for [Capuzzo](#), the navigating being done by the Bn. All went well until some of the leading trucks became stuck; this created a considerable noise which must have been heard for miles around. After getting mobile again we carried on and finally came out on a tar sealed road running from [Bardia](#) to [Capuzzo](#), and just north of the actual fort itself. We formed up and moved down the edge of the road straight into the fort.' <sup>16</sup>

It was the noise of getting the trucks unbogged that helped the patrol commander in his audacious capture of [Fort Capuzzo](#) and 200 very surprised Italians. Nobody, they thought, except their own people, would make such a hellish noise in the middle of the night.

The sappers left the infantry to do whatever they do when they help themselves to an enemy fort without so much as a by-your-leave and set about locating the pipeline. It proved to be a six-inch main and was cut by the simple process of removing a length of pipe.

At dawn sappers early on the scrounge found some empty tents with beds obviously vacated in a hurry. Further investigation led them to an underground tank in which were found about twenty very cold Italians, the engineers' first prisoners of the campaign. The officer with them appeared not so much concerned about his prospects of passing the war in a PW camp as with the disappearance of his ornate shaving gear from his tent.

Fourth Brigade, with the task of cutting the [Bardia- Tobruk](#) road, navigated through a dark and stormy night to [Menastir](#), about 15 miles north of [Sidi Azeiz](#). The brigade halted near the edge of an escarpment that overlooked what was variously called the Coast Road, the [Bardia- Tobruk](#) road or the [Via Balbia](#). <sup>17</sup>

Sixth Field Company continued an unpleasant experience by camping in a nest of thermos bombs, one of which advertised its presence by exploding under [Lieutenant McFarlane's](#) <sup>18</sup> truck. 'We walked on tip-toe all night, marked off 20-odd

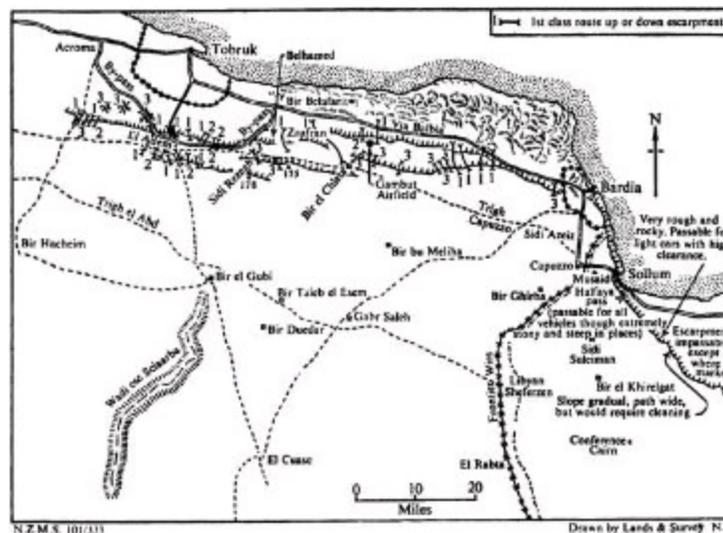
more without further explosion, then moved out and set them off with rifle-fire. [McFarlane](#) wasn't hurt, but the truck was very battered underneath.' <sup>19</sup>

The sappers had a grandstand view of 20 Battalion negotiating a track down the escarpment and having a fine time playing foxes in the hen run with bewildered line-of-communication troops. The surprise was complete, but later armoured cars and self-propelled guns arrived and a squadron of tanks was sent to answer them. Small battles were fought throughout the day and by nightfall over 400 prisoners had been collected.

It was a satisfying spectacle for 6 Field Company, which had opened its campaign in [Greece](#) with the loss of forty sappers in the ambush at [Elevtherokhorion](#) and closed it with a hundred killed, wounded and missing at [Corinth](#).

Orders were expected for an attack on [Bardia](#), but instead 4 Brigade was instructed to leave 20 Battalion Group, with 6 Field Company less No. 2 Section (Lieutenant Wheeler) under command, at [Menastir](#), until relieved by 22 Battalion, while the balance of the brigade occupied the landing ground at [Gambut](#).

The reader is invited to study the map. South of the main road between [Bardia](#) and [Tobruk](#) an escarpment divides into two branches, the northern one fading out past [Gambut](#) landing ground (now the objective of 4 Brigade). The southern branch flattens out near [Bir el Chleta](#), then builds up again and carries on through [Zaafran](#) to [Belhamed](#), then to [Ed Duda](#) and farther west.



**sollum - tobruk, showing routes up escarpments**

Another escarpment begins south of [Bir el Chleta](#) and follows the [Trigh Capuzzo](#) to [Sidi Rezegh](#). At two-thirds of its length stands Point 175. South again from Point 175 is the start of yet another escarpment which fades out west of [El Adem](#).

It will be noticed that a by-pass road that had been built from the [Via Balbia](#) around [Tobruk](#) passes through a defile between [Belhamed](#) and [Ed Duda](#), while the [Trigh Capuzzo](#) goes past the little tomb popularly called 'the Mosque' that gives the [Sidi Rezegh](#) escarpment its name. The [Ed Duda- Belhamed- Sidi Rezegh](#) triangle dominates the south-eastern approaches to [Tobruk](#).

The [Gambut](#) landing ground was approached by 4 Brigade by way of a shallow three-mile-wide valley between the forks of the escarpment south of the [Via Balbia](#). The column was fired on and there were halts while the gunners retaliated, but there was no trouble for the infantry on arrival. The attached tanks had done all that was necessary.

Sixth Brigade had left the Divisional area on the afternoon of the 21st under instructions to move west on the axis of the [Trigh Capuzzo](#) as far as [Bir el Chleta](#). The journey was resumed on the 22nd but, on account of an inaccurate situation report, without any sense of urgency. The situation was viewed in a different light when an LO from [30 Corps](#) arrived with urgent instructions for the support tanks to move on [Sidi Rezegh](#) at their best speed.

A signal from [General Freyberg](#) amplified these disturbing orders: 'Have received orders from [30 Corps](#) that you are to take your Bde Gp with all haste to relieve Support Group of Armd Corps who are surrounded at [Sidi Rezegh](#) 428405. You will receive no further orders but you will start fighting and get in touch with Gen GOTT comd [7 Armd Div](#) who is surrounded there. Recognition signal is two red very lights. Leave your 2nd line [transport] at present location or send back eastwards. You must decide quickly whether you go by rd or part on escarpment.'

The brigade got on to the [Trigh Capuzzo](#) before dark and found that it did not belie its name—the [Capuzzo](#) track—a mere line of wheel ruts very like the old Tokaanu- [Waiouru](#) desert road in the coaching era. A halt was made for breakfast before dawn, but the first glimmers of light revealed that some of the columns were mixed among German vehicles whose occupants were similarly engaged. Eighth

Field Company heard the firing and was told later that 200 prisoners were taken before the parties disengaged and finished their breakfasts at a safer distance from each other.

The intention was to occupy Point 175 before going to the assistance of 5 South African Brigade, whose position was reported to be insecure. What was expected to be a routine operation resulted in a bloody battle, with 25 Battalion losing over 300 in killed, wounded and missing. Part of 24 Battalion was thrown in and even then a line had to be consolidated short of the trig point. The sappers were positioned in what was thought to be a safe spot near Brigade Headquarters in [Wadi esc Sciomar](#), about three miles east of Point 175.

Eighth Field Company's first day in action had been very full; it had heard a confused mêlée before breakfast and seen the results of a partially successful attack against a heavily defended position before tea. In the interval three enemy tanks had been sighted and chased away by guns, but not before a few trucks had mildly panicked at the sight. Then a party of infantry had been seen and fired on at extreme range and with probably little effect, but they had obligingly disappeared from view. However, the Company had laid no mines to protect the infantry nor had they been asked to lift any.

The infantry completed the capture of Point 175 the next day but the Field Company took no part. The position was then that the western slopes of the feature could still be made uncomfortable, the South African brigade had been overrun and apparently there were enemy in all directions. Sixth Brigade could, in fact, have been very easily erased, but it did not happen and this is the way of it—in the light of after knowledge.

General Rommel, under the impression that he had accounted for the armour of [30 Corps](#), was engaged in a venture that has been described variously as a brilliant operation and a piece of military foolishness; instead of completing the destruction of his scattered adversary, the German and Italian armour had been ordered to relieve the [Omar](#) forts. Certainly Headquarters [30 Corps](#) was chased into Egypt, supplies disrupted and havoc caused in the rear areas. The Omars, however, were a disappointment as they were largely occupied by Indians and determinedly hostile, but the New Zealand Division, thought to be facing [Sollum](#), was marked for early

capture.

There were in fact only three battalions and 5 Brigade Headquarters in the [Sollum](#) area. The position there was:

Brigade Headquarters had taken over the defence of a landing ground at [Sidi Azeiz](#).

Twenty-eighth (Maori) Battalion Group, which included No. 2 Section, 7 Field Company (Lieutenant [Ross](#) <sup>20</sup>), had captured the barracks on the edge of the escarpment at Upper [Sollum](#) without much trouble and were looking down on the pier where 19 Army Troops Company barges had been bombed the previous December.

Twenty-second Battalion Group (No. 3 Section, Lieutenant Foster) was covering the [Bardia- Tobruk](#) road west of [Bardia](#). It had taken over from 20 Battalion, which had left by way of the [Trigh Capuzzo](#), where it was to rendezvous with 21 Battalion (now detached from 5 Brigade) and [Divisional Headquarters](#) which, with 5 Field Park, was en route to [Bir el Chleta](#).

Twenty-third Battalion Group (No. 1 Section, Lieutenant Brady) had moved in to [Fort Capuzzo](#); three battalions were thus doing the job originally entrusted to seven and there was no more talk for the moment of attacking [Bardia](#). Water was now a problem at [Capuzzo](#) for the three tanks originally supplying the fort were in various stages of disrepair, and the enemy, after losing the services of a truckload of men sent to repair an inexplicable leak in the line to [Halfaya](#), discontinued pumping water to the fort.

Lieutenant Brady illustrates one of those arrangements that just happen through force of circumstances and without the consent of Authority. He wrote:

'Water was now one of our problems. We discovered an underground supply about a mile North of [Capuzzo](#) where the track branched off to Sidi Aziz. As this was outside the Bn's perimeter we used our water cart and all available cans to transport water into one of the large tanks in [Capuzzo](#) and succeeded in shifting a considerable quantity in this manner. This daily water cart parade really provided one of the highlights of our stay in [Capuzzo](#). Each morning we set off after breakfast

accompanied by a Bren Carrier who was to give us warning of any enemy activity.

'After one morning we got word that an enemy party was approaching from [Bardia](#), so we packed up our pumping gear and departed back to our area and discovered to our amazement that the Germans were also using this water point, presumably to augment their supply. It then became a daily practice for us to have the mornings at the water point and the Germans the afternoons, both sides doing their best to get as much as possible. We eventually shifted about 10,000 gls.

'We also turned one of the underground tanks into an emergency hospital and this proved to be very useful later on.'

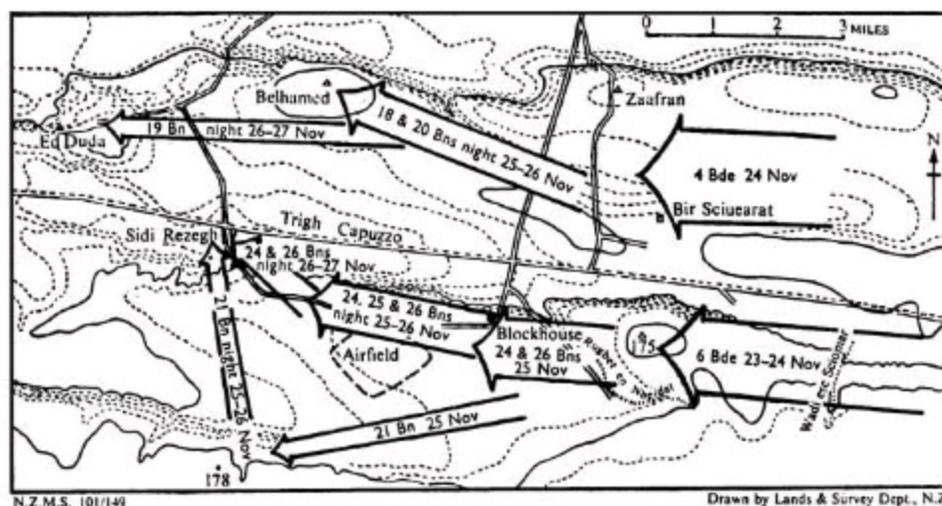
Meanwhile at [Bir el Chleta](#), Headquarters NZ Division, 20 and 21 Battalions, 5 Field Park and 6 Field Companies dispersed at daybreak and stood-to under scattered shellfire. The sappers breakfasted and later had a grandstand view of 20 Battalion with some tanks turning on an enemy group and chasing it away in the general direction of [Gambut](#) where, unless it was very careful, it would collide with 4 Brigade. The group then split, with 21 Battalion, under orders to report to 6 Brigade, moving towards [Sidi Rezegh](#), 20 Battalion rejoining 4 Brigade now west of the [Gambut](#) area, and [Divisional Headquarters](#) (with 5 Field Park and 6 Field Company less one section) moving another seven miles along the [Trigh Capuzzo](#) and establishing themselves under the lee of Point 175.

Sixth Brigade attacked again before dawn (25th) and carried its line about two miles past what was called the Blockhouse, actually a rest post for travellers. During the night 8 Field Company was ordered to take up a position near Point 175. It was the Company's first night manoeuvre in battle and Major Currie remembers it very well:

'We moved in close formation, my PU in front of the centre to lead the way. We went South-West to avoid WADI ESC SCIOMAR and then directly North to the centre of our position. It was pitch dark, no lights, and I was travelling on dead reckoning worked off the map. We travelled at a very slow speed. Suddenly the texture of the darkness changed, and I stopped and everybody else did. I then found that we were on the edge of the escarpment where we were supposed to be. The escarpment was too steep to drive down in the dark and in that part it would require careful driving in

full light. We camped for the rest of the night and dispersed at first light.'

The Company was shelled at daybreak and suffered its first casualties, one fatal.  
21 The 18-pounder troop of 33 Anti-Tank Battery came up and silenced the enemy guns, for which the sappers were very grateful as it was their first experience of shellfire and it taught them much of the nerve control that carries a man through such an ordeal. In the years to come many a night in the [NAAFI](#) was brightened by descriptions of sappers taking cover behind their unloaded boxes of ammunition and grenades.



THE ADVANCE TO TOBRUK, 23-27 NOVEMBER 1941

### the advance to tobruk, 23-27 november 1941

When there was sufficient light to see the country ahead, 4 Brigade again drew level by advancing as far as [Zaafran](#), where there was a good passage down the escarpment. No. 2 Section, 6 Field Company, was joined there by the rest of the Company and it was agreed by all that even though they had been given no jobs there was no lack of movement. The Company was lucky to have left the [Divisional Headquarters](#) area in time to miss an attack by twenty-eight dive-bombers, one of the few times the enemy air force had been able to intervene. A number of bombs fell among the Headquarters Divisional Engineers and 5 Field Park vehicles. Four trucks and Lieutenant-Colonel Hanson's car were damaged beyond repair. Captain Lindell was wounded and Lieutenant Wildey took his place as Adjutant. The only fatal casualty among the engineers was the 5 Field Park dog mascot, Captain Box Girder.

Major Anderson was instructed to build a temporary prisoner-of-war cage in a wadi where an MDS had been established a little eastward of Trig 175.

'We jacked up a cage using the Fd Park Bridging trucks and some barbed wire. And prisoners came thick and fast. By 28th we had over a thousand. There was no shelter, no conveniences, no grub. It was getting a bit grim. We had a German Colonel for whom we provided a tent but that was the only convenience. He asked for a smoke and I offered him some cigarettes but apparently he only smoked cigars which weren't on the menu.'

Major Currie was called up on the phone that had been laid to Brigade Headquarters (Engineer companies had no wireless at that stage) and instructed to investigate a suspected minefield reported in a wadi between Point 175 and the Blockhouse, where three trucks had been blown up during the night operations. He went to investigate his first enemy minefield and found a number of hastily laid 'Teller' mines, <sup>22</sup> conspicuous by being only partly buried and covered with sand. No. 3 Section (Lieutenant 'Mit' [Page](#) <sup>23</sup>) was given the job of lifting them and found about fifty altogether. The place had been used as an artillery headquarters and the sappers left the area staggering under the weight of loot they had acquired. Another minefield found at Point 175 was lifted by No. 2 Section (Lieutenant 'Monty' [Craven](#) <sup>24</sup>). The Company felt that it was justifying its existence.

General Rommel, besides other diversions, was getting on with his arrangements for liquidating the New Zealand Division which he still supposed to be in the [Sollum](#) area. And [General Freyberg](#) was making his preparations for the relief of [Tobruk](#). It was to be a night attack with bayonet and grenade, and if all went well daylight would find 4 Brigade on [Belhamed](#) ridge and 6 Brigade with two battalions on the [Sidi Rezegh](#) escarpment and two on the high ground at [Ed Duda](#). Then 70 Division from the [Tobruk](#) garrison, when ordered, would break through the enemy ring around [Tobruk](#) and join the Kiwis.

Eighth Field Company had no active part to play in the 6 Brigade operations beyond moving up as far as the Blockhouse area, but 2 Section, 6 Field Company, spent a very busy and unprofitable night with 4 Brigade.

[Belhamed](#) was to be taken by two assaulting battalions (18 and 20) with

Colonel Kippenberger of 20 Battalion in charge of the operation. No. 2 Section (Lieutenant Morgan <sup>25</sup>), with two trucks and 500 anti-tank mines, accompanied the attack with the mission of laying a protective minefield in front of the position when won. Morgan says:

'We moved off in the dark following Bn. H.Q. After some time we started moving down hill along what appeared to be a wadi, which I later realised led down the escarpment. We had difficulty in guiding the two trucks as the going was very rough. When we reached the bottom of the escarpment Kip realised that he was off course and we must have moved too far to the right. After doing some map reading under a ground sheet he decided to move back up the escarpment and change direction left from our recent course.'

The sudden rattle of small-arms fire, the yells of charging men and the uprush of German rockets was the first intimation that Headquarters Group was not where it ought to be. A cautious return was being made when a party of enemy was encountered and the result was approximately seventy prisoners. Except for wounded men calling for help and stretcher bearers stumbling around in the darkness, everything was then quiet on Belhamed. No. 2 Section and Battalion Headquarters formed a defensive perimeter while Colonel Kippenberger went off to find the battalions. This took a long time and in the end the infantry consolidated on Belhamed without the benefit of protective mines. Had things not gone wrong in the darkness those 500 anti-tank mines might have made all the difference later. It is to be noted that the tactical advantages of minefields were not thoroughly appreciated at that period, for though other opportunities presented themselves during the battle, none of the engineer units were called on to protect the FDLs with anti-tank mines.

To resume.

'Just before dawn Kip sent me back to Bde. with my Sec. and two trucks as these were too conspicuous on the flat plain,' Morgan continues. 'We also took back a batch of prisoners.... We arrived back at Bde about an hour (?) after daybreak out of the morning fog. I believe Bde was rather puzzled by our appearance at first. Two trucks with prisoners between them and my blokes in single file on each side escorting both. That morning haze played tricks on the eyes.'

Support arms were to move up to [Belhamed](#) behind the infantry and Sergeant Tom [Hanger](#) <sup>26</sup> and fifteen sappers of 3 Section were detailed to accompany some tanks which were under command of 4 Brigade. Their job was to lift anti-tank mines, for which task they carried mine detectors. Again something went wrong for the tanks did not find the infantry and went too far forward. The result was a fierce fight with enemy armour which cost seven tanks, and from which the sappers were lucky to return without casualties.

The 6 Brigade attack along [Sidi Rezegh](#) was only partly successful for it got no farther than the little mosque that gave the place its name, whereas two battalions should have pressed on from there to [Ed Duda](#). Fourth Brigade, securely in possession of [Belhamed](#), brought 19 Battalion from reserve and sent it against [Ed Duda](#). Sixth Field Company was then ordered to occupy part of the position vacated by the 19th along the edge of a low escarpment at [Zaafraan](#). They were joined there by some 200 survivors of the South African brigade mentioned earlier and a South African officer, Major C. Cochrane, was given command of the Kiwi-Springbok combination. The line was thickened up with the balance of 5 Field Park under Captain Pemberton. Beyond the shortage of water, which was rationed down to half a bottle per man plus three half mugs of tea provided by the cooks, memorable events in the next few days on the Kiwi-Springbok front were the guarding of some tanks in laager while maintenance was carried out and the shooting down of an enemy 'recce' plane.

Who shot the plane down is an open question but it fell in the 6 Field Company area. No. 3 Section captured the wounded pilot and observer and were rapidly dismantling the machine when Authority put it under guard until an IO came from Divisional Headquarters.

The Divisional programme for the night 26th–27th was for 6 Brigade to secure the rest of the [Sidi Rezegh](#) escarpment while 4 Brigade tied in with 70 Division, which had meantime reached [Ed Duda](#). The Italian forces investing [Tobruk](#) had been rather roughly handled by 70 Division in the breakout, and messages to Rommel imploring him to return and save a threatening situation failed to reach him, or if they did he took no apparent notice. He was still in the rear of the force he supposed he had trapped between 15 and 21 Panzer Divisions. And the scattered but not

annihilated 30 Corps armour had been given time to reassemble, repair, and replenish.

Both brigades now took all their objectives and junction was made with 70 Division on Ed Duda. Tobruk was in effect relieved and a corridor cleared in the terrain commanded by the New Zealand Division. But General Rommel was now concentrating on the problem of how to disperse the enemy containing his frontier posts, and how with expedition to get back to Tobruk. His resulting actions brought disaster to 5 Brigade Headquarters Group.

Seventh Field Company's dispositions at dawn on 27 November were:

No. 1 Section on water duties at Fort Capuzzo.

No. 2 Section at Sidi Azeiz with Company Headquarters in the 5 Brigade HQ Group.

No. 3 Section on water duties with 22 Battalion on the escarpment above the Bardia- Tobruk road.

Company Headquarters' cook's burner was belching flames and breakfast was near. Over near the horizon was an approaching cloud of dust, a cloud that hid a line of tanks—enemy tanks. Shells began to explode in the area and everybody dived for slit trenches—everybody except the cook, who had no trench and had to lie down near his burner and watch the breakfast burn to cinders. Soon the engineer trucks were on fire and detonating anti-tank mines added to the smoke and noise.

Major Thomas describes his last battle:

'Much of the ground in our area was rock and when a shell burst on this hard ground near a slit trench the ground was made to ring and slit trenches certainly felt comforting. The gunners had a bad time manning their few guns as they did not have the same protection as other personnel close to the ground.

'Some infantry groups changed their position among the black smoke of burning gear, ammo and other stores, and the bursting shells but their game effort could not affect the outcome.

'After a period of heavy shelling the tanks rode into our position with their machine guns shooting at anything above the ground. The tanks halted among and over us and we furtively looked for the German Infantry who we understood always followed up their tanks. Fortunately for the German Infantry and possibly fortunately for us, no German Infantry arrived. The tanks with their armour plate overawed us and Brigadier Hargest decided to cease fire.... The Brigadier was not interested in mines for protection of his wide open position. Admittedly, all of us assumed that it was merely a halt on our advance on [Tobruk](#) and Major Nicholl,<sup>27</sup> O.C. Div Cav was horrified when it was suggested that mines would give some protection.'<sup>28</sup>

The survivors of 5 Brigade Headquarters Group, breakfastless, were marched 19 miles to [Bardia](#) and a PW cage. Streams of enemy vehicles were on the move, some towards [Tobruk](#), others to [Bardia](#) and replenishment. Elements of 23 and 28 Battalions situated in the path of these columns as they lapped around [Fort Capuzzo](#) were involved, but the sappers were not engaged in any of the fighting. The situation that night was not reassuring according to Lieutenant Brady:

'By nightfall [Capuzzo](#) was completely surrounded and in every direction German flares were to be seen, giving a grim picture for the following morning as it was known that large forces of enemy were in the vicinity and our reply was one tank minus track which was manoeuvred into position and there it stayed. However by next morning the enemy had completely disappeared.'

Twenty-second Battalion was in the unhappy state of not knowing much of what was going on but being quite certain that its position was dangerous: gunfire and smoke in the direction of [Sidi Azeiz](#), a message to the effect that Brigade Headquarters was being attacked, then no more messages. Large heavily armed convoys, too strong for the battalion to do much about, streamed westwards from [Bardia](#) and a threatening infantry deployment, which did not however develop into an attack, preceded an uneasy night.

While the Division consolidated its new areas on [Sidi Rezegh](#) and [Ed Duda](#) (27th) 23 Battalion Group fought off another attack. From the sapper's view at the water point:

'Next day the 27th, at about 1100 hrs the shelling began in earnest and we had

several hours of it during which we suffered six engineer casualties, including Sapper Tate,<sup>29</sup> killed in action and Sapper Davidson,<sup>30</sup> died of wounds. My pickup, an 8 cwt Dodge, received a direct hit but fortunately Arthur Warburton,<sup>31</sup> the driver, was not in it.... This truck "Audrey" was to become a familiar sight, as over the next couple of years the riddled cab was to be seen whenever we passed Capuzzo and was still there when we finally left Libya in 1943.... The attack carried on and the Germans actually got as far as our transport at one end and took two or three sappers prisoner, but they were later released.'<sup>32</sup>

The return of the panzer divisions to the main battle at Sidi Rezegh was announced by the muffled sounds of distant firing. It was German armour beating off British attacks and finally breaking through to the rear of the Division.

Major Anderson was wondering how many more prisoners he would have to cram into his cage before somebody took them away, when Lieutenant Bowes arrived with a message from Divisional Headquarters to the effect that there were some unburied dead to the south-west, and also that there was food and water in an enemy encampment somewhere between the Blockhouse and 6 Brigade. Anderson left Captain Thomson in charge, and accompanied by a truckload of prisoners and nine guards, he and Bowes went out to reconnoitre the areas. They found a number of German dead who were buried by their countrymen, and also obtained a load of water cans, tinned gherkins, Danish butter and hermetically-sealed bread as moist and fresh as the day it was made.

'We started back with our spoils and got within about 600 yards of home when we realised that Jerry was in charge,' Major Anderson writes. 'The cage was in a depression that we could not see but the prisoners were all running around cheering and they came up on the ridge where we saw them. We went about smartly. Jerry blazed a bit of MG fire at us but apparently they were all too excited to do anything much. We moved a mite smartly. Fortunately we had located 6 Bde on the march out so we made for them and reached them just before dark. I made for HQ and found Barrington<sup>33</sup> (BM at the time). His tale was gloomy. Everyone was pinched and nothing certain was known of Div HQ. He suggested I join 8th Field Coy and picked up Capt Reid<sup>34</sup> about 9 p.m. just as he was moving off. We moved down the escarpment on to the flat and turned west for about two miles where we laguered for the rest of the night. In the morning I turned east to look for Div HQ and when I

located them they were all rather surprised because the whole of the Company, less Pemberton's detachment, was reported captured. Anyway we still had our few prisoners and we made a small crib to hold them until arrangements were made for their despatch elsewhere.'

Sapper O'Reilly,<sup>35</sup> who had just returned with Lieutenant Acland<sup>36</sup> and a couple more sappers from a job of blowing up an enemy ammunition dump, wrote home later:

'We got home safely, had tea—and then it happened! About 20 minutes after we arrived a whole Panzer brigade arrived without any warning and the first we knew about it there were Huns in amongst us with machine guns. We couldn't even fire a shot it was so sudden and unexpected. We had treated the "prisoners" pretty well (at least ¼ of them speak intelligible English). They all leapt out of the pen saying "New Zealanders—good comrades", patting us on the back with one hand and taking away our rifles with the other! It was really very funny and a movie of it would have made a good sequel to the one the official photographer took of us guarding them a few days earlier! They marched us a couple of miles, put us in trucks and the next morning we were in a temporary P.O.W. camp on the Bardia-Tobruk road.'<sup>37</sup>

While Major Anderson was moving to the new location with 8 Field Company transport, Captain Pemberton's section was on night manoeuvres. 'Sometime during the night 28–29 Cpl Harry Livingston<sup>38</sup> reported tanks moving out forward of our positions,' Pemberton writes. 'Bn HQ and Bde had no more clues than we whether they were ours or enemy.

'I decided to investigate them before first light. However they were up early too for they started up their engines and pinpointed their position while it was still fairly dark as we went down to find them. Sergt Ted Morse<sup>39</sup> (Workshop Sect) had an idea they were probably ours because the faint outline of a truck he could pick up looked like a South African truck.

'I kept Workshop sect back covering me from the FDL's of their position and sneaked forward in the faint glimmer of first light to recce—realising then that I had left some perfectly good "sticky bombs" back at HQ and all I had was a pocket full of

grenades. I almost reached the nearest tank when it pulled out and disappeared and I ran over to the next one. Someone must have spotted me in the half light for the turret with its big gun swung round in my direction and I ducked in alongside to avoid being shot up. The tank was a Hun. An unfriendly type leaned out of the turret and had a shot at me with a pistol at a few feet range while I frantically pulled at a stiff pin of a grenade. It came away and I held it—just too long—and then lobbed it for the hatch of the turret. The clang of the cover closing and the crash of the grenade against it were almost simultaneous. The engine roared and the tank slewed around and thundered off into the dusk of the morning. I ran back where I'd left Ted Morse a bit shaken and annoyed at myself for not doing better—our little action a failure. But no—not quite. Some of the boys had spotted a tank and a couple of trucks slower off the mark than the others further round quite close under the escarpment between Stores and Workshops fronts. They caught the crew out of their tank and rounded up the lot, 1 tank, 2 trucks and nine prisoners. I was very proud of them.'

The Germans who had overrun Major Anderson's prisoner cage and the adjacent MDS did not move beyond the wadi that had sheltered both. But the German officer who smoked only cigars and did not like Anderson's fags, Colonel Mickl of 155 Lorried Infantry Regiment, was to be back in action again the next morning.

By dusk there had been more fighting for the [Sidi Rezegh](#) ridge, but 6 Brigade had remained in possession though not without cost. There were enemy east, west and south. To the north where 4 Brigade was on [Belhamed](#) and to the north-west where the [Tobruk](#) garrison held [Ed Duda](#) were the only friendly fronts. Brigadier Barrowclough regrouped his battered battalions with 21 on Point 175, 25 around the Blockhouse, 8 Field Company with detachments of machine and anti-tank gunners under command on the north-eastern perimeter of the [Sidi Rezegh](#) airfield, then 26 Battalion and finally, completing an eight-mile line from east to west, 24 Battalion on the western flank, the whole brigade being deployed facing south. Brigade Headquarters and all vehicles moved to a safer area below the escarpment and nearer [Belhamed](#). This move was in progress when Major Anderson met Captain Reid.

A move that had some bearing on 6 Field Company fortunes was that of [Divisional Headquarters](#), which had been forced to vacate its area after the capture

of the wadi containing the 5 Field Park PW cage and the MDS. It moved west nearer to 6 Brigade Headquarters. Brigadier Inglis chose a new spot on the south-eastern slopes of the wadi between [Belhamed](#) and [Zaafran](#) for his 4 Brigade headquarters. Part of 19 Battalion was brought back from [Ed Duda](#) to its old area, where it was greeted by Sergeant Len Morris and his Stores Section armed to the teeth with grenades and sticky bombs. After identification had been established, 19 Battalion took over the area and 5 Field Park were attached for all purposes.

The South Africans and 6 Field Company moved to the [Bir Sciuearat](#) area a mile and a half north of Point 175, where in an infantry role they joined 26 Field Battery, a troop of 65 Anti-Tank Regiment, RA, and a platoon of 27 Machine Gun Battalion, partly to protect the rear of [Divisional Headquarters](#) and partly to fill the gap between the two brigades. Next to Point 175, [Bir Sciuearat](#) was the highest ground thereabouts. It was tactically an important feature, but to keep a clear mind for what follows it is only necessary to say that for the next few days both sapper units shot when there was anything to shoot at.

They had to put up with a lot of shelling, mortaring and machine-gunning at long range, but when anything ventured close enough it received a shower of Spandau bullets with which the sappers were by now well provided.

The day (29th) opened with infantry attacks against 21 Battalion on Point 175. They were repulsed, and the battalion was congratulating itself on the outcome when tanks were seen approaching. Without doubt these were the South Africans, known to be not very far away. The troops went forward to welcome them and it is a moot point as to who got the biggest surprise—for the South Africans were actually part of the Italian [Ariete Division](#) under the impression that Point 175 had been recaptured. In the event Point 175 was recaptured, together with most of 21 Battalion. Twenty-fifth Battalion was unable to intervene, and 8 Field Company farther west again passed an anxious day that ended, however, on an unusual note. To quote Major Currie again:

'It was on the 29th that an Italian tank came into our lines for safety. The turret had been pierced by an AP shell and the tank commander was badly wounded. We gave what assistance we could. Some of my sappers got the crew's Biretta automatic pistols. All this was in the afternoon. I decided to take the tank to Bde

HQ. Driving it was quite easy and I took it down the escarpment only to be met by some British tanks, who said I was not qualified or permitted to handle it. They took it from me and I was robbed of a glorious opportunity to drive up to the Brigadier's truck with my prize.'

Eighth Field Company had another quiet day in the sunshine of the 30th wondering what was going on. Twenty-fifth Battalion was still on their left and 24 and 26 on the right. None of the shellfire directed against the western end of [Sidi Rezegh](#) ridge came their way, nor were they involved with the converging tank and infantry movement that ended at dusk with the overrunning of 24 and half of 26 Battalions. Their turn come later.

'Some time after dark,' wrote Major Currie, 'there were sounds of vehicles moving close at hand. On a dying telephone line, we had no wireless in those days, I ascertained that there were no friendly vehicles moving. The anti-tank portees backed up inch by inch until they could see the loom of the vehicles in the darkness. They opened fire and got every truck, three of them I think. One was an ammunition truck and went on fire giving a brilliant display for some hours, but we didn't like it as it drew attention to our area. The enemy seemed to go to ground, and not wanting to be between them and the sky line at daylight, I organised a bayonet charge under the command of Lt Craven.'

The enemy did not wait for the wildly yelling sappers and the only positive result was the release of Captains E. J. [Thomson](#)<sup>40</sup> and E. F. [Walden](#),<sup>41</sup> who had been captured while searching for Major Currie with the view to forming a line in his area with what was left of 24 Battalion. They managed to slip away in the confusion, and after Thomson had restored himself to comfort by removing his compass from where he had hidden it in his crutch, they reported to Brigade Headquarters. Their troops had already been withdrawn there.

The situation on the [Sidi Rezegh](#) ridge was then that 25 Battalion around the Blockhouse and 8 Field Company adjacent to the airfield were all that remained of 6 Brigade, excepting of course Headquarters, the B Echelons below the escarpment and some remnants of the other battalions. They were safe until daylight, and orders were to keep the corridor to [Tobruk](#) open at all costs even if, as Brigadier Inglis said, 'It was a damned draughty corridor'.

A South African brigade was still expected to reinforce the Division, but the loss of Point 175 and other complications made this expectation remote.

From the New Zealand point of view the providential arrival of a 300-lorry supply convoy piloted by the ex-CRE, [Colonel Clifton](#), restored the fighting power of the guns, and the food and water were welcome, too, but there was little else pleasing in the prospect. <sup>42</sup> [Divisional Headquarters](#) and 4 Brigade Headquarters were stripped down to bedrock and the rest sent into [Tobruk](#) along the 'damned draughty corridor'. Unfortunately, 6 Brigade B Echelon was not included in this order. Major Anderson and his sapper team of guards, Engineer Headquarters and the Postal Unit were included in the column that was met and guided through the minefields. The journey was surprisingly quiet and uneventful, except for Lieutenant Coupland's Postal truck which went up on a mine with the loss of two killed.

Eighth Field Company's transport stood-to ready to move into [Tobruk](#) at a moment's notice; Captain Reid waited all night at 6 Brigade Headquarters for orders and then at dawn (1 December) returned to the park and dispersed his vehicles. This had hardly been done when firing broke out on [Belhamed](#) ridge, and then German tanks were seen there moving eastwards. They had come from [Sidi Rezegh](#), had overrun the guns of 6 Field Regiment, then overwhelmed 20 Battalion and forced 18 Battalion to withdraw into the [Tobruk](#) defences. An ironic twist to a desperate situation was that 18 Battalion found safety behind an anti-tank minefield previously laid by the enemy.

Every gun and tank that could be brought to bear halted the enemy advance towards [Zaafran](#) and 4 Brigade Headquarters and the attack swung round on 6 Brigade. Very soon seven of Captain Reid's trucks were burning. A runner was sent to Brigade for orders and returned with instructions to hang on for our own tanks were coming.

Major Currie, from his vantage point on [Sidi Rezegh](#), saw the captured 20 Battalion being marched away, and saw also less than a mile away his own trucks burning, one in particular giving a remarkable pyrotechnic display.

'I remarked to my companion, Major [Luxford](#), <sup>43</sup> of the Machine Gun Battalion that there were going our mines. Mines which nobody wanted but which, if laid,

could have kept the Hun tanks off the Brigade. Besides the mines given us by the CRE, we had a truckload of Teller mines we had lifted earlier.'

But Brigade's information was correct. This time the tanks really were coming. Major Currie saw 22 Armoured Brigade approaching the airfield and went down to tell them what was going on over the ridge and to hurry, otherwise their journey would be unnecessary. He was staggered by being requested to produce his identity card; it did seem to be carrying security a little too far in a situation where every minute counted. How much every minute counted even he did not know, for the infantry immediately available to Brigadier Inglis in 4 Brigade consisted of the 5 Field Park/19 Battalion group at [Zaafran](#) and the 6 Field Company/South African combination at [Bir Sciuearat](#).

Captain Reid, from a slit trench in the vehicle park, saw two tanks coming from the direction of Brigade Headquarters. He saw also that they were the wrong kind of tank. They took thirty-eight cooks, drivers and quartermaster personnel from their shelters and marched them away. Later Reid, who had been missed, collected nine others and, under cover of the smoke from his burning trucks, made his way to Brigade Headquarters only to find that it had departed. Actually it was now with [Divisional Headquarters](#) at [Zaafran](#).

By this time, early afternoon, 22 Armoured Brigade was down off [Sidi Rezegh](#) and turning back the tide of disaster threatening to engulf the Division. [General Freyberg](#) with only 25 Battalion, two and a half Engineer companies, half of 19 Battalion and sundry infantry remnants left to him out of the seven battalions that had entered the battle was virtually surrounded. He asked and obtained permission to break out that night (1–2 December) and refit in Egypt. Arrangements were made with General Norrie, commanding [30 Corps](#), to do this and by late afternoon orders for the operation had reached all units.

Major Currie was to withdraw his sappers from [Sidi Rezegh](#) forthwith. 'Withdraw' suggests an orderly movement with the best use being made of the transport available, but there was no transport available and in actual fact some of the company came back on the portées of the anti-tank guns, some on the machine-gunners' trucks and some rode on stray 22 Armoured Brigade tanks.

The tanks came under fire from the enemy on Point 175 and the passengers were forced to de-tank and move out of danger as fast as their legs would take them, down to the [Trigh Capuzzo](#) and to the rest of the Division around [Zaafran](#), where Captain Reid found them. It only remains now to bring the [Bir Sciuearat](#) detachment into focus.

Sixth Field Company was facing south and south-east, with enemy on Point 175 about 3000 yards away with whom they carried on a desultory sniping match. According to Lieutenant Wheeler, who was with Captain Woolcott at Tactical Headquarters:

'Daytime we usually had a sniping match with infantry moving on the plains to the south. But the thing I always remember is how at 12 noon, they would bring up a big lorry with a smoking chimney, the Gerries would queue up for lunch, and all shooting would stop while our own cooks brought up the "dixies". Till 1 p.m. you could walk around, sit and write letters etc. in peace. Then there would be a shot, and both sides would dive for cover and go on with the war. Then the last afternoon.... they came in really hard from the South. We had some 25-pounders back in a hollow doing very well against the tanks, but their O.P. must have been shot out, because Woolcott spent most of the afternoon with field glasses and telephone, directing the fire. He was hit, in the arm only, and I took over the telephone, had a great time for a while, but the sun got low behind the enemy, and they could pick up the field-glasses, and gave us quite a strafing. We lost the telephone line, so the big guns moved up to the ridge behind us, with the 2-pounders and fired over the sights. But one by one they were hit, and there was quite a fireworks display from burning guns and quads behind us. Our slit trenches were barely a foot deep, the ground was so rocky. [McFarlane](#) got a piece in the stomach, was taken out, but died next day on the way back.'

Lieutenant Morgan in the centre of the engineer defensive position saw it this way:

' [6 Bde](#) took off from Sidi Resegh past our West flank, the 27 (MG) Bn chaps were picked up in a rush and we still had no word of what was happening.... Some of our transport came for us and we quadrupled the loads to take out the South Africans. This was about 1700–1730 hrs. [McFarlane](#) was hit in the stomach with a bit

of mortar, loaded into my 8-cwt and off.... Wheeler picked up my batman and myself when we had the whole place to ourselves.'

Eighth Field Company fossicked around among the battalions for transport to replace that lost in the vehicle park and were offered several trucks and trailers by some Tommy gunners. The catch was that they were full of captured Bersaglieri, but the orders were that all prisoners were to be left behind.

'One truck with trailer wouldn't go so we abandoned it. With the prisoners was one of my sappers "Flash" [Ashdown](#),<sup>44</sup> so named because nobody in the NZ Div could ride a motor cycle slower than he and yet keep going. He had been one of my D/Rs. The Wops had to be got off the trucks at revolver point. Flash didn't hear the order that we were abandoning them and went with them. After the Bde had gone the Wops set to and got the truck going and took Flash with them, not West to their own lines but East after us. They had had the war and wanted to get into a POW Cage. They propped Flash up in the front seat, nursed his rifle for him and caught us up the next morning. Thereafter they were our devoted slaves till we reached [BAGGUSH](#) and sent them back to the cages at MERSA MATRUH. They used to push our trucks out of the soft sand, do the cooking and line up for whatever rations were left over.'<sup>45</sup>

The engineers were back in their old area at [Burbeita](#) by the afternoon of 5 December after travelling all day in a hellish sandstorm. 'Got settled in and issued more blankets. [Andrew](#)<sup>46</sup> went ahead as advance party and arranged things. Had tea at LOB camp with [Pickmere](#)<sup>47</sup> and Skinner. A great feed and yarn by the fire. To bed at 2115 very tired and done up. Foot and arm pretty sore.'<sup>48</sup>

It is not unusual for feet and arms to feel pretty sore after some days of neglected wounds.

The departure of the panzer divisions from the frontier on 27 November relieved the pressure on the decapitated 5 Brigade. Colonel [Andrew](#),<sup>49</sup> worried by his isolation, had brought his 22 Battalion Group back to Libyan Omar and was there directed to join 23 Battalion at [Capuzzo](#). The Maori Battalion was still in position at Upper [Sollum](#). Colonel Andrew was appointed to the temporary command of 5 Brigade and had got a scratch headquarters operating when he was instructed to

take his brigade back to his original area and prevent all movement between Bardia and the west. Seventh Field Company was re-formed and distributed, No. 1 Section going to 23 Battalion; No. 2 Section, a small new section commanded by Sergeant George,<sup>50</sup> to 28 Battalion; and No. 3 Section (Sergeant McQueen<sup>51</sup>) and a skeleton Company Headquarters (Lieutenant Foster) to 22 Battalion.

On 3 December, while the rest of the Division was making its way back to Baggush, a battalion of the German 104 Lorried Infantry Regiment practically ceased to exist after having the misfortune to run into an ambush set by the Maori Battalion on the flat below the Menastir escarpment. Sergeant McQueen was working with his section improving the track down the escarpment when the transport park was shelled. The drivers were ordered to take their vehicles down to the flat where there was some shelter, but the movement was not well organised. Part of McQueen's DCM citation states:

'Heavy artillery and machine gun fire was encountered and drivers were leaving their trucks, control was being lost, and the road was becoming blocked with lines of vehicles. Sgt. McQueen realising the seriousness of the position immediately took control and, displaying a total disregard for personal safety and refusing to leave when he himself was wounded, soon had some of the drivers back and damaged trucks were quickly moved aside to allow the remaining traffic to pass and disperse. He then turned his attention to wounded personnel. Despite his wound he carried on and again the following day was responsible for saving transport under almost similar conditions between MENASTIR and CAPUZZO. Sergeant McQueen was at all times an example and an inspiration to all who came in contact with him.'

Dispositional shuffles along the frontier resulted in 5 Brigade Group returning to Capuzzo early next day to relieve 5 Indian Brigade and come under command of 2 South African Division.

Brigadier Wilder<sup>52</sup> arrived on 7 December with a headquarters staff to take command of 5 Brigade. The 7 Field Company sections had been recalled from the battalions and assembled at Capuzzo the previous day, and on the 8th 5 Brigade was ordered westward to reinforce Rommel's decision to retire from Tobruk. His success in resealing the punctured cordon around Tobruk had proved a Pyrrhic victory, for he had insufficient strength left to resist renewed British pressure and

protect his long line of communications.

It was thought likely that he would try to stand at the [Gazala](#) position about 40 miles to the west. [Gazala](#) was a strongly defended area and might have to be reduced before the operation could continue.

Fifth Brigade assembled near [Sidi Azeiz](#), then moved westwards in desert formation astride the [Trigh Capuzzo](#) for a few miles before turning north and scrambling down the escarpment on to the [Via Balbia](#), where it laagered for the night at the [Tobruk](#) bypass turnoff. The troops stayed there throughout a cold, wet and windy day (10th). It did not seem a proper way to chase a retiring enemy, but [13 Corps](#) had to wait until the rear echelons were organised to operate from [Tobruk](#); the supply chain from the New Zealand Railway Group's railhead at [Misheifa](#) was stretched to the limit.

The latest information was that the enemy had vacated [Acroma](#), on the western junction of the bypass road with the [Via Balbia](#), and was, for the time being, beyond pursuit. The RAF was of course in attendance. After a long chase from the LOB camp Captain Skinner and Lieutenant Pickmere caught up with 7 Field Company. Captain Skinner took command and Pickmere went to No. 2 Section.

The same afternoon Major Anderson and party, who had left [Tobruk](#) with [Divisional Headquarters](#) two days earlier, marched into [Sidi Haneish](#) expecting to find only Captain Pemberton's detachment, but to his speechless amazement practically the whole Company was there. The sappers whom he thought were languishing behind enemy barbed wire had beaten him home by five hours after one week as prisoners of war. According to Sapper O'Reilly they had been well treated by the Germans and exceedingly badly by the Italians, to whom they had been handed over while their original captors got on with the war. An armoured-car detachment had picked them up somewhere west of [Tobruk](#), and as O'Reilly wrote: 'We had been prisoners just 2 hours short of a week—and what a wonderful feeling to be free again! You have no idea what it was like.... None of us had shaved for at least 10 days, nor once had taken our clothes off nor washed and we were a pretty rough looking lot. It was really great to have a decent wash and shave yesterday and to clean one's teeth.... this morning we got a Patriotic Fund issue of razors, soap, tobacco (I lost 5 tins of Bears DC would break your heart wouldn't it) and there is

also another Patriotic parcel due so we should be all right.'

To return to 7 Field Company.

Thirteenth Corps' plan was for 5 Brigade to advance on [Gazala](#) which, if held in force, was to be reconnoitred but not attacked. A tank brigade would protect the inland flank, while 4 Indian Division would bypass the place and endeavour to cut off and capture the garrison.

The brigade left early next morning and made a slow trip along the mine-flanked road between the silent [Belhamed](#) feature and [Ed Duda](#) as far as [Acroma](#), where the troops deployed on a three-battalion front facing west. To the north was the sea, to the south 4 Indian Division, and straight ahead the [Gazala](#) fortress position.

From then to the end of the campaign 7 Field Company salvaged vehicles, machine guns, artillery gunsights, water tanks, signal gear and the debris of a battlefield while the enemy were pushed from position to position. The biggest engineering job was the construction of a road that saved the wounded many excruciating miles, as Captain Skinner later reported:

'Accompanied by Major [King](#)<sup>53</sup> of Field Amb. I recced a road site down the escarpment north of el Azragh. Commencing work before daylight on 14th Dec. using our compressors and a considerable amount of explosives we were able to construct a road enabling ambulances to convey the wounded from the 28 Bn. to the MDS. established on the el [Agheila](#) flat instead of taking them to [Acroma](#) saving approx. 30 miles over desert track each trip.'

Corporal Jefferies and Sapper Locke<sup>54</sup> were lent to the REs in the rear for instruction in mine detecting, using detectors instead of bayonets, and they supervised the lifting of some 2000 enemy mines. No. 2 Section found a minefield of their own and picked up about 500 mines, while the Company as a whole disposed of unexploded mines and Thermos flask bombs.

By the 15th the outer defences had been breached and the main [Gazala](#) position was within reach. Poles, Indians and Kiwis launched their attacks and after two days' hard fighting, plus the threat of the outflanking left hook which had been delayed by

bad going, the enemy withdrew.

It was the end of 5 Brigade's active role in the campaign. The Company continued working on battlefield salvage and operating the water point until transport arrived to carry the infantry. The brigade left the [Gazala](#) area on 23 December. Near [Tobruk](#) the Company salvaged one of its own trucks, a 30-cwt. Ford complete with log book and tools. It had been abandoned in [Greece](#) and brought to [Africa](#) by the Germans, and had not been looked after very well. [Sidi Haneish](#) was reached on 26 December.

Christmas Day had passed almost unnoticed. Away to the west [Benghazi](#), where the Railway sappers spent a few weeks earlier in the year, was again in our hands. Christmas dinner in the traditional manner was served on New Year's Day.

The coming of 1942 was hailed by the Division at [Baggush](#) in such a way that the Navy and [RAF](#) thought the enemy had miraculously returned to the attack. The engineers added a few special effects to the erupting land mines, the indiscriminate mortar and cannon fire, and the streams of tracer that tore into the sky from ten thousand rifles.

Engineer casualties for the period June-December 1941 were:

5 Field Park  
Company

Died of wounds 1  
Wounded 10  
PW 4

6 Field Company

Killed and died of wounds 4  
Wounded 14

7 Field Company

Killed and died of wounds 5  
Wounded 11  
Wounded and PW 1  
PW 10

8 Field Company

Killed and died of wounds 3  
Wounded 8

Wounded and PW	2
PW	38
Postal Unit	
Killed and died of wounds	2
Died while PW	1

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<sup>1</sup> On 7 September Maj Anderson, ex 19 Army Troops Coy, assumed command of [5 Fd Pk Coy](#) in place of Maj Morrison, who had been posted to HQ BTE.

<sup>2</sup> Letter, Maj Currie.

<sup>3</sup> Pick-up.

<sup>4</sup> Maj Rudd relinquished command of [6 Fd Coy](#) to become Military Secretary, [2 NZEF](#), and Maj Woolcott took over. Maj Thomas replaced Maj Hanson, who became CRE when [Lt-Col Clifton](#) left the Division to be CRE [30 Corps](#).

<sup>5</sup> Letter, Brig Hanson.

<sup>6</sup> [Capt J. H. Shelker](#); born NZ 11 Mar 1896; accountant; died 20 Mar 1959.

<sup>7</sup> [Lt H. S. Coupland](#); born [Christchurch](#), 25 Apr 1906; clerk; died [Lower Hutt](#), 8 Apr 1948.

<sup>8</sup> The very first mine detectors, few in number, were the Goldak, made in the [USA](#) as a commercial machine for finding buried engineering services but not robust enough for the desert conditions. The local mine detector was made to meet a pressing demand, from parts and valves available in the [Middle East](#).

<sup>9</sup> LOB, left out of battle.

<sup>10</sup> Modern military history has been made by at least three triumphant Eighth Armies. The first was the Chinese Eighth Route Army of the

nineteen-thirties, then the British Eighth Army of the 1939-45 war, and finally the United States Eighth Army of the Korean war.

<sup>11</sup> 5 Fd Pk Coy was attached for the move only.

<sup>12</sup> Lt T. W. Bowes; Christchurch; born Christchurch, 24 Feb 1915; surveyor.

<sup>13</sup> Capt N. R. Brady; Kerikeri; born Auckland, 20 Nov 1912; civil engineer; wounded 24 Oct 1942.

<sup>14</sup> Lt F. E. Foster, MC; Auckland; born Waikino, 24 Sep 1903; engineer; three times wounded.

<sup>15</sup> The description 'ridge' does not have the New Zealand significance. It meant in the Western Desert any country a few feet higher than the surrounding terrain.

<sup>16</sup> Letter, Lt Brady.

<sup>17</sup> 5 Fd Pk Coy had, during the first Libyan campaign, travelled the Via Balbia across Cyrenaica. On its return it had brought back a liberated Italian piano for the sisters at the General Hospital at Helwan.

<sup>18</sup> 2 Lt D. F. McFarlane; born Napier, 24 Jun 1918; mining student; died of wounds 3 Dec 1941.

<sup>19</sup> Letter, Lt Wheeler.

<sup>20</sup> Capt W. S. Ross; born NZ 31 Aug 1915; civil engineer; p.w. 13 May 1944.

<sup>21</sup> Spr F. E. Gray killed and eight others wounded.

<sup>22</sup> The Teller was the German standard anti-tank mine, about twelve inches in diameter by three high, and containing 11 lb of high explosive. It could

be fitted with pull igniters and trip-wires which made lifting a very dangerous operation. A tank exploding a Teller mine invariably lost a track and was immobilised until repairs were effected. A truck was generally a write-off, and drivers seldom escaped death or injury.

<sup>23</sup> Capt R. M. Page, MC; Auckland; born Auckland, 12 Aug 1911; civil engineer.

<sup>24</sup> Lt M. A. Craven; Wellington; born Wellington, 1 Sep 1917; civil engineer.

<sup>25</sup> Maj P. W. de B. Morgan, MC, m.i.d.; Christchurch; born England, 2 Mar 1917; engineering student; OC 8 Fd Coy Feb 1945; 6 Fd Coy Mar-Oct 1945; wounded 29 Mar 1944.

<sup>26</sup> Capt T. Hanger, m.i.d.; Dunedin; born NZ 31 Mar 1912; bridge builder; wounded 30 Nov 1941.

<sup>27</sup> Lt-Col A. J. Nicoll, ED, m.i.d.; Ashburton; born Ashburton, 2 Feb 1900; farmer; CO Div Cav Jul 1941-Oct 1942.

<sup>28</sup> While mines greatly assisted in protecting a defensive position, they were disliked by armoured units when laid hurriedly without adequate marking and clearly-indicated gaps for vehicles.

<sup>29</sup> Spr L. A. Tait; born NZ 23 Apr 1914; milk roundsman; killed in action 27 Nov 1941.

<sup>30</sup> Spr F. C. Davidson; born NZ 30 Jul 1901; quarryman; died of wounds 27 Nov 1941.

<sup>31</sup> Sgt A. B. Warburton; Gisborne; born NZ 8 Jan 1915; gasworks stoker.

<sup>32</sup> Letter, Lt Brady.

<sup>33</sup> Brig B. Barrington, DSO, OBE, ED, m.i.d.; born Marton, 2 Oct 1907;

insurance inspector; SC 6 Bde Mar 1940-May 1941; BM 6 Bde May 1941-Jan 1942; DAQMG 2 NZ Div May-Nov 1942; AA & QMG Nov 1942-Dec 1944; DA & QMG NZ Corps Feb-Mar 1944; died Wellington, 17 Apr 1954.

<sup>34</sup> Lt-Col H. M. Reid, MC and bar, m.i.d.; Christchurch; born Auckland, 21 Mar 1904; civil engineer; OC 6 Fd Coy Jun-Jul 1942; 8 Fd Coy Aug-Dec 1942; comd NZ Forestry Group ( UK) Jul-Oct 1943; attached Air Ministry Dec 1943-Feb 1944; twice wounded; wounded and p.w. 16 Dec 1942; released, Tripoli, 23 Jan 1943.

<sup>35</sup> Lt J. M. H. O'Reilly; Kuala Lumpur; born Wanganui, 18 Nov 1919; mining student.

<sup>36</sup> Capt T. St. H. Acland; Christchurch; born England, 8 Apr 1910; mining engineer; p.w. 28 Nov 1941.

<sup>37</sup> The officers were separated from the sappers and sent away to Benghazi. En route they stayed the night with some South African sapper prisoners, whereupon Lieutenant Acland demoted himself by removing his stars and became a Springbok. In Benghazi he joined forces with an Australian Flight Sergeant and the pair hid in the camp water cart. The idea was to wait there until the city was captured, but they were discovered and, as the escapee writes, 'that was that'.

<sup>38</sup> Cpl H. Livingston; Lower Hutt; born Nth Ireland, 20 Mar 1906; gardener.

<sup>39</sup> WO II A. E. Morse; m.i.d.; Auckland; born Rotorua, 14 Aug 1909; foreman carpenter.

<sup>40</sup> Lt-Col E. J. Thomson, ED; Wellington; born Dunedin, 5 Feb 1910; business manager; DAAG HQ NZ Tps in Egypt 1944-45.

<sup>41</sup> Maj E. F. Walden, ED; Dunedin; born Dunedin, 16 Feb 1911; brewer; p.w. 4 Sep 1942.

<sup>42</sup> For getting the supplies through to the Division Col Clifton received an

immediate bar to a DSO awarded, but not yet notified, for his exploits in Greece. He therefore received the bar before the initial award.

<sup>43</sup> Maj J. H. R. Luxford, ED, m.i.d.; Wanganui; born NZ 3 Sep 1909; grocer; 27 MG Bn; 2 i/c 3 Bn Fiji Regt 1942–43; wounded ( Italy) 29 Sep 1944.

<sup>44</sup> Spr H. K. Ashdown; Tauranga; born England, 9 Feb 1907; fisherman.

<sup>45</sup> Letter, Maj Currie.

<sup>46</sup> Maj M. A. Andrew, MC, m.i.d.; Northern Rhodesia; born Wellington, 19 Oct 1917; mining student; twice wounded.

<sup>47</sup> Lt R. A. Pickmere, MC; born Te Aroha, 20 Jun 1911; architect; wounded 16 Jul 1942.

<sup>48</sup> Capt Reid's diary.

<sup>49</sup> Brig L. W. Andrew, VC, DSO, m.i.d.; Wellington; born Ashhurst, 23 Mar 1897; Regular soldier; Wellington Regt, 1915–19; CO 22 Bn Jan 1940-Feb 1942; comd 5 Bde 27 Nov-6 Dec 1941; Area Commander, Wellington, Nov 1943-Dec 1946; Commander, Central Military District, 1948–52.

<sup>50</sup> WO II R. George; born Ireland, 16 Jun 1908; linesman.

<sup>51</sup> Sgt E. J. E. McQueen, DCM, m.i.d.; born India, 20 Dec 1904; seaman; wounded Dec 1941.

<sup>52</sup> Maj-Gen A. S. Wilder, DSO, MC, m.i.d., Order of the White Eagle (Serb); Te Hau, Waipukurau; born NZ 24 May 1890; sheep farmer; Maj, Wgtn Mtd Rifles, 1914–19; CO 25 Bn May 1940-Sep 1941; comd NZ Trg Group, Maadi Camp, Sep-Dec 1941, Jan-Feb 1942; 5 Bde 6 Dec 1941–17 Jan 1942; 5 Div (in NZ) Apr 1942-Jan 1943; 1 Div Jan-Nov 1943.

<sup>53</sup> Brig R. D. King, CBE, DSO, m.i.d.; Greek Medallion for Distinguished

Deed; Timaru; born Timaru, 25 Feb 1896; medical practitioner; 1 NZEF 1918–19; physician 1 Gen Hosp 1940–41; CO 4 Fd Amb 1942–43; ADMS 2 NZ Div 1943–44; DDMS NZ Corps Feb-Mar 1944.

<sup>54</sup> Spr O. J. Locke; Maramarua, Thames; born England, 8 Apr 1918; joiner; p.w. 15 Jul 1942; released, Italy, Sep 1943; escaped to Ancona, Apr 1945.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## CHAPTER 8 – A MISCELLANY OF WORK

## CHAPTER 8

### *A Miscellany of Work*

The celebrations that had started in the [Western Desert](#) on New Year's Eve were continued at [Aqaba](#) in [Transjordan](#) by the sappers from 21 Mechanical Equipment Company and 19 Army Troops Company but had nothing man-made about them. A storm blew up from the south and by dusk a six-foot-high wall of water, constrained by the mountainous flanks of the narrow gulf, was sweeping everything before it. At dawn there was only a muddy swell rolling lazily up the beach. But it was rolling through a tangled mass of breakwater and Victoria pier and swirling around beached lighters. The temporary lighter jetty was saved by its more sheltered position, and while the wreckage was being cleared and the barges repaired long hours were worked until the end of January. It was during this period that Lieutenant H. C. Page was transferred as second-in-command to 7 Field Company and his place taken by Lieutenant [Dalmer](#). <sup>1</sup>

February in [Aqaba](#) was notable only for the preparations for a visit of inspection by General Sir Henry Maitland Wilson and the arrival towards the end of the month of the first ship to use the new port facilities. The cargo was landed speedily and efficiently with the aid of mobile cranes from the Mechanical Equipment Company plant. Four days later another freighter called to unload [NAAFI](#) stores. This was done even more speedily and efficiently.

March the 5th was a very notable day indeed for it was the only time rain fell while the sappers were at [Aqaba](#). The shower lasted for only about thirty minutes, during which time men were stationed at vantage points to retrieve tables, beds, and other gear that was rapidly en route to the sea. A torrent swept towards what was left of the damaged pier and on its way tore a stone crusher out of its quarry. A light railway line between the RE yards and an Indian labour company's brick kiln was left hanging in mid-air and two diesel trolley engines were overturned and buried in mud. It was quite a shower.

The main job of the Army Troops section now was the quarrying of metal for the concrete used by 21 Mechanical Equipment sappers on their lighter basin work, and the building of an anchor wall for the sheet-piling being driven along the foreshore

by the sister unit. On 11 April they left [Aqaba](#) by sea for [Suez](#), had a filthy, seasick passage down a stormy [Red Sea](#) and cursed their folly in joining the Engineers.

The sappers of 3 Section, Mechanical Equipment Company, working at [Aqaba](#) had their share of the setbacks suffered by the Army Troops men, so much so that they suggested to their Arab friends that perhaps some vital detail had been omitted in the sacrificial offering to Allah, who didn't appear to be on their side at all. The Arabs approached the sheik on the subject, but he assured them that the ceremony had been carried out with the strictest regard to the rules and that the minor disasters being suffered were only Allah's way of testing them and that all would turn out well.

The testing was not all being done by flood at [Aqaba](#) for both the road section and Repairs at [Nagb Ashtar](#) had their share. Work was curtailed by severe weather and on 3 January the cold was so intense that forty Arabs were frozen to death in their tents. After repeated and urgent requests two Nissen huts were released to Repairs Section and were erected forthwith. Thereafter the winter was endured in some comfort.

A limited amount of leave was available from [Nagb Ashtar](#), but as half the time was taken up in travelling little use was made of it. One party of six, after taking three days to reach [Tel Aviv](#), took over the loco themselves. They clipped four hours from the usual twelve for the journey from [Amman](#) to Ma'an, mostly by omitting to stop at wayside halts. The amateur enginedrivers felt that they had put up a good show, but the Transport Authority was prejudiced and took steps.... Major Tiffen, after disposing summary justice, added as a rider a proud, 'I always knew my boys could drive a train.'

Even Headquarters felt the testing hand of Allah, for on 17 February they had to leave their snug quarters in Garden Street, [Haifa](#), and the protection of the Aussie provosts and move back to [Ataqa](#), about eight miles from [Suez](#).

No. 1 Section at GE1 were the first to see the break in the cloud, for they also were under orders to leave the Arabian desert. They were needed to operate their heavy earthmoving machinery in the building of a deep-sea wharf, a lighter basin and a jetty at [Adabiya Bay](#), about eight miles south-west of [Suez](#), where the coast

projects a couple of miles into the [Red Sea](#) and forms a promontory that gives some protection to the water to the north of it. The beach sloped suddenly and to a sufficient depth to berth ocean-going ships close inshore. The terrain was very like [Safaga](#)—a narrow beach and a mile-deep foreshore terminating at the bottom of a 2000-foot escarpment.

The project, the largest of its kind in the [Middle East](#), was to be a base for assault landing craft, known technically as Z craft. Perhaps even at that early stage there were eyes sufficiently keen and longsighted to envisage a sea-landing on an Italian mainland. The sappers handed over to 860 Mechanical Equipment Company, RE, by 15 February and caught up with Headquarters outside [Haifa](#).

Part of the section built a camp at [Adabiya Bay](#). The place was renamed Ao-te-a-roa, but the only resemblance to the real Ao-te-a-roa was in its inhabitants. Others worked at [El Shatt](#) (on the eastern side of the Canal and a couple of miles from [Suez](#)) where a new wharf was being built. The rest were employed near their temporary camp at [Ataqa](#), working on pits for petrol storage until the arrival of plant and machinery.

The new camp at Adabiya was occupied on 23 March, the day work commenced on the main project. New Zealand sappers were then employed on three different harbour works along the [Red Sea](#) coast.

The conditions in the Adabiya area were a considerable improvement on anything the section had previously experienced. Mr Shafto, who needs no introduction to any soldier who served in North Africa, had one of his cinemas at [Ataqa](#). As was the rule with his establishments, the projector often refused to function and the screen remained a white blank or became one very shortly after the entertainment began. Some of the sappers used to help in getting the decrepit machinery going again and the freedom of the house was gracefully accepted by the rest of the company. A good RE canteen existed at [Ataqa](#) and the section made it their recreation headquarters, for [Suez](#), only eight miles away, possessed none of the western amenities of [Cairo](#), [Alexandria](#) or [Port Said](#). It had an abundance of all their very worst qualities and after dark was not a safe place for an unarmed sapper. Few worried when the place was put out of bounds.

Some preliminary work had already been done at the proposed port. The actual manual labour was performed by natives and the whole project was in the hands of Egyptian contractors, who were as inefficient in supervising as the labourers were in performing their various tasks. Both parties realised that a new regime had commenced when the Kiwis took over the supervision.

A stone sea wall was already in course of erection and 27 ft steel sheet piles were being driven into the seabed in two rows, 215 feet apart, to form the walls of the deep-sea wharf. At the same time, 700 feet out to sea, two sheet-pile cylinders also 215 feet apart were in the course of construction for the outer end of the wharf. South of the main wharf site the coastline was being transformed. Another line of piles was being driven above high-water line and spoil deposited by carry-alls was making provision for transit sheds.

Returns for April, the first full month on the new harbour, show that a six-day week with two six and a half hour shifts per day was the rule. The plant consisted of two D8 angle-dozers, one D7 angledozer, 7 D7s and 12-yard carry-alls, and 2 D7s and 7-yard carry-alls which shifted 85,450 cubic yards of spoil.

In addition a sea wall was being constructed, a light railway from [Ataqa](#) to Adabiya was being built and roads graded at [El Shatt](#).

Headquarters was conducting a school of instruction on earthmoving machinery for about fifty men from Training Depot and RE formations as well as performing its normal functions. The learners were a great help as soon as their education had progressed sufficiently.

May and June followed much the same pattern.

Back on the Nagb the final section of the road, which had to be scalloped out of the hillside like the highway over the [Olympus Pass](#), was finished in late May. The detachment then camped with Repairs Section and worked on the filling and levelling of the marshalling yards, the station and transit sheds for the approaching railway from Ma'an. The line was to end in a shallow valley and the spoil had to be obtained from a neighbouring hill. The carry-alls, confined to a narrow track, made up to fifty trips daily through a foot and a half of powdered, choking, rocky dust.

Coalmine respirators were tried but found useless and recourse was made to Arab headdress. The keffiahs have side flaps that normally hang over the back and shoulders and are so designed that they can be drawn across the face to give fair protection against the dust.

The construction of the lighter basin at [Aqaba](#) had been pushed on sufficiently by May for dredging to be started. At low tide there was a depth of from nil to four feet, and it was intended to dredge to an over-all depth of six feet. At this stage something of a problem presented itself, namely, how to dredge a basin without a dredge. Sappers are not supposed to be daunted by situations that halt lesser men in their tracks and an ingenious method was evolved to meet the situation.

A tractor was made secure in a barge moored at a convenient distance out to sea and an excavator made equally secure on shore. A dragline bucket was placed in the basin and attached by a rope to the winches of the tractor. The excavator would haul the bucket along the seabed, lift the spoil and deposit it on the beach to form a staging from which lighters would later discharge their cargo. The tractor on the barge would then come into operation and direct the empty bucket back into the required position for another fill. It was not fast but it worked. Sappers not employed on this work excavated for flood diversion in case of another cloudburst and levelled off sites for transit sheds. Some months were spent thus.

At [Safaga](#) 19 Army Troops Company was left using sea water with fresh-water cement because there was no fresh water available. A water boat arrived in mid-January, permitting orthodox practice to be resumed in the manufacture of 446 steel-pointed piles, 14 in. × 14 in. and 47 feet long. They were ready by the middle of April, by which time Lieutenant Morris with the help of two sapper surveyors, [Birkmyer](#)<sup>2</sup> and [Duncan](#),<sup>3</sup> had completed the setting out of the work for the construction of the deep-water berth.

The piles were to be driven in two rows along nearly half a mile of foreshore chosen for the site of the wharf, and then behind them an anchor wall was to be constructed partly by the sappers and partly by contractors.

No. 2 Section arrived at [Aqaba](#) on 25 April, by which time the Company was working on a concrete caisson for the anchor wall, setting up boxes for the

construction of crane beams, each weighing about seven tons, supervising the driving of the piles and capping and filling a lighter berth that had been commenced before their arrival. It had to be finished so that supplies could be landed for the bigger job.

Nos. 2 and 4 Sections were employed in building caissons for the anchor wall. They were precast on the surface then sunk to a depth of 15 feet in 6 feet 'lifts'. Nos. 1 and 3 Sections were kept busy throughout May and early June on the crane beams.

Water was still in short supply and in early May a detachment was sent to [Mons Claudianus](#) to examine some wells in the vicinity. Two were found likely to be a valuable adjunct to the [Safaga](#) water supply, though the water would have to be piped over ranges and across wadis from the high country down to the coast. Corporal [Hight](#)<sup>4</sup> and a detachment were sent to clean, deepen, and get the wells ready for linking up. They started first with the Roman Well, 75 feet to water level, and situated at [Mons Claudianus](#). This was the ruin of what, some 2000 years ago, was a Roman town, built handy to the red granite quarries from which countless slaves carved huge pillars for the decoration of the palaces of the Roman emperors. These monoliths were by some means dragged to the [Nile](#), then ferried down to the coast and across the [Mediterranean](#). One which had broken in the final stages of preparation still lay where it had been left twenty centuries ago.

The Roman well, which was used only for watering the infrequent camel trains that passed that way, was first emptied with pumps, then two sappers went down on an improvised bucket to dig out the accumulated sand. Early in June the well had been deepened to 84 feet with a nine-foot depth of water. The only amenity around [Mons Claudianus](#) was a 6000-gallon reservoir which, with a temperature soaring to 129 degrees, was in frequent use as a swimming bath.

The Pasha well was across a range of hills between [Mons Claudianus](#) and [Safaga](#), close to the spot where a tungsten mining company was operating. The sappers were made welcome by the engineers working the mine. This well was only 60 feet to water level, but was in a shocking condition and took longer to clean than the deeper one. The sappers returned to [Safaga](#) early in July.

In England the Forestry Group was working through an English winter towards an English spring. There was much time lost in the mills, but not lost militarily because it was used in soldier training.

[Chilton Foliat](#) mill, which was, it will be remembered, some 15 miles from the camp at [Chippenham](#), worked short hours through time taken in travelling to and from work and in waiting for daylight, and also lost time through trouble with its sawdust creeper. For the rest of the mills, time was lost through bad weather, frozen pipes and snow.

Perhaps the most frustrating experience at this period was the difficulty in obtaining dental treatment. A simple dental plate breakage that a civilian dentist would repair within hours took up to six weeks through army channels, so the sappers looked after their own dental troubles by having the work done at their own expense. More serious from the health angle was the lack of a Regimental Medical Officer, which meant that the Group had to depend on whatever medical services were available, sometimes RAMC and sometimes civilian. The establishment was eventually altered to include a medical officer and transport to cover the wide area of the Group's activities.

Climatic troubles were over by the end of March, but production had fallen far short of target figures. The Ministry of Supply was perturbed, mentioned that ample machinery and transport were now available, and said that it was anxious to receive suggestions for an increase in production.

The lag in production was not of course confined to the New Zealand Group, but the resulting suggestions are taken from a report on the activities of the New Zealand Forestry Group sent by Lieutenant-Colonel Elliott to the Commanding Officer, Military Liaison Office, [London](#).

It had been decided, the report said, to erect another mill for 14 Forestry Company near [Wickwar](#), Gloucestershire. The CO NZ Forestry Group had gone carefully into the ability of 14 Forestry Company to run another mill detachment without overstrain, and had decided that it could be done with the assistance of a few reinforcements and the further training of the Spaniards to carry out the more skilled operations. Fifteenth Forestry Company was collecting plant for another mill,

and as 120 men from a labour unit were being attached to it, there should be no shortage of manpower. It was hoped that the third mill for 11 Forestry Company would soon be in operation. AMPC<sup>5</sup> labour was to be attached to the company.

The third mill for 11 Company referred to above was a band mill being erected by the company near [Cirencester](#), close by its other two mills at [Hailey Wood](#) and [Overley Wood](#). It went into production during the first week in June.

Fourteenth Company, already operating four mills with the help of the Spanish Labour Company at [Chilton Foliat](#), [Grittleton](#), Bowood and Savernake, added a fifth. A block of timber had been acquired at [Charfield](#), near [Bristol](#), and [Wickwar](#) mill's returns are shown for the first time in the production figures for the period ending 3 June.

Fifteenth Company's mills at [Langrish](#), [Arundel East](#) and [Arundel West](#) were increased by another in [Woolmer Forest](#) near [Longmoor](#), where 11 Forestry Company camped in the park of [Lord Woolmer's](#) home on its arrival in England.<sup>6</sup>

A typical New Zealand small sawmill was built there and through the generosity of the Commanding Officer, Railway Operating Training Depot, Royal Engineers, at [Longmoor](#), a particularly favourable site on a siding of the War Office's Border-[Longmoor](#) railway was made available. From this site timber could be railed to any part of [Britain](#), whereas delivery hauls of up to one hundred miles were made by the other mills. [Woolmer](#) mill commenced cutting on 21 July.

A letter of appreciation followed an inspection in May of the New Zealand Group's activities by the Parliamentary Secretary, Materials Section, Ministry of Supply. He concluded: 'I was delighted with everything I saw and feel I am expressing the views of everyone at the Ministry of Supply and the Government when I say how grateful we are for the grand work that you and your men are doing.'

The question of the destination, civil or military, of the Kiwis' winter output must have been debated by the sappers as was the case the previous winter,<sup>7</sup> for among the exceedingly scanty archives of the period is a letter to Colonel Elliott, part of which runs:

'As it is necessary to keep actual consumption figures a secret we have only been able to give percentages, but it is hoped that these will be of interest to you and your men and show them what a small part of the output goes to civilian uses. Compared with pre-war days the consumption of sawn timber in this country has been approximately halved. Nearly all the timber we are producing today is directed to the war effort. An analysis of the figures of consumption during the past year has just been made and it shows that for purely civil needs only about 4% of Softwood and only about 5% of Hardwood are used.'

The Group, less skeleton crews supervising the labour units, went into three weeks' military training on 3 June at the Royal Engineers Training Centre, Street Camp, Somerset.

Proposals were made to Headquarters, New Zealand Forestry Group, during this period for the erection and operation of yet another mill, probably at Tram Inn Station, Allenmore, near Hereford. The station stood at a level crossing on the Truxton-Much Dewchurch road, and on its south-eastern side was an abandoned sawmill which was used in the First World War. Western Command would provide a hutted camp for one officer and 25 men, or alternatively would find billets in Much Dewchurch, which was about two miles distant. Timber in the neighbourhood was calculated to provide about a year's work for the Tram Inn mill as well as pit-prop work for Italian prisoners of war.

## *The Field Companies*

February saw 6 Field Company, now for one month residents of [Kabrit](#), enjoying a spot of leave, attending schools of instruction, absorbing reinforcements, building a camp for 4 Brigade Headquarters, revising its elementary infantry training and generally flexing its muscles.

Eighth Field Company was doing the same, at first in [Maadi](#) and later at [Kabrit](#); Headquarters NZ Engineers and 5 Field Park Company were in [Syria](#). In [Baalbek](#) Headquarters was studying files concerned with contracts for earthworks bequeathed by a departing 70 Division and investigating maps also left for the new incumbents. Fifth Field Park was 20 miles north of [Djedeide](#), making an inventory of an RE dump and trying to discover just what stores it was supposed to be responsible for.

Seventh Field Company was back in the desert at [El Adem](#), south of [Tobruk](#) and a few miles west of [Sidi Rezegh](#), helping 5 Brigade build a fortress. All of which needs some explanation.

There were more than enough trained men to fill the ranks of the New Zealand Division after the Libyan campaign. In the Engineers 5 Field Park sappers who had been captured when the prisoner-of-war cage had been overrun were back with the unit again, and so were the majority of 7 Field Company captured at [Sidi Azeiz](#). They had had a bad time for six weeks in an overcrowded pen in [Bardia](#) until released by its capture on 2 January.

Fifth Brigade was still in the fighting at [Gazala](#) in the middle of December when a projected Divisional move to [Syria](#) for refitting and training was cancelled to allow the Division to train for a projected seaborne landing behind the enemy line. The New Zealanders were to do this training at [Kabrit](#), on the [Bitter Lakes](#) portion of the [Suez Canal](#).

It was expected that after General Rommel was eased out of the [Gazala](#) position his next stand (if he escaped capture) would be at [El Agheila](#), where the Italian Army had sheltered the previous January and from which the combined Italian-German force had regained the lost province of [Cyrenaica](#) three months later.

To hold [Cyrenaica](#) it was necessary to hold [Agheila](#), and the long-term plan was to land a force behind the enemy position which would join with another force making a wide outflanking move through the desert; they would then sit astride the enemy's communications while a third force attacked frontally.

Fifth Brigade, which with the attached Maoris had three battalions that had not been unduly tried in CRUSADER, was cast for the seaborne role and went to [Kabrit](#) on 4 January with 7 Field Company<sup>8</sup> for a comprehensive course in landing operations.

[General Freyberg](#) asked the CRE to have a plaster model of the area constructed forthwith. The only maps available were without contours or spot heights and were inaccurate regarding sand dunes and marshes, all vitally necessary knowledge in the deployment of ground troops. A satisfactory model was produced by piecing together

vertical and oblique aerial photographs, supplemented by [Long Range Desert Group](#) reports and information obtained from prisoners. Maps were then prepared for distribution to the units about to be involved. The work was carried out in such secrecy that those employed on the project (Lieutenant Wildey and Sappers [Hardy](#)<sup>9</sup> and [Barclay](#)<sup>10</sup>) ate and slept in the hut where they were working. The GOC and his senior officers studied earnestly and often their problems as disclosed on the model. There were some who thought it could be another [Gallipoli](#).

Training and planning for the amphibious landing were complicated by the fact that Rommel was not co-operating by staying in his lair at [Agheila](#). On the contrary he was again taking an active interest in the war by making a reconnaissance in force which developed into a definite thrust (21 January). By the time 5 Brigade had finished its first trial run on a beach in the [Red Sea](#) the Germans were back in front of the [Gazala- Bir Hacheim](#) line covering [Tobruk](#), The seaborne landing was declared off. So, at first, was a projected New Zealand sojourn in [Syria](#).

The Division was ordered to be ready within a fortnight for a full operational role, but the [New Zealand Government](#) made known its feeling that, if possible, the Division should not get involved in possible further heavy losses so soon.

Movement orders affecting thousands of men and tons of material cannot be altered with a stroke of the pen, and the final arrangement was that 5 Brigade Group would report to [13 Corps](#) until another division could be deployed. The Group, now commanded by [Brigadier Kippenberger](#), was in position by the required date (16 February) after borrowing desertworthy trucks from the rest of the Division, and was ordered to dig a fortress at [El Adem](#) as part of the defence in depth of the area. Ten days later the rest of the Division began its trek into [Syria](#), where it became part of Ninth Army (General Wilson), whose task was to oppose any enemy thrust on the [Middle East](#) from the north. Among the various considerations were the necessity of covering up the weakness in strength through the transfer, proposed and actual, of forces to counter the Japanese threat in the [Pacific](#), preparations to assist [Turkey](#) should that country resist a German invasion, and the construction of fortresses designed to impede any enemy progress through [Syria](#).

Demolitions are a sine qua non in such a situation, and Engineer Headquarters traversed every square inch of [Syria](#) from the Turkish frontier north of [Aleppo](#) to

Baalbek, and from the coast to the eastern desert, noting bridges, tunnels, crossroads and the like. At Baalbek plans were drawn from the field notes and demolition charges calculated and recorded on the plans for use when and if necessary.



Sappers with architectural, surveying and engineering training were employed in building a plaster model of Syria showing all defensive works and communications. It was the biggest and longest modelling task undertaken by Divisional Engineers, who by this time had become experts in transforming photographs and maps into something solid that could be understood by commanders who were not invariably expert map readers.



**eastern mediterranean**

While 6 and 8 Field Companies are improving their general knowledge at Kabrit

before moving to [Syria](#) in March, we will return to 5 Brigade and 7 Field Company.

The building of a fortress at [El Adem](#) was to counter precisely the same operation Eighth Army had been training to perform against the enemy—an outflanking march that would put enemy troops on the [Trigh Capuzzo](#) and cut off the [El Adem](#) airfield—our most westerly operational airfield at that period.

The advance parties met their units as they arrived and conducted them to their bivouac areas, in the case of 7 Field Company halfway down the escarpment overlooking the airfield. The site had been occupied before and little digging was needed to make the place comfortable. The only drawback was rats, thicker than rabbits on a [Canterbury](#) sheep station and nearly as big. But there was a fine view of enemy air attacks on the airfield below.

The sappers were kept exceedingly busy for six weeks wiring the infantry positions before starting on the minefields, where only salvaged British, German and Italian mines were to be used. New ones were all needed further forward. In ten days they put down 20,000 mines, 13,000 of which were lifted from the outer defences of [Tobruk](#). Other jobs were salvaging enemy water tanks for storing the reserve supply (seven days at half a gallon per man), operating their compressors on gun emplacements and weapon pits, excavating a site for Brigade Headquarters, dismantling observation towers in [Tobruk](#) and re-erecting them at [El Adem](#).

The last fortnight was occupied in less specialist work such as repairing the tarsealed road to the airfield, for which job Lieutenant Page had to scour the desert until he found a tar boiler. Other parties were collecting Spandau ammunition boxes from the [Gambut](#) battlefield for the even less romantic purpose of manufacturing fly-proof latrine seats for the infantry battalions. All hands were unanimous in thanking the God of War that they were not in [Tobruk](#), which was again under constant attack from the air.

They left [El Adem](#) on 23 March and five days later arrived in [Maadi](#). Seven days' leave was granted for those entitled to it and the Company was paid £E1000 for the purpose. A thanksgiving display of enemy rockets with explosive effects on the side was organised, with the result that [Maadi Camp](#) was in an uproar most of the night, and with an extra result that leave was cancelled and the culprit company did four

hours' square-bashing the next day.

The requirements of discipline thus satisfied, the sappers went on their leave and those remaining went into training for a ceremonial parade for [General Freyberg](#). To the sappers left behind it was only an elaboration of their punishment, but on the day (2 April) all went well, and four days later 7 Field Company set out for [Syria](#).

Sixth Field Company by this time had been nearly a month at [El Aine](#), near [Baalbek](#), working on the [Djedeide](#) fortress situated at the northern entrance to the [Bekaa](#) valley between the [Lebanon](#) and Anti-[Lebanon](#) ranges. [Djedeide](#) had been designed to hold four infantry brigades and auxiliary arms and to be self-contained for two months, with five days' rations held in each company area, five more days under brigade and fifty days under divisional control. The work had to be finished by 15 May, the earliest date an enemy force might reasonably be expected. Some work had been done but there were still dugouts, pillboxes, anti-tank ditches, minefields and barbed-wire defences to be built or excavated, as well as provision for sanitary services, ration and water stores, not to mention ammunition reserves. Communications ranging from mule tracks to main roads had to be constructed. Besides five-hundred strong infantry working parties whose work had to be supervised, 1971 and 1974 (Bechuana) Pioneer Companies and 600 native labourers working under civilian contractors had to be watched. The last month of the Lebanese winter was a time of rain and biting cold winds which turned roads into bogs and blew down tents. Compressors were worked in two six-hour shifts and daily maintenance was carried out in the fitters' bay by night in shifts. Overhauls were done on Sundays. A unit library was established in the recreation room but nobody knew what to use for leisure time.

By contrast 8 Field Company was on velvet.

They relieved 42 Field Company, RE, and saw the Syrian winter out in the walled city of [Aleppo](#) (population 250,000), 150 miles north near the Turkish border. They took over a comfortable camp at Nerab aerodrome on the outskirts of the city and manned demolitions on tunnels and viaducts, guarded ammunition stores, commenced road blocks and generally 'recced' the country as far as the Turkish border with a view to blowing up anything that would impede an enemy's progress.

They also tried to give the impression that they were very thick on the ground by taking out-of-the-way routes and showing themselves in as many places as possible. The Company was not pleased when 7 Field Company took over in the middle of April and they themselves moved to [Zabboud](#) in the [Djedeide](#) fortress, from where they supervised the construction of a road from [Aleppo](#) to the Turkish border, together with the necessary bridges and culverts, as well as running the [Aleppo](#) RE stores dump and making roads to the infantry positions in the high [Lebanon](#) Mountains. But it was the Syrian spring and the fruit trees were in blossom and the grass was green underfoot, even if the work was unusually hard and battalion commanders wanted their private latrines dug in solid rock.

Brigade exercises began in May and the engineers practised their mine laying and lifting techniques, techniques that had not been taken advantage of in [Libya](#) but which were now gaining recognition. An accidental if rather dramatic exposition of the value of minefields was given in the [Forqloss](#) desert area where the manoeuvres were being held. Practice mines were contrived by 8 Field Company taking the charge out of EP Mark II mines and replacing it with a small amount of black powder and an ounce of gelignite. The charge was worked out by trial and error with a truck until harmless proportions, giving a loud bang from the gelignite and lots of black smoke from the powder, were determined. These mines were laid by 6 Field Company for the 4 Brigade exercises and proved such a success that Colonel Hanson ordered more to be made forthwith for the 6 Brigade exercises.

Eighth Field Company made the mines but got a bit careless in measuring the proportions for a second batch. Major Currie, who was responsible, describes the result of omitting to put a warning fence in front of part of his minefield before breaching the real field and erecting the standard gap fence.

'After the exercise all were to congregate on a low hill to watch an anti-tank gun shoot.... The gaps were a bottleneck to the traffic so they started to cross the unmarked minefield. Then the fun started. Trucks and cars were being immobilised all along the line. The overcharged mines were cutting tyres and breaking sumps. We got a General, several Brigadiers and junior Officers. There was a bit of inquiry afterwards because tyres were very precious in the Ninth Army. The CRE told them off for not being mine conscious. I think this was the beginning of mine consciousness in the [2 NZ Div.](#)'

The time passed pleasantly enough for 7 Field Company stationed around [Aleppo](#). There was daily leave with transport provided, and besides the [YMCA](#) in the city there were sixteen cafés in bounds for sappers, two for sergeants and five clubs or hotels for officers. Finding them was quite simple, for unless the IN BOUNDS sign was displayed the place was out of bounds. If you didn't feel like going into town there was the Company canteen, which produced sufficient profits to put on supper in the mess through the good nature of the cooks, who didn't seem to mind working an 18-hour day. There were, of course, minor crises such as when the canteen reported that owing to New Zealand tobacco and beer both being available in quantity at the same time there were not enough funds to purchase both, so would tobacco smokers put their orders in with the requisite cash in advance.

The weeks rolled by almost unnoticed and it was a distinct shock to learn that 8 Field Company was coming back and that 7 Field Company would follow 5 Brigade into the Syrian desert on manoeuvres. It was only too sadly true, and 13 June found the 7 Field Company sapper in a bivouac area at Muskene, wondering just who was sitting in his favourite seat in his favourite café being served by his favourite waitress.

But there was something more than practice going on in another desert facing the [Mediterranean](#), something that needed the immediate attendance of the New Zealand Division.

The following signal was sent by [Divisional Headquarters](#) to all formations at 11.45 a.m. on 14 June:

MOST SECRET. WARNING ORDER. NZ Div be prepared to move earliest after 15 Jun following order. three fd regts. remainder NZ div then div cav regt. unit at leave camp return 15 June. 5 NZ bde proceed [BEKAA](#) valley forthwith. all informed.

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<sup>1</sup> Lt E. B. Dalmer, m.i.d.; [Christchurch](#); born [Christchurch](#), 30 Oct 1909; civil engineer; twice wounded.

<sup>2</sup> Spr A. J. B. Birkmyer; born [Opotiki](#), 9 Mar 1915; engineering draughtsman.

<sup>3</sup> WO II R. Duncan; Napier; born Scotland, 17 Aug 1917; mining student; seconded to Middle East Supply Centre 1943–45.

<sup>4</sup> L-Sgt F. J. Hight, m.i.d.; born NZ 24 Nov 1909; city engineer's assistant; wounded 21 May 1941.

<sup>5</sup> Alien Military Pioneer Corps.

6



<sup>8</sup> Now commanded by Maj Lincoln, ex 18 Army Troops Company, replacing Maj Thomas, taken prisoner at [Sidi Azeiz](#).

<sup>9</sup> S-Sgt K. F. Hardy; Dunedin; born NZ 29 Sep 1915; quantity surveyor.

<sup>10</sup> Spr W. C. de R. Barclay; Wellington; born Wellington, 28 Jun 1906; architect.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## [SECTION]

The celebrations that had started in the [Western Desert](#) on New Year's Eve were continued at [Aqaba](#) in [Transjordan](#) by the sappers from 21 Mechanical Equipment Company and 19 Army Troops Company but had nothing man-made about them. A storm blew up from the south and by dusk a six-foot-high wall of water, constrained by the mountainous flanks of the narrow gulf, was sweeping everything before it. At dawn there was only a muddy swell rolling lazily up the beach. But it was rolling through a tangled mass of breakwater and Victoria pier and swirling around beached lighters. The temporary lighter jetty was saved by its more sheltered position, and while the wreckage was being cleared and the barges repaired long hours were worked until the end of January. It was during this period that Lieutenant H. C. Page was transferred as second-in-command to 7 Field Company and his place taken by Lieutenant [Dalmer](#). <sup>1</sup>

February in [Aqaba](#) was notable only for the preparations for a visit of inspection by General Sir Henry Maitland Wilson and the arrival towards the end of the month of the first ship to use the new port facilities. The cargo was landed speedily and efficiently with the aid of mobile cranes from the Mechanical Equipment Company plant. Four days later another freighter called to unload [NAAFI](#) stores. This was done even more speedily and efficiently.

March the 5th was a very notable day indeed for it was the only time rain fell while the sappers were at [Aqaba](#). The shower lasted for only about thirty minutes, during which time men were stationed at vantage points to retrieve tables, beds, and other gear that was rapidly en route to the sea. A torrent swept towards what was left of the damaged pier and on its way tore a stone crusher out of its quarry. A light railway line between the RE yards and an Indian labour company's brick kiln was left hanging in mid-air and two diesel trolley engines were overturned and buried in mud. It was quite a shower.

The main job of the Army Troops section now was the quarrying of metal for the concrete used by 21 Mechanical Equipment sappers on their lighter basin work, and the building of an anchor wall for the sheet-piling being driven along the foreshore

by the sister unit. On 11 April they left [Aqaba](#) by sea for [Suez](#), had a filthy, seasick passage down a stormy [Red Sea](#) and cursed their folly in joining the Engineers.

The sappers of 3 Section, Mechanical Equipment Company, working at [Aqaba](#) had their share of the setbacks suffered by the Army Troops men, so much so that they suggested to their Arab friends that perhaps some vital detail had been omitted in the sacrificial offering to Allah, who didn't appear to be on their side at all. The Arabs approached the sheik on the subject, but he assured them that the ceremony had been carried out with the strictest regard to the rules and that the minor disasters being suffered were only Allah's way of testing them and that all would turn out well.

The testing was not all being done by flood at [Aqaba](#) for both the road section and Repairs at [Nagb Ashtar](#) had their share. Work was curtailed by severe weather and on 3 January the cold was so intense that forty Arabs were frozen to death in their tents. After repeated and urgent requests two Nissen huts were released to Repairs Section and were erected forthwith. Thereafter the winter was endured in some comfort.

A limited amount of leave was available from [Nagb Ashtar](#), but as half the time was taken up in travelling little use was made of it. One party of six, after taking three days to reach [Tel Aviv](#), took over the loco themselves. They clipped four hours from the usual twelve for the journey from [Amman](#) to Ma'an, mostly by omitting to stop at wayside halts. The amateur enginedrivers felt that they had put up a good show, but the Transport Authority was prejudiced and took steps.... Major Tiffen, after disposing summary justice, added as a rider a proud, 'I always knew my boys could drive a train.'

Even Headquarters felt the testing hand of Allah, for on 17 February they had to leave their snug quarters in Garden Street, [Haifa](#), and the protection of the Aussie provosts and move back to [Ataqa](#), about eight miles from [Suez](#).

No. 1 Section at GE1 were the first to see the break in the cloud, for they also were under orders to leave the Arabian desert. They were needed to operate their heavy earthmoving machinery in the building of a deep-sea wharf, a lighter basin and a jetty at [Adabiya Bay](#), about eight miles south-west of [Suez](#), where the coast

projects a couple of miles into the [Red Sea](#) and forms a promontory that gives some protection to the water to the north of it. The beach sloped suddenly and to a sufficient depth to berth ocean-going ships close inshore. The terrain was very like [Safaga](#)—a narrow beach and a mile-deep foreshore terminating at the bottom of a 2000-foot escarpment.

The project, the largest of its kind in the [Middle East](#), was to be a base for assault landing craft, known technically as Z craft. Perhaps even at that early stage there were eyes sufficiently keen and longsighted to envisage a sea-landing on an Italian mainland. The sappers handed over to 860 Mechanical Equipment Company, RE, by 15 February and caught up with Headquarters outside [Haifa](#).

Part of the section built a camp at [Adabiya Bay](#). The place was renamed Ao-te-a-roa, but the only resemblance to the real Ao-te-a-roa was in its inhabitants. Others worked at [El Shatt](#) (on the eastern side of the Canal and a couple of miles from [Suez](#)) where a new wharf was being built. The rest were employed near their temporary camp at [Ataqa](#), working on pits for petrol storage until the arrival of plant and machinery.

The new camp at Adabiya was occupied on 23 March, the day work commenced on the main project. New Zealand sappers were then employed on three different harbour works along the [Red Sea](#) coast.

The conditions in the Adabiya area were a considerable improvement on anything the section had previously experienced. Mr Shafto, who needs no introduction to any soldier who served in North Africa, had one of his cinemas at [Ataqa](#). As was the rule with his establishments, the projector often refused to function and the screen remained a white blank or became one very shortly after the entertainment began. Some of the sappers used to help in getting the decrepit machinery going again and the freedom of the house was gracefully accepted by the rest of the company. A good RE canteen existed at [Ataqa](#) and the section made it their recreation headquarters, for [Suez](#), only eight miles away, possessed none of the western amenities of [Cairo](#), [Alexandria](#) or [Port Said](#). It had an abundance of all their very worst qualities and after dark was not a safe place for an unarmed sapper. Few worried when the place was put out of bounds.

Some preliminary work had already been done at the proposed port. The actual manual labour was performed by natives and the whole project was in the hands of Egyptian contractors, who were as inefficient in supervising as the labourers were in performing their various tasks. Both parties realised that a new regime had commenced when the Kiwis took over the supervision.

A stone sea wall was already in course of erection and 27 ft steel sheet piles were being driven into the seabed in two rows, 215 feet apart, to form the walls of the deep-sea wharf. At the same time, 700 feet out to sea, two sheet-pile cylinders also 215 feet apart were in the course of construction for the outer end of the wharf. South of the main wharf site the coastline was being transformed. Another line of piles was being driven above high-water line and spoil deposited by carry-alls was making provision for transit sheds.

Returns for April, the first full month on the new harbour, show that a six-day week with two six and a half hour shifts per day was the rule. The plant consisted of two D8 angle-dozers, one D7 angledozer, 7 D7s and 12-yard carry-alls, and 2 D7s and 7-yard carry-alls which shifted 85,450 cubic yards of spoil.

In addition a sea wall was being constructed, a light railway from [Ataqa](#) to Adabiya was being built and roads graded at [El Shatt](#).

Headquarters was conducting a school of instruction on earthmoving machinery for about fifty men from Training Depot and RE formations as well as performing its normal functions. The learners were a great help as soon as their education had progressed sufficiently.

May and June followed much the same pattern.

Back on the Nagb the final section of the road, which had to be scalloped out of the hillside like the highway over the [Olympus Pass](#), was finished in late May. The detachment then camped with Repairs Section and worked on the filling and levelling of the marshalling yards, the station and transit sheds for the approaching railway from Ma'an. The line was to end in a shallow valley and the spoil had to be obtained from a neighbouring hill. The carry-alls, confined to a narrow track, made up to fifty trips daily through a foot and a half of powdered, choking, rocky dust.

Coalmine respirators were tried but found useless and recourse was made to Arab headdress. The keffiahs have side flaps that normally hang over the back and shoulders and are so designed that they can be drawn across the face to give fair protection against the dust.

The construction of the lighter basin at [Aqaba](#) had been pushed on sufficiently by May for dredging to be started. At low tide there was a depth of from nil to four feet, and it was intended to dredge to an over-all depth of six feet. At this stage something of a problem presented itself, namely, how to dredge a basin without a dredge. Sappers are not supposed to be daunted by situations that halt lesser men in their tracks and an ingenious method was evolved to meet the situation.

A tractor was made secure in a barge moored at a convenient distance out to sea and an excavator made equally secure on shore. A dragline bucket was placed in the basin and attached by a rope to the winches of the tractor. The excavator would haul the bucket along the seabed, lift the spoil and deposit it on the beach to form a staging from which lighters would later discharge their cargo. The tractor on the barge would then come into operation and direct the empty bucket back into the required position for another fill. It was not fast but it worked. Sappers not employed on this work excavated for flood diversion in case of another cloudburst and levelled off sites for transit sheds. Some months were spent thus.

At [Safaga](#) 19 Army Troops Company was left using sea water with fresh-water cement because there was no fresh water available. A water boat arrived in mid-January, permitting orthodox practice to be resumed in the manufacture of 446 steel-pointed piles, 14 in. × 14 in. and 47 feet long. They were ready by the middle of April, by which time Lieutenant Morris with the help of two sapper surveyors, [Birkmyer](#)<sup>2</sup> and [Duncan](#),<sup>3</sup> had completed the setting out of the work for the construction of the deep-water berth.

The piles were to be driven in two rows along nearly half a mile of foreshore chosen for the site of the wharf, and then behind them an anchor wall was to be constructed partly by the sappers and partly by contractors.

No. 2 Section arrived at [Aqaba](#) on 25 April, by which time the Company was working on a concrete caisson for the anchor wall, setting up boxes for the

construction of crane beams, each weighing about seven tons, supervising the driving of the piles and capping and filling a lighter berth that had been commenced before their arrival. It had to be finished so that supplies could be landed for the bigger job.

Nos. 2 and 4 Sections were employed in building caissons for the anchor wall. They were precast on the surface then sunk to a depth of 15 feet in 6 feet 'lifts'. Nos. 1 and 3 Sections were kept busy throughout May and early June on the crane beams.

Water was still in short supply and in early May a detachment was sent to [Mons Claudianus](#) to examine some wells in the vicinity. Two were found likely to be a valuable adjunct to the [Safaga](#) water supply, though the water would have to be piped over ranges and across wadis from the high country down to the coast. Corporal [Hight](#)<sup>4</sup> and a detachment were sent to clean, deepen, and get the wells ready for linking up. They started first with the Roman Well, 75 feet to water level, and situated at [Mons Claudianus](#). This was the ruin of what, some 2000 years ago, was a Roman town, built handy to the red granite quarries from which countless slaves carved huge pillars for the decoration of the palaces of the Roman emperors. These monoliths were by some means dragged to the [Nile](#), then ferried down to the coast and across the [Mediterranean](#). One which had broken in the final stages of preparation still lay where it had been left twenty centuries ago.

The Roman well, which was used only for watering the infrequent camel trains that passed that way, was first emptied with pumps, then two sappers went down on an improvised bucket to dig out the accumulated sand. Early in June the well had been deepened to 84 feet with a nine-foot depth of water. The only amenity around [Mons Claudianus](#) was a 6000-gallon reservoir which, with a temperature soaring to 129 degrees, was in frequent use as a swimming bath.

The Pasha well was across a range of hills between [Mons Claudianus](#) and [Safaga](#), close to the spot where a tungsten mining company was operating. The sappers were made welcome by the engineers working the mine. This well was only 60 feet to water level, but was in a shocking condition and took longer to clean than the deeper one. The sappers returned to [Safaga](#) early in July.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## FORESTRY GROUP

### *Forestry Group*

In England the Forestry Group was working through an English winter towards an English spring. There was much time lost in the mills, but not lost militarily because it was used in soldier training.

[Chilton Foliat](#) mill, which was, it will be remembered, some 15 miles from the camp at [Chippenham](#), worked short hours through time taken in travelling to and from work and in waiting for daylight, and also lost time through trouble with its sawdust creeper. For the rest of the mills, time was lost through bad weather, frozen pipes and snow.

Perhaps the most frustrating experience at this period was the difficulty in obtaining dental treatment. A simple dental plate breakage that a civilian dentist would repair within hours took up to six weeks through army channels, so the sappers looked after their own dental troubles by having the work done at their own expense. More serious from the health angle was the lack of a Regimental Medical Officer, which meant that the Group had to depend on whatever medical services were available, sometimes RAMC and sometimes civilian. The establishment was eventually altered to include a medical officer and transport to cover the wide area of the Group's activities.

Climatic troubles were over by the end of March, but production had fallen far short of target figures. The Ministry of Supply was perturbed, mentioned that ample machinery and transport were now available, and said that it was anxious to receive suggestions for an increase in production.

The lag in production was not of course confined to the New Zealand Group, but the resulting suggestions are taken from a report on the activities of the New Zealand Forestry Group sent by Lieutenant-Colonel Elliott to the Commanding Officer, Military Liaison Office, [London](#).

It had been decided, the report said, to erect another mill for 14 Forestry

Company near [Wickwar](#), Gloucestershire. The CO NZ Forestry Group had gone carefully into the ability of 14 Forestry Company to run another mill detachment without overstrain, and had decided that it could be done with the assistance of a few reinforcements and the further training of the Spaniards to carry out the more skilled operations. Fifteenth Forestry Company was collecting plant for another mill, and as 120 men from a labour unit were being attached to it, there should be no shortage of manpower. It was hoped that the third mill for 11 Forestry Company would soon be in operation. AMPC<sup>5</sup> labour was to be attached to the company.

The third mill for 11 Company referred to above was a band mill being erected by the company near [Cirencester](#), close by its other two mills at [Hailey Wood](#) and [Overley Wood](#). It went into production during the first week in June.

Fourteenth Company, already operating four mills with the help of the Spanish Labour Company at [Chilton Foliat](#), [Grittleton](#), Bowood and Savernake, added a fifth. A block of timber had been acquired at [Charfield](#), near [Bristol](#), and [Wickwar](#) mill's returns are shown for the first time in the production figures for the period ending 3 June.

Fifteenth Company's mills at [Langrish](#), [Arundel East](#) and [Arundel West](#) were increased by another in [Woolmer Forest](#) near [Longmoor](#), where 11 Forestry Company camped in the park of [Lord Woolmer's](#) home on its arrival in England.<sup>6</sup>

A typical New Zealand small sawmill was built there and through the generosity of the Commanding Officer, Railway Operating Training Depot, Royal Engineers, at [Longmoor](#), a particularly favourable site on a siding of the War Office's Border-[Longmoor](#) railway was made available. From this site timber could be railed to any part of [Britain](#), whereas delivery hauls of up to one hundred miles were made by the other mills. [Woolmer](#) mill commenced cutting on 21 July.

A letter of appreciation followed an inspection in May of the New Zealand Group's activities by the Parliamentary Secretary, Materials Section, Ministry of Supply. He concluded: 'I was delighted with everything I saw and feel I am expressing the views of everyone at the Ministry of Supply and the Government when I say how grateful we are for the grand work that you and your men are doing.'

The question of the destination, civil or military, of the Kiwis' winter output must have been debated by the sappers as was the case the previous winter,<sup>7</sup> for among the exceedingly scanty archives of the period is a letter to Colonel Elliott, part of which runs:

'As it is necessary to keep actual consumption figures a secret we have only been able to give percentages, but it is hoped that these will be of interest to you and your men and show them what a small part of the output goes to civilian uses. Compared with pre-war days the consumption of sawn timber in this country has been approximately halved. Nearly all the timber we are producing today is directed to the war effort. An analysis of the figures of consumption during the past year has just been made and it shows that for purely civil needs only about 4% of Softwood and only about 5% of Hardwood are used.'

The Group, less skeleton crews supervising the labour units, went into three weeks' military training on 3 June at the Royal Engineers Training Centre, Street Camp, Somerset.

Proposals were made to Headquarters, New Zealand Forestry Group, during this period for the erection and operation of yet another mill, probably at Tram Inn Station, Allenmore, near Hereford. The station stood at a level crossing on the Truxton-Much Dewchurch road, and on its south-eastern side was an abandoned sawmill which was used in the First World War. Western Command would provide a hutted camp for one officer and 25 men, or alternatively would find billets in Much Dewchurch, which was about two miles distant. Timber in the neighbourhood was calculated to provide about a year's work for the Tram Inn mill as well as pit-prop work for Italian prisoners of war.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## THE FIELD COMPANIES

### *The Field Companies*

February saw 6 Field Company, now for one month residents of [Kabrit](#), enjoying a spot of leave, attending schools of instruction, absorbing reinforcements, building a camp for 4 Brigade Headquarters, revising its elementary infantry training and generally flexing its muscles.

Eighth Field Company was doing the same, at first in [Maadi](#) and later at [Kabrit](#); Headquarters NZ Engineers and 5 Field Park Company were in [Syria](#). In [Baalbek](#) Headquarters was studying files concerned with contracts for earthworks bequeathed by a departing 70 Division and investigating maps also left for the new incumbents. Fifth Field Park was 20 miles north of [Djedeide](#), making an inventory of an RE dump and trying to discover just what stores it was supposed to be responsible for.

Seventh Field Company was back in the desert at [El Adem](#), south of [Tobruk](#) and a few miles west of [Sidi Rezegh](#), helping 5 Brigade build a fortress. All of which needs some explanation.

There were more than enough trained men to fill the ranks of the New Zealand Division after the Libyan campaign. In the Engineers 5 Field Park sappers who had been captured when the prisoner-of-war cage had been overrun were back with the unit again, and so were the majority of 7 Field Company captured at [Sidi Azeiz](#). They had had a bad time for six weeks in an overcrowded pen in [Bardia](#) until released by its capture on 2 January.

Fifth Brigade was still in the fighting at [Gazala](#) in the middle of December when a projected Divisional move to [Syria](#) for refitting and training was cancelled to allow the Division to train for a projected seaborne landing behind the enemy line. The New Zealanders were to do this training at [Kabrit](#), on the [Bitter Lakes](#) portion of the [Suez Canal](#).

It was expected that after General Rommel was eased out of the [Gazala](#) position his next stand (if he escaped capture) would be at [El Agheila](#), where the

Italian Army had sheltered the previous January and from which the combined Italian-German force had regained the lost province of [Cyrenaica](#) three months later.

To hold [Cyrenaica](#) it was necessary to hold [Agheila](#), and the long-term plan was to land a force behind the enemy position which would join with another force making a wide outflanking move through the desert; they would then sit astride the enemy's communications while a third force attacked frontally.

Fifth Brigade, which with the attached Maoris had three battalions that had not been unduly tried in CRUSADER, was cast for the seaborne role and went to [Kabrit](#) on 4 January with 7 Field Company <sup>8</sup> for a comprehensive course in landing operations.

[General Freyberg](#) asked the CRE to have a plaster model of the area constructed forthwith. The only maps available were without contours or spot heights and were inaccurate regarding sand dunes and marshes, all vitally necessary knowledge in the deployment of ground troops. A satisfactory model was produced by piecing together vertical and oblique aerial photographs, supplemented by [Long Range Desert Group](#) reports and information obtained from prisoners. Maps were then prepared for distribution to the units about to be involved. The work was carried out in such secrecy that those employed on the project (Lieutenant Wildey and Sappers [Hardy](#) <sup>9</sup> and [Barclay](#) <sup>10</sup>) ate and slept in the hut where they were working. The GOC and his senior officers studied earnestly and often their problems as disclosed on the model. There were some who thought it could be another [Gallipoli](#).

Training and planning for the amphibious landing were complicated by the fact that Rommel was not co-operating by staying in his lair at [Agheila](#). On the contrary he was again taking an active interest in the war by making a reconnaissance in force which developed into a definite thrust (21 January). By the time 5 Brigade had finished its first trial run on a beach in the [Red Sea](#) the Germans were back in front of the [Gazala- Bir Hacheim](#) line covering [Tobruk](#), The seaborne landing was declared off. So, at first, was a projected New Zealand sojourn in [Syria](#).

The Division was ordered to be ready within a fortnight for a full operational role, but the [New Zealand Government](#) made known its feeling that, if possible, the Division should not get involved in possible further heavy losses so soon.

Movement orders affecting thousands of men and tons of material cannot be altered with a stroke of the pen, and the final arrangement was that 5 Brigade Group would report to **13 Corps** until another division could be deployed. The Group, now commanded by **Brigadier Kippenberger**, was in position by the required date (16 February) after borrowing desertworthy trucks from the rest of the Division, and was ordered to dig a fortress at **El Adem** as part of the defence in depth of the area. Ten days later the rest of the Division began its trek into **Syria**, where it became part of Ninth Army (General Wilson), whose task was to oppose any enemy thrust on the **Middle East** from the north. Among the various considerations were the necessity of covering up the weakness in strength through the transfer, proposed and actual, of forces to counter the Japanese threat in the **Pacific**, preparations to assist **Turkey** should that country resist a German invasion, and the construction of fortresses designed to impede any enemy progress through **Syria**.

Demolitions are a sine qua non in such a situation, and Engineer Headquarters traversed every square inch of **Syria** from the Turkish frontier north of **Aleppo** to **Baalbek**, and from the coast to the eastern desert, noting bridges, tunnels, crossroads and the like. At **Baalbek** plans were drawn from the field notes and demolition charges calculated and recorded on the plans for use when and if necessary.



Sappers with architectural, surveying and engineering training were employed in building a plaster model of **Syria** showing all defensive works and communications. It was the biggest and longest modelling task undertaken by Divisional Engineers, who by this time had become experts in transforming photographs and maps into

something solid that could be understood by commanders who were not invariably expert map readers.



**eastern mediterranean**

While 6 and 8 Field Companies are improving their general knowledge at [Kabrit](#) before moving to [Syria](#) in March, we will return to 5 Brigade and 7 Field Company.

The building of a fortress at [El Adem](#) was to counter precisely the same operation Eighth Army had been training to perform against the enemy—an outflanking march that would put enemy troops on the [Trigh Capuzzo](#) and cut off the [El Adem](#) airfield—our most westerly operational airfield at that period.

The advance parties met their units as they arrived and conducted them to their bivouac areas, in the case of 7 Field Company halfway down the escarpment overlooking the airfield. The site had been occupied before and little digging was needed to make the place comfortable. The only drawback was rats, thicker than rabbits on a [Canterbury](#) sheep station and nearly as big. But there was a fine view of enemy air attacks on the airfield below.

The sappers were kept exceedingly busy for six weeks wiring the infantry positions before starting on the minefields, where only salvaged British, German and Italian mines were to be used. New ones were all needed further forward. In ten days they put down 20,000 mines, 13,000 of which were lifted from the outer defences of [Tobruk](#). Other jobs were salvaging enemy water tanks for storing the

reserve supply (seven days at half a gallon per man), operating their compressors on gun emplacements and weapon pits, excavating a site for Brigade Headquarters, dismantling observation towers in [Tobruk](#) and re-erecting them at [El Adem](#).

The last fortnight was occupied in less specialist work such as repairing the tarsealed road to the airfield, for which job Lieutenant Page had to scour the desert until he found a tar boiler. Other parties were collecting Spandau ammunition boxes from the [Gambut](#) battlefield for the even less romantic purpose of manufacturing fly-proof latrine seats for the infantry battalions. All hands were unanimous in thanking the God of War that they were not in [Tobruk](#), which was again under constant attack from the air.

They left [El Adem](#) on 23 March and five days later arrived in [Maadi](#). Seven days' leave was granted for those entitled to it and the Company was paid £E1000 for the purpose. A thanksgiving display of enemy rockets with explosive effects on the side was organised, with the result that [Maadi Camp](#) was in an uproar most of the night, and with an extra result that leave was cancelled and the culprit company did four hours' square-bashing the next day.

The requirements of discipline thus satisfied, the sappers went on their leave and those remaining went into training for a ceremonial parade for [General Freyberg](#). To the sappers left behind it was only an elaboration of their punishment, but on the day (2 April) all went well, and four days later 7 Field Company set out for [Syria](#).

Sixth Field Company by this time had been nearly a month at [El Aine](#), near [Baalbek](#), working on the [Djedeide](#) fortress situated at the northern entrance to the [Bekaa](#) valley between the [Lebanon](#) and Anti-[Lebanon](#) ranges. [Djedeide](#) had been designed to hold four infantry brigades and auxiliary arms and to be self-contained for two months, with five days' rations held in each company area, five more days under brigade and fifty days under divisional control. The work had to be finished by 15 May, the earliest date an enemy force might reasonably be expected. Some work had been done but there were still dugouts, pillboxes, anti-tank ditches, minefields and barbed-wire defences to be built or excavated, as well as provision for sanitary services, ration and water stores, not to mention ammunition reserves. Communications ranging from mule tracks to main roads had to be constructed.

Besides five-hundred strong infantry working parties whose work had to be supervised, 1971 and 1974 (Bechuana) Pioneer Companies and 600 native labourers working under civilian contractors had to be watched. The last month of the Lebanese winter was a time of rain and biting cold winds which turned roads into bogs and blew down tents. Compressors were worked in two six-hour shifts and daily maintenance was carried out in the fitters' bay by night in shifts. Overhauls were done on Sundays. A unit library was established in the recreation room but nobody knew what to use for leisure time.

By contrast 8 Field Company was on velvet.

They relieved 42 Field Company, RE, and saw the Syrian winter out in the walled city of [Aleppo](#) (population 250,000), 150 miles north near the Turkish border. They took over a comfortable camp at Nerab aerodrome on the outskirts of the city and manned demolitions on tunnels and viaducts, guarded ammunition stores, commenced road blocks and generally 'recced' the country as far as the Turkish border with a view to blowing up anything that would impede an enemy's progress. They also tried to give the impression that they were very thick on the ground by taking out-of-the-way routes and showing themselves in as many places as possible. The Company was not pleased when 7 Field Company took over in the middle of April and they themselves moved to [Zabboud](#) in the [Djedeide](#) fortress, from where they supervised the construction of a road from [Aleppo](#) to the Turkish border, together with the necessary bridges and culverts, as well as running the [Aleppo](#) RE stores dump and making roads to the infantry positions in the high [Lebanon](#) Mountains. But it was the Syrian spring and the fruit trees were in blossom and the grass was green underfoot, even if the work was unusually hard and battalion commanders wanted their private latrines dug in solid rock.

Brigade exercises began in May and the engineers practised their mine laying and lifting techniques, techniques that had not been taken advantage of in [Libya](#) but which were now gaining recognition. An accidental if rather dramatic exposition of the value of minefields was given in the [Forqloss](#) desert area where the manoeuvres were being held. Practice mines were contrived by 8 Field Company taking the charge out of EP Mark II mines and replacing it with a small amount of black powder and an ounce of gelignite. The charge was worked out by trial and error with a truck until harmless proportions, giving a loud bang from the gelignite and lots of black

smoke from the powder, were determined. These mines were laid by 6 Field Company for the 4 Brigade exercises and proved such a success that Colonel Hanson ordered more to be made forthwith for the 6 Brigade exercises.

Eighth Field Company made the mines but got a bit careless in measuring the proportions for a second batch. Major Currie, who was responsible, describes the result of omitting to put a warning fence in front of part of his minefield before breaching the real field and erecting the standard gap fence.

'After the exercise all were to congregate on a low hill to watch an anti-tank gun shoot.... The gaps were a bottleneck to the traffic so they started to cross the unmarked minefield. Then the fun started. Trucks and cars were being immobilised all along the line. The overcharged mines were cutting tyres and breaking sumps. We got a General, several Brigadiers and junior Officers. There was a bit of inquiry afterwards because tyres were very precious in the Ninth Army. The CRE told them off for not being mine conscious. I think this was the beginning of mine consciousness in the [2 NZ Div.](#)'

The time passed pleasantly enough for 7 Field Company stationed around [Aleppo](#). There was daily leave with transport provided, and besides the [YMCA](#) in the city there were sixteen cafés in bounds for sappers, two for sergeants and five clubs or hotels for officers. Finding them was quite simple, for unless the IN BOUNDS sign was displayed the place was out of bounds. If you didn't feel like going into town there was the Company canteen, which produced sufficient profits to put on supper in the mess through the good nature of the cooks, who didn't seem to mind working an 18-hour day. There were, of course, minor crises such as when the canteen reported that owing to New Zealand tobacco and beer both being available in quantity at the same time there were not enough funds to purchase both, so would tobacco smokers put their orders in with the requisite cash in advance.

The weeks rolled by almost unnoticed and it was a distinct shock to learn that 8 Field Company was coming back and that 7 Field Company would follow 5 Brigade into the Syrian desert on manoeuvres. It was only too sadly true, and 13 June found the 7 Field Company sapper in a bivouac area at Muskene, wondering just who was sitting in his favourite seat in his favourite café being served by his favourite waitress.

But there was something more than practice going on in another desert facing the [Mediterranean](#), something that needed the immediate attendance of the New Zealand Division.

The following signal was sent by [Divisional Headquarters](#) to all formations at 11.45 a.m. on 14 June:

MOST SECRET. WARNING ORDER. NZ Div be prepared to move earliest after 15 Jun following order. three fd regts. remainder NZ div then div cav regt. unit at leave camp return 15 June. 5 NZ bde proceed [BEKAA](#) valley forthwith. all informed.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## CHAPTER 9 – THE WESTERN DESERT RAILWAY

## CHAPTER 9

### *The Western Desert Railway*

(January to June 1942)

To complete the additional section of the Western Desert Railway Extension in time for the Eighth Army's first offensive, the Construction Group and its Pioneer helpers had worked long hours for seven days a week through the torrid winds and dust of summer into the bleakness of winter.

But their efforts would have gone for nothing without the wonderful efforts of the transportation organisation in [Alexandria](#), which was responsible for the supply, loading and despatch of the large daily requirements for the two miles or so of railway track. Often the material was loaded into wagons straight from the ships' holds and then the Railway Operating units had to fit the trains into a timetable of a very busy single-track line with three greater priorities—food, water, ammunition. The supply train nearly always arrived at track-head at 7 a.m. in spite of enemy interference, the odd hot box or a broken coupling, a tremendous achievement by the Operating Units and fully appreciated by the Construction sappers.

And then, while the Division moved up to and into the battle for the escarpments and ridges south-east of [Tobruk](#), the Group had replaced twisted rails and splintered sleepers resulting from enemy bombing, bombing that did not prevent the Operating Group from running its trains.

Particularly large bombs, up to 1200 lb, were being used by the enemy air force at this time; one nearly hit an ambulance train at [Wahas](#) and another landed and then bounced right on top of Major Smith's car while he was away at a conference. Mafeesh car.

The campaign concluded with the deliberate enemy retirement beyond the seaport city of [Benghazi](#), the second largest in [Libya](#) and the capital of [Cyrenaica](#), to the easy-to-defend position of [El Agheila](#), 500 miles west of [Tobruk](#). There were, however, substantial hostile garrisons still holding [Bardia](#) and [Halfaya](#).

The construction units managed a little leave and took their semi-permanent

anti-sandstorm squints to, among other places, [Alexandria](#), [Tel Aviv](#) and [Jerusalem](#) where, for a short time, they forgot brackish water, marmalade and flat limestone boredom.

The Operating Group had to wait until the traffic slowed down in January before it could get away in batches for a change of air; in the meantime it was instrumental in helping the Kiwis who were liberated when [Bardia](#) fell (2 January) to realise that they were really free men again. The ex-captive 7 Field Company sappers and about 800 others got their first surprise when they were lorried out to a railway in the desert where a railway had not, to their knowledge, previously existed. Soon they were bound for [Baggush](#) on a train driven by New Zealand crews, through block-posts manned by New Zealanders and past other trains run by New Zealanders. It was no time at all before the ex-PWs were swarming over the locos after hot water for tea-making and not much longer before, being in iron trucks, a fire was going and the billy being boiled therein.

British troops pressing the retreating enemy had eaten their Christmas dinner in [Benghazi](#) and, following a reconnaissance by Lieutenant Bishop who had been in the captured city in 1941, 17 NZ Operating Company, represented by Lieutenant [McLenaghin](#) <sup>1</sup> and 27 other ranks, made the railway engineers' second acquaintance with that locality. The party, a selection of workshops and loco staff with sufficient traffic men to operate the Italian light railway, left by plane and road on 5 January. They went in two parties, one under Sergeant [Arnold](#) <sup>2</sup> from Group Headquarters as senior NCO, but only McLenaghin's section arrived on schedule; the other got lost and came in the next day.

'As usually happens in the Army no one on the aerodrome had the slightest idea who we were or knew anything of our arrival but after a lot of fruitless walking and telephoning we used a couple of loaves of bread (a rare commodity in those parts) to bribe a couple of Tommy drivers to take us up into the town where we took up temporary billets in a bombed out villa.'<sup>3</sup>

A day or so was spent in making an appreciation of the state of the workshops and rolling stock, in meeting transportation officers and in settling into more comfortable quarters. There was a wide choice of fully furnished deserted houses, but the sappers were touchy about colour schemes and choosy about furnishings,

which they rearranged with acquisitions from other villas.

Careful patrol work located a partly burnt-out dump from which the army ration scale was supplemented with German barley soup, vegetables, and other not so easily identified ingredients. The fact that all the labels had been scorched from the tins added an air of uncertainty to the meals. A night operation by McLenaghin and Arnold produced a typewriter which, in spite of a distressing tendency to print accents above certain letters, enabled the Orderly Room to function more efficiently.

Lieutenant Bishop had found on his 'recce' that the railway which had been left in full working order by the Italians on the previous evacuation was now a shambles. Even the demolitions by British sappers on their evacuation, which had included the wrecking of the high-level water tower, the workshop machinery installations and the diesel locos, had not been fully repaired; craters in the marshalling yards and many [Bomba](#) inesplosa notices testified to [RAF](#) interest, while the departing Germans, in spite of their publicised intentions to return soon, had added a few refinements of their own. In addition, a large washout had occurred on the [Soluk](#) line.

On the credit side the tracks from the docks to the yard were already under repair and a Dock Operating Company had got steam up in one loco which had, no doubt through an oversight, been left intact. As the line to [Barce](#) was not operable owing to damage and shortage of rolling stock, local labour was obtained for the job of filling washouts on the shorter [Soluk](#) line. Rubble from the bombed railway buildings was used for this purpose. Such was the position on the arrival of the McLenaghin party.

They started on the workshops first and patrols scoured [Benghazi](#) for equipment; local tradesmen were put to work on repairs to the rolling stock; a native electrician not only found parts to get the shop motor going but also told his new employers where an electric welding set might be acquired.

Trains were running to Tete by 17 January, the day that Colonel Anderson and Major Young arrived to examine the possibility of recovering the [Benghazi- Barce](#) line and using the material to extend the railhead beyond [Soluk](#).

Headquarters Eighth Army, now completely confident that if the New Zealand

Construction Group said it could build a railway from here to there in so many days it would be done, had told Colonel Anderson that it would like the Desert Extension carried on through [Capuzzo](#) to [El Adem](#) and how long would it take?

Colonel Anderson and Major Smith 'recced' the proposed route and replied that the only obstacles to a quick job were our own and enemy minefields, plus a hostile garrison at [Halfaya](#) Pass. Remove them, and with material arriving as promised on 7 January, there would be a line ready for operating to [El Adem](#) on 23 March. The first leg, [Misheifa](#) to [Capuzzo](#), involved laying 86 miles of track in 53 days.

Let us take a look at the team that was to build the railway to [Capuzzo](#), the ornate fort that 23 Battalion walked into unannounced during the CRUSADER campaign.

Eighteenth Army Troops Company was operating the water pipeline. The water was taken from the [Nubariya](#) Canal at the edge of the Delta, where it was filtered, chlorinated and then pumped on through boosters or repumping stations spaced at approximately 30-mile intervals to [Charing Cross](#) (or Mohalafa), beyond which point the South Africans were responsible Captain [Learmonth](#)<sup>4</sup> took over the company on 4 January vice Major Lincoln, transferred to the command of 7 Field Company.

Ninth Railway Survey Company still worked from its [Almaza](#) headquarters. Over the New Year it had staged its first almost complete concentration since its arrival in Egypt but within a few days was again at work in four countries: in Palestine on a base ordnance depot at [Haifa](#), in [Syria](#) on rail extensions at [Rayak](#), in the [Sudan](#) on a contour survey at [Shallal](#), in Egypt on the line from [Ataqa](#) to Adabiya and finally on the Western Desert Extension. Company Headquarters, apart from administration, carried on with an important function it had assumed on its own responsibility as a kind of rear base for the Construction Group. Twice weekly two lorries were sent up with supplies and equipment of such a nature as could not be readily obtained through routine channels. The securing of such items by more or less, mostly less, regular short-circuiting methods was important, for what a ton of requisitions could not secure from the red tape fastnesses of Garden City was often made available through the good offices of an RE officer or sergeant at [Almaza](#).

Farther west again, 17 Railway Operating Company was working the [Daba-](#)

[Matruh](#) section of the Egyptian State Railway, with 16 Company responsible for the sandbagged block-posts and railheads on the 92-mile Desert Extension from [Similla](#) to [Misheifa](#).

No. 2 Section, 21 Mechanical Equipment Company, lately filling potholes in the roads around [Alamein](#), arrived by train at railhead on 31 December and set up camp at mile peg 108. The sappers spent New Year's Eve quietly on their bunks contemplating a really worth-while job at last, a job of railway building to supply the forward army. They had spent the previous evening with 13 Construction Company and had heard something of the conditions they were likely to encounter.

They had also heard something of enemy interference with train running and track maintenance: they were told of locomotives straight from England with raiders' bullets in their boilers before they had completed one trip; of workshop sappers who patched them up where they stood at least sufficiently well to limp back to the Egyptian Railway workshops in the Delta; of construction gangs called out at all hours to repair bomb damage to the permanent way. Sometimes it was worse than that, as when the train at [Misheifa](#) was bombed and German prisoners were killed in the wagons. The doors were prised open with picks and chisels and the tangled mass inside buried in two common graves.

The new arrivals had plenty to think about as they got the feel of the machines they had taken over from 13 Railway Construction Company and pushed the formation a mile or so ahead of the platelaying start line.

The locations at that period of the various railway groups were:

HQ NZ Railway Maintenance and Construction Group (Colonel J. E. Anderson), [Qasaba](#).

10 Railway Construction Company (Major Marchbanks), 109-mile-peg camp.

13 Railway Construction Company (Major Trevor Smith), [Wahas](#) Station.

HQ NZ Railway Operating Group (Colonel A. H. Sage), [Matruh](#).

16 Railway Operating Company (Major F. W. Aickin), [Similla](#).

17 Railway Operating Company (Major G. T. Poole), Daba.

HQ 9 NZ Railway Survey Company (Major W. F. Young), Almaza.

The actual line building was to be undertaken thus:

A detachment of 9 Railway Survey Company (Lieutenant D. U. White) on location.

No. 2 Section, Mechanical Equipment Company (Lieutenant Hazledine-Barber), on formation.

10 Railway Construction Company and two Indian Pioneer Companies on platelaying.

13 Railway Construction Company with one Indian and one East African Pioneer Company on ballasting and servicing.

A three- to four-mile gap was to be kept between each group and, as in the first leg, the location was planned to pass close to depressions where spoil for the raising of levels could be more easily obtained; conversely, cuttings were avoided wherever possible.

It had been impressed on the Mechanical Equipment sappers that no matter what happened the formation must be kept well ahead of the platelaying gangs. To that end the eight caterpillar tractors with an assortment of carry-alls, two bulldozers and a grader were to be worked in two shifts, commencing at 6.30 a.m and ending at 6 p.m. Four standby drivers were to take over during tea breaks, five mechanics were detailed to service the plant, and a pegging party of four marked the width and level of formation. Everybody else was on truck-driving or 'Q' duties. Major repairs were to be the responsibility of 13 Construction Company which had a mobile workshop and a supply of spares.

If any sheik-on-camel-with-palm-fringed-oasis-in-the-near-distance illusion still lingered in the minds of the Mechanical Equipment sappers it was dispelled while building the Desert Extension Railway. The bitterly cold winter mornings were seldom without a wind strong enough to whip up particles of stinging grit into the

operators' faces. Often enough it would increase to gale force and sweep up billowing clouds of yellow, blinding dust.

When it was quite impossible to see the other machines the men dispersed their equipment and returned to camp; with water rationed to one bottle a day, all that was possible was to rinse the dust out of eyes and mouth and think about a hot shower.

Hovering over the strip of new-turned and levelled desert, seldom gaining much and never dropping noticeably back, was a small dust cloud. That cloud hid 10 Construction Company, a party of 9 Survey Company, the Indian pioneers—and four long thin barrels of an English ack-ack battery pointing watchfully to the sky. They were working a technique perfected on the Mohalafa- [Misheifa](#) stretch.

The surveyors with theodolite and long poles left a line of guiding pegs behind them. Tractors roared up dragging steel rails that the Indians had unloaded from the construction train and left them in pairs alongside the formation. Lorries on the other side of the strip lurched up and backed smartly while more Indians with sharp-pointed picks dragged and dropped the heavy sleepers neatly into place. Other trucks raced up with fishplates, dogs and bolts, which were laid in heaps as required. A rubber-tyred tractor with compressors and bits was close on the heels of a party marking the spots on sleepers where the dog holes were to be bored. As soon as the last hole was finished the first line of dogs would be in position to receive the leading leg (the first rail) carried by a gang of specially drilled Indians and placed with exacting care. The leading leg was fully dogged down and fished up, then the gauge leg (that is the second rail) was fished up and dogged to gauge at the ends and at the quarter points. Finally the track was pulled into line.

There were occasions when the going was bad and the dust cloud got too close to formation head. Then the Mechanical Equipment section worked a third shift in the moonlight so that there should be no delay for lack of a formed bed on which to lay track.

The impression may have been given that, rails having been fastened to the sleepers, all the Operation sappers had to do was to drive their trains along the ever-lengthening route. It was not like that.

The Construction sappers following the platelaying had to lift the track to a perfect level and pack under the sleepers with desert sand. Sidings, platforms, loading banks, telephone sheds and other ancillary works had to be built before trains could operate at speed.

In the hectic days before and during CRUSADER there were dust-storms when visibility was almost nil and the engine crews pushed their trains along blindfold. There was no through braking system, and often the driver did not know whether the complete train was following properly behind him or whether the couplings had parted, in which case there would be a pile-up somewhere. In normal conditions the driver would, from time to time, give a pre-arranged whistle signal, whereupon the brakesman would lean out of the van and show a green flag or light. But in a bad dust-storm the driver would not be able to see his brakesman's signal and just trusted to luck and the feel of the train.

There were no proper fixed signals on the line at this period and the train crews made their own safety rules, rules that the compilers of the Military Railway Manual had never envisaged. Caution signals made from kerosene tins holding hurricane lamps—an orange light by night, a flag by day, or, in bad visibility, a detonator placed on the rail—warned the driver to get his train under control; another red or green light or flag nearer the station indicated whether the train was to stop or keep going.

At night the enginemen worked under a tarpaulin blackout cover so that the fireman could shovel coal without advertising by the glare of the open firebox that a train without head or tail lights was on the road. Then there was the hazard of spread or damaged rails through tanks and other heavy vehicles crossing the track at unauthorised places and the always possible peril from sand drifts and derailment.

The authority for trains to move between stations was through the 'telephone and ticket' system. One station rang the next asking permission for the train to proceed, and if the section was clear consent would be given. A ticket was then written out at the requesting station and handed to the driver.

To avoid stopping the heavy trains, tablet slings were made out of fencing wire and tobacco tins, the ticket was placed in the tin and the contraption held out loop

foremost to the oncoming engine. The driver put his arm through the loop, at the same time holding out his own sling with his ticket for the section he had just passed over.

Coaling was done at [Similla](#), generally by Egyptian labourers and occasionally by Libyan prisoners who volunteered for the duty, and sometimes by African soldiers. Major Aickin did not think much of the Libyans:

'With the Libyans we always required four times the number necessary to do a given job. One quarter was always making tea, another praying, the third quarter visiting the latrines (provided the sentries were vigilant enough to stop them polluting the surrounding desert) while the remaining quarter worked half heartedly. They were overpaid at a shilling a day and found.'

All wagons for the desert extension were marshalled into train loads at [Similla](#) with gangs of sappers working round the clock. Most of the shunting was done at night under strict blackout conditions. The shunters used hand lamps with the glass blacked out, leaving only a small circle of light visible. There weren't very many accidents to men or machines.

As promised, but only just in time, a track was cleared and fenced through the minefields and the line went steadily westwards. Hirsha, [Habata](#) and [Mawi](#) block-posts came into being and operating staff had to be thinned out to provide for the extra sections. The 13th and 10th Companies were scheduled to change places and jobs at the end of January and rivalry between the two construction units was keen. Now the platelaying sappers could only lay the rails that arrived each day, but Major Trevor Smith, whose company was about to take over the platelaying, had been insistent that given a sufficient supply of material, adequate plant and enough skilled men to spell each other, up to four miles of track could be laid daily. The 10th was inclined to agree that given all the material and all the breaks it might be possible.

Work had ceased on the 14th owing to the non-arrival of the supply train, and when it turned up that evening with another due on the morrow it meant that both loads would have to be laid before the third train congested the line.

Hardy New Zealanders and swarthy Indians waited in the morning sun for the first rails to be distributed. Soon the leading rail was moving westward with the

gauge rail following close behind; rail after rail, chain after chain, the two steel lines rolled across the wooden sleepers. The cooks did their share and sent out tea and scones.

When time was called three miles and 500 feet of rails had been laid. It so happened that by way of a change the construction train arrived on the 17th with sixty-pound rails but no plates or bolts. Sleepers were put down but no rails could be laid. The next morning was fine and dustless and the supply train arrived on time with seventy-five pound rails and bolts and plates for each weight of rail. It was discussed and agreed that an attempt be made to break the four-mile barrier.

Work began smoothly and it was not long before the spiking party was close behind the sappers boring dog holes in the sleepers with their high-speed pneumatic drills. When the construction train moved forward at 'smoko' it travelled across three-quarters of a mile of new track; nobody knew quite how it happened but in one memorable hour one mile of track was laid and by lunchtime two miles were finished—in itself a decent day's work.

The pace was on without any conscious effort; the Kiwis wielding the spiking hammers pushed the sleeper borers to the limits of swift accuracy. Work was interrupted by the change from sixty to seventy-five pound rails and by the necessity of having two turnouts laid in by 13 Company. The Indian gangs were slowed up by the necessity of picking over the rails and discarding short and imperfect lengths. The wind rose sufficiently to hinder the men securing the rails with dirty threaded secondhand bolts.

Word got around that there was a record in the making, and as the various jobs petered out Kiwis and Indians hurried to trackhead and watched the men on the linking and spiking hunting amid the oddments of material for the final rails. A dozen were tried before the last perfect length was spiked down by the sleeper borers, who had taken over the hammers from the exhausted spikers. Two hundred and seventy-three all ranks of construction men of two nationalities had completed four miles of track laying in a working day.

On account of the differing conditions and the fact that the New Zealand railway men were equipped with many mechanical aids, tractors, trucks, compressors and

pneumatic augers, close comparison cannot be made, but on the [Kassala](#) project, the Kut- [Baghdad](#) and [Baghdad-Hilia](#) lines the average was never better than 1½ miles per day, with up to two miles in a single day. <sup>5</sup> In 1897 on the Halfa- [Abu Hamed](#) line of 230 miles the average was over 1½ miles per day. Once only, three miles were laid in one day. <sup>6</sup>

By this time railhead was getting uncomfortably close to [Halfaya](#), which was still held by the enemy, but the day after the record-making run (19 January) the South Africans removed the last obstacle to a direct approach to [Capuzzo](#) by capturing the place.

Meanwhile Colonel Anderson and Major Young had looked over the [Barce-Benghazi](#) line and decided that the rails could be recovered and used for the [Benghazi-Soluk](#) extension. They were back with their report at Rear Headquarters, Eighth Army, at [El Adem](#) on 25 January, but they found there little inclination to discuss railway projects. General Rommel was driving eastward again.

In [Benghazi](#) trains were being run by 22 January from the wharves to the dumps with loads of bombs and petrol, and rumours of an enemy breakout were discounted. Three days later the railway sappers were on the steamer [Mausang](#) bound for [Tobruk](#). They were seen off by a cautious Italian plane, which appeared to dislike the attentions of a destroyer escort and shortly departed. A tougher friend of his turned up soon afterwards and picked on the little, overcrowded [Mausang](#). Her anti-aircraft armament was not impressive, consisting of one [Breda](#) of temperamental habits, operated by two Aussie naval ratings assisted by Sapper Tim [Tangney](#). <sup>7</sup> As for the passengers, mostly native Africans and Mauritians, they had already ruined any captured Italian arms they had by using them as crowbars to open cases of tinned fruit. That left only the Kiwi sappers, whose knowledge of rifles was not extensive.

I became conscious that it was almost impossible to hold a rifle properly when wearing a life jacket, realised that there was no time to remove it and just waited. When the plane (coming in at masthead height) was about 400 yards away, taking our cue from the [Breda](#), we tore into him as fast as we could reload. It was impossible to miss at that range and the Italian must have got the biggest bloody surprise of his life, for he banked steeply, dropped what appeared to be a torpedo

and got out of it as fast as he could go.’<sup>8</sup>

The torpedo was avoided by a quick turn. It was a chilly night run into [Tobruk](#) but the sappers were in very good spirits, induced partly by the encounter with the aircraft and partly because Charlie [Tombs](#)<sup>9</sup> had traded an Italian dress sword for a bottle of whisky.

Thirteenth Company was a bit unlucky, for when it took over the platelaying from the 10th on 26 January, rougher going commenced in fairly broken country. A succession of sandstorms carried over into February, the supply trains were irregular and, when they did turn up, brought unpredictable miscellanies of ironmongery. Even the rails were of such varying length that often the sleepers had to be respaced.

The unit took a few days to settle down before it distinguished itself with a record, perhaps not so spectacular as that of its rivals but the kind which is rarer—accomplishment over a period, without any favourable conditions. Trackhead was at the 134-mile peg when work began on Sunday, 1 February. In the week that followed the Mechanical Equipment Section, with three of its nine carry-alls out of action for varying periods, averaged over 2¼ miles of formation daily. They had to put in fourteen culverts with the platelayers breathing down their necks. The last sleeper spiked on Saturday was 150 miles from [Similla](#), an average of a few yards short of 2¼ miles per day for the week.

Neither company achieved that again.

Certainly there was no immediate opportunity of improving on the performance. General Rommel had been halted on the [Gazala- Bir Hacheim](#) line, 30 miles west of [Tobruk](#), on 6 February and it was expected that very shortly he would be chased back again. In the meantime the defences at [Sollum](#) and [Halfaya](#) were to be strengthened, to which end there was need of a spur to hold sixty wagons at [Abar el Silqiya](#) near the top of [Halfaya](#) Pass, and one to hold forty at the 128-mile peg near [Mawi](#). They had to be made ready at the double, necessitating the reduction of the [Capuzzo](#) railhead to second priority with a new deadline—25 February.

It was also at this period that changes took place in 18 Army Troops Company dispositions. The Matruh- [Garawla](#) section of the water pipeline was to be handed

over to a South African unit, leaving 18 Army Troops Company responsible for the maintenance and operation of all pumping stations and pipeline from the Delta up to but exclusive of [Garawla](#), but including the [Alamein](#) position pumphouses and the line to the [Fuka](#) wells.

No. 4 Section, now commanded by Lieutenant [Mawson](#),<sup>10</sup> completed the hand-over on 10 February, and went back to a camp at [Sidi Bishr](#) near [Alexandria](#). The sappers did a training course by day and visited Alex by night and wondered how long it would last. It lasted until 1 March, when two jobs were put in hand at the same time, the laying of a hundred miles of 10-inch supplementary pipeline from [Abd el Qadir](#) to [Daba](#), and the construction of improved loco water-filling facilities and fuel tanks for diesel-driven pumping stations.

The [Capuzzo](#) railhead, situated at the 162-mile peg just two miles past the fort, still standing, but very much the worse for wear, was reached on 18 February, seven days ahead of the timetable. The depot itself, a main marshalling yard, a balloon loop with sidings and branches, was ready on 13 March. Other jobs were the finding and spreading of spoil over the unloading areas and the building of a 16-foot-high shelter ramp for the protection of locomotives against bombing attacks. A dummy railhead was also provided for the mystification of the enemy and fitted out with all the dummy amenities. As a final effort to fool the 'shufti' planes, [Fort Capuzzo](#) was dismantled stone by stone and used for making roads around the railhead. Sic transit gloria [Mussolini](#).

A highlight in the period of unremitting toil, frequent sandstorms and poor rations, was the periodic arrival of the [YMCA](#) mobile canteen provided by the staff of [Woolworths \(NZ\) Ltd](#). It brought luxuries like New Zealand tobacco, tinned fruit and chocolate; necessities such as toilet gear and primus heaters. It showed talkies and shorts of New Zealand scenes to men who for months had seen nothing but desert. Word of its coming was passed along from camp to camp and its welcome was a warm one.

Sunday, 15 March, was declared a public holiday for the construction sappers who, with the exception of odd breaks caused by bad weather, had been working a seven-day week since January. Two lorries took all who wished on a conducted tour of [Halfaya](#) (long since renamed Hellfire) Pass, followed by lunch at [Sollum](#) Bay and

the first swim for months. The return was by the [Sollum](#) Pass road, with a tour of the Barracks captured by the Maoris and a short stop by a few lonely Maori graves on top of the bleak escarpment.

There was a three-weeks' break in construction and the opportunity was seized to get the men away on leave and to change-of-air camps.

The Operating Group did not have the benefit of this break—on the contrary. The enemy had declared an open season on railway trains and 16 Company, responsible for the 162-mile section between [Similla](#) and [Capuzzo](#), found that the work was beyond the capacity of a normal operating establishment. A draft of two officers (Lieutenants H. E. McLenaghin and T. B. [Lucy](#) <sup>11</sup>) and 100 other ranks was transferred from 17 Company and stationed between [Misheifa](#) and [Capuzzo](#), where full loco facilities were necessary.

These extracts from the New Zealand Railway Operating Group war diary for March will make the point that running trains in the [Western Desert](#) at that period was not monotonous.

Place	Date	Hour	
	March		
<a href="#">EL DABAA</a>	5	1600	Enemy aircraft dropped bombs and also machine gunned the locality. Track sustained slight damage, telephone and 'Staff' communications also severed, necessitating the initiation of Pilot guard working.
<a href="#">EL SUT</a>	7	1000	No. 12 train attacked by enemy aircraft while standing at El Sut. The engine was struck by cannon shells and armour piercing S.A.A. The Engine (disabled) was subjected to further attack at 1300 hours when additional damage was caused.
<a href="#">WAHAS</a>	7	1024	No. 5 train attacked by enemy aircraft while standing at <a href="#">Wahas</a> . The engine was hit in a number of places and disabled. Train again attacked by 1326 hours and three personnel slightly injured.
<a href="#">MAZHUD</a>	7	1030	No. 2 train attacked by enemy aircraft while standing at <a href="#">Mazhud</a> . In addition to the engine being damaged and disabled the engine driver and fireman were scalded by escaping steam causing them to be evacuated to a C.C.S.
<a href="#">MISHEIFA</a>	7	1030	A 'light' engine was machine gunned by enemy aircraft on morning of 7 March when leaving <a href="#">Misheifa</a> for <a href="#">Capuzzo</a> . Slight

damage only to two auxiliary water wagons attached to the engine.

Between 7 0500 Enemy aircraft dropped bombs at Kilo 271 (between [Kassaba](#) & [Gerawla](#)) about 20 Yards from the Mainline. Telephone and 'Staff' communications were severed.

A subsequent examination of the track led to the discovery of 2 UXB <sup>12</sup> near KASSABA Station and 1 UXB near Kilo 271. All traffic over section suspended until 1800 hours pending advice from a Bomb Disposal Squad that line was again safe for traffic.

Place	Date	Hour	March
Near FUKA	7	0510	Enemy aircraft dropped bombs in the vicinity of FUKA Station. No damage resulted but a 500 lb UXB near FUKA Station caused a suspension of traffic until 1430 hours.
Between <a href="#">GALAL &amp; EL QUTT</a>	7	0525	No. 538 train bombed and machine gunned at KILO 197 (Between <a href="#">Galal</a> and <a href="#">El Qutt</a> ). Two bombs landed 6 feet from the line causing the first three wagons (ammunition) in front of van to become derailed. The derailed vehicles travelled along the sleepers for approximately 100 yards until two of them capsized. Clearance of the track and relaying of damaged portion was completed early on the morning of 8 March.
W.D. Extension <a href="#">MISHEIFA</a>	7		Daylight running of trains on Extension line suppressed meantime as a result of enemy bombing attacks on that date.
	8	0915	Enemy aircraft machine gunned station Yard causing damage to one engine and wounding one Sapper (Operating personnel).
	11		Lt.-Colonel A. H. Sage relinquished appointment of A.Q.M.G. (M) Western Desert Area. Area merged with Eighth Army and <a href="#">Alexandria</a> .
Near Nile	26	2000	Enemy aircraft bombed No. 139 <a href="#">CAPUZZO- MISHEIFA</a> (Mixed) train resulting in the death of 19 soldiers and the wounding of 69 others. 2 carriages, 11 wagons and 1 brakevan were all more or less badly damaged by bomb splinters.
SIDI HANEISH	26	2000	Enemy aircraft made bombing attack on Station, and No. 267 <a href="#">MATRUH- CAIRO</a> personnel train which had just arrived as attack commenced. 5 soldiers were killed and 19 wounded. All were passengers on the train.

The windows of all the carriages were blown out and all cars were pierced by shrapnel. The station building was partially destroyed and one E.S.R. employee seriously wounded.

Place	Date	Hour	
	March		
Mile 119 W.D. Extension	27	2330	Enemy aircraft bombed and damaged the track.
Mile 103	28	0915	Engine 9329 machine gunned. Engine driver wounded and evacuated to a C.C.S. Vacuum pipe of engine damaged.
Mile 119	28	0945	No. 150 <a href="#">MISHEIFA- CAPUZZO</a> train machine gunned. Construction Group personnel working at this point were also machine gunned, 4 killed and 16 wounded. Steam pipe of engine (9317) damaged.
Mile 132	28	1000	No. 147 <a href="#">CAPUZZO- MISHEIFA</a> train machine gunned. Fireman wounded and evacuated to a C.C.S. Engine (9307) damaged and disabled.
Kilo 182 (Between SIDI SHEBIB & GALAL) EL QUTT	31	2128	Track damaged by enemy bombing. Personnel from 17th NZ Rly. Op. Coy (NZE) assisted with repair work which was completed 0350 hours, 1 April 42.
	31		No. 267 <a href="#">MATRUH- CAIRO</a> personnel train machine gunned while standing at <a href="#">El Qutt</a> waiting for repairs to track to be effected. Seven casualties were caused comprising 4 Military personnel, the Egyptian Railway Guard and two Libyan P.W., all of whom were wounded.
Mile 146 (Between <a href="#">ARAD</a> & <a href="#">HALFAYA</a> )	31	0715	No. 165 <a href="#">DOWN</a> personnel attacked by two enemy fighter aircraft. One of the A.A. crew of train killed and one wounded. Engine (9325) damaged by machine gun bullets and cannon shells.

Major Aickin, commenting on this period, says:

'It was obvious we could not afford to lose our locomotives at such a rate.... In any case the British Railways could not afford to hand locomotives out to us like children's toys to be destroyed in a week, and accordingly something had to be done about it.... All trains henceforth were provided with two anti aircraft teams, each occupying a wagon at opposite ends of the train, one being armed with machine guns of various types and the other with Bofors or [Breda](#) guns.'

The construction teams who received a share of the blitz were full of admiration for the train crews. A Mechanical Equipment Company historian, in mentioning that No. 2 Section's camp was not shot up while others in the vicinity were, continued:

'Most heavily attacked of all and a sitting shot for these raiders were the trains themselves, which were later forced to carry their own barrage balloons and ack ack guns. Everyone on the Railway Construction operation took their hats off to the New Zealand engine crews, who in their noisy cabs were liable at any moment to be the target for vicious hails of cannon and machine gun bullets, but though casualties were inflicted by these unheralded attacks, they continued bringing their trains through cheerfully and dauntlessly.'<sup>13</sup>

In spite of it all there was some rugby and soccer played and at [Similla](#) the sappers had built a nine-hole golf course in a wadi. To locate the balls more readily they were painted red.

On 23 March 5 Brigade passed [Capuzzo](#) on its way to the green hills of [Syria](#) in one of the wildest dust-storms ever experienced.

Track laying on the [Capuzzo- Belhamed](#) length began on 3 April and was to be finished by 31 May, which involved 72 miles of railroad being built in 59 days. Thirteenth Construction Company carried the work forward until 10 May, when the lead was again taken by 10 Company at the 204-mile peg between [Gambut](#) and [Waikikamoukau](#).

Since entering [Libya](#) some latitude had been permitted in naming the stations: the first one safely west of the border at the top of the [Halfaya](#) Pass became, naturally enough, Hellfire. Keen to do their Indian friends and helpers honour, the sappers named the next station Rumbalbelipur. [Capuzzo](#) remained [Capuzzo](#), then came [Gundagai](#), [Killarney](#), [Gambut](#) and, to put New Zealand characteristically on the map, [Waikikamoukau](#). No. 21 Railway Line Maintenance Section of No. 2 RE Telegraph Company installing train tablet machines found these flights of poetic fancy too tough for other than Kiwi tongues, as well as being far too long to inscribe on train tablets. [Waikikamoukau](#) became Sandilane and Rumbalbelipur reverted to its native [Musaid](#). But the railwaymen always called it Rumble.

The first part of the section offered no special difficulties other than those involved in avoiding air raids, which, as has been pointed out, were directed mostly against the trains. There were of course the usual short deliveries due to unbalanced supply trains and the recurrent sandstorms. However, at the 194-mile peg the country became more difficult, necessitating much culverting; between the 202 and 205-mile pegs there were two small bridges and one large rock filling.

The train operating story in April was much the same as in March—air raids that often scored hits and caused casualties. The Army posted more and more anti-aircraft defences at block-posts and the Air Force supplied balloons to be towed from special platforms behind each engine. Experiments were being made with an armour of slabs made with a bitumen shingle mix to protect the engines.

Army Intelligence warned [Similla](#) to expect a blitz on 4, 5 and 6 May, but Providence stepped in and provided sandstorms in the evenings instead of, as usual, in the mornings. The raiders countered by dropping on [Capuzzo](#) the hardware destined for [Similla](#) and damaged forty-nine wagons. Instead of dodging bombs the sappers at [Similla](#) ran a cricket tournament. There is a story of a six-foot driver just off duty who was clean bowled by his commanding officer, but followed through with such vigour that he lost his bat, which nearly woodened out one of the outfield.

The 21st Mechanical Equipment section arrived at [Belhamed](#) for the formation work on 16 May, but instead of completing the marshalling yard or the loop, carried on across the Axis Road towards [Tobruk](#), where a dummy railhead was built before the real one at [Belhamed](#). This was a somewhat subtle piece of deception, for the enemy had not been fooled at [Capuzzo](#) where the dummy was made after the real loop, and it was hoped that it would be thought that the same procedure was being followed. Trackhead reached the site of the [Belhamed](#) depot on 19 May with twelve comfortable days to complete the loop and amenities before the deadline date of 31 May.

Seventeenth Operating Company, which had a large number of its men at [Capuzzo](#) under command of the sister unit, <sup>14</sup> was to take over the whole section westwards of [Misheifa](#) on 24 May. The rest of the Company moved up on the 19th, the day the track reached [Belhamed](#), and began to make camp. They were lucky to make a safe landfall for the moon was out and so were the raiders, but the anti-

aircraft batteries got them through safely. [Misheifa](#) again took the last hammering of the month when a petrol train standing on the balloon loop was bombed and set on fire. Sapper King <sup>15</sup> supplies the sequel:

'Lieut Hec McLenaghan and Lieut Jim [Morgan](#) <sup>16</sup> were the officers in charge at the time and they took steps to try and save some of the wagons on the burning train. Jim Morgan got the shunting engine from the yard and with the engine crew took it round the balloon loop with the intention of pulling away the rear portion of the train. Hec McLenaghan meanwhile had gone over to the train, and although several wagons were a mass of flame and drums of petrol were every few minutes exploding and being thrown 20 or 30 feet into the air McLenaghan went in between the wagon next but one to the last one actually burning and unhooked the couplings just as the wagon he uncoupled burst into flame. The rest of the train was pulled away to safety.... As far as I know this act of heroism by McLenaghan was never acknowledged probably because neither he nor Jim Morgan reported it. I actually witnessed the whole incident from a couple of hundred yards distance.'

It was about this time that rumours began to circulate to the effect that the days of 10 Construction Company in the [Western Desert](#) were numbered. <sup>17</sup> They were not without foundation. South African and Australian engineers were working along the coasts of [Syria](#) and Palestine from [Haifa](#) to [Tripoli](#), building a railway that would connect [Tobruk](#) with Calais and [Hong Kong](#), enemy permitting such a journey, and the [New Zealand Company](#) was to change places with the South Africans. It was expected that the first of the Springbok units would be ready to move at the beginning of June.

There were other and larger moves afoot, moves initiated by General Rommel. The attacks along the railway during April and May had been diagnosed as something more than enemy restlessness, and the all-out blitz on [Malta](#), six raids daily throughout April, had not been misunderstood. Authority expected malignant developments.

A conference of all commanding officers in 91 Sub-Area was held on 25 May and plans were discussed for the evacuation of non-essential units, should such a course become necessary. The word HOPSCOTCH was to be the code signal. Rifles, ammunition and tin hats would be carried at all times.

Work went on as usual while German armoured forces, ten thousand vehicles loaded with men and material, began the great outflanking march that was intended to destroy the Eighth Army. In essence Rommel's plan was to move swiftly around the inland flank, destroy the British armour in the open area behind the [Gazala](#) line, then wheel north and take the line itself in the rear. A decision was expected within twenty-four hours, with the capture of [Tobruk](#) and the opening of the road to Egypt following as a matter of course.

The strategy bore resemblance in reverse to the CRUSADER campaign and in its results was somewhat similar. The Eighth Army was almost wrecked, retired many hundreds of miles, and three weeks later was groggily sparring for time while reinforcements, including the New Zealand Division, hurried across [Syria](#), Palestine and [Sinai](#).

At midnight 26–27 May the [Deutsches Africa Corps](#) recorded in its war diary:

'In bright moonlight the D.A.K. rolls on towards the enemy. Morale is superb and everyone is tense in anticipation of the first encounter with the English. At midnight there is no report regarding the enemy nor have the troops on our right and on our left any contact with the enemy.'

In the early afternoon Don Rs tore around the construction gangs delivering the HOPSCOTCH signal and there was some hurried packing. The evacuation plan as it affected the New Zealand sappers was that Eighth Army was to provide rolling stock at [Gambut](#) for 13 Company and attachments and at [Belhamed](#) for 10 Company and attachments, while the heavy plant would be entrained at Sandilane.

They were to move back to [Qasaba](#), 250 miles to the rear, until it was seen how the battle was shaping.

Seventeenth Operating Company would continue to run trains forward from [Capuzzo](#) for the time being and 16 Company would carry on as if there were no attack. It is interesting to note the varying reactions to this purely (at the time) precautionary move.

Twenty-first Mechanical Equipment Company's war diary is quite unconcerned over the matter. It packed up, drove its heavy equipment to Sandilane siding, where

the flat trucks were supposed to be but did not arrive. It formed a convoy (Lieutenant [Ellis](#) <sup>18</sup>) and moved under its own steam to [Qasaba](#), while Captain [Tustin](#) <sup>19</sup> and party stood by to load the plant when the train did arrive on the following day. Even then there was no room for six tractors and an assortment of carryalls and graders, which were then driven 60 miles to [Halfaya](#) evacuation siding. It took thirteen hours with the graders hooked on behind the carry-alls and the tractors roaring along in top gear. Captain Tustin and some spare drivers took turns in dashing ahead to get the billy boiled before changing places with the dust-encrusted drivers. They did not know that while they were moving along in 'line ahead' they were mistaken for enemy tanks and were very lucky not to have been shot up.

Thirteenth Construction Company had had a bad night with bombers over in force and nuisance machine-gunners spraying the place with random streams of bullets. There is a sour note about the diary entries for the 27th. 'At 1700 hrs received pre-arranged codeword for Coy to shift back to [Qasaba](#) as Jerry had started push. Thereupon, we took part for the first time in that well known British operation—"evacuation"—ordered by Eighth Army because we were "non-essential" troops and we and our valuable plant and equipment had to be got out of the way.'

Tenth Company were more peeved over the timing of the message than anything else:

'Codeword for evacuation reached Orderly Room at 1600 Hrs and DR's sent to warn Indian Coys and to contact officer at Trackhead. An unfortunate time to arrive for most of the personnel were on their way home and it meant returning to collect tools after dinner.'

No. 4 Section (Lieutenant [Treloar](#) <sup>20</sup>) of 13 Construction Company, a sub-section of 21 Mechanical Equipment sappers and a platoon of 1217 Indian Pioneers remained behind to attend to essential maintenance. By 30 May the Group, less the details mentioned, had settled in at [Qasaba](#) among the clean white sandhills close by the beach. It had been virtually the base from which their enterprise had begun, and there was a reunion dinner at which New Zealand lamb was served—the first since leaving home. As the diary diplomatically puts it, there was 'considerable alcoholic fraternization between units of group during evening'.

From the early hours of the 27th, when 3 Indian Motor Brigade, which at some time must have been in close contact with the Kiwis and learnt some of the language, reported that there was 'a whole bloody German armoured Division in front of them,'<sup>21</sup> there had been one long confused battle until the night of the 30th, when the enemy were apparently in general retreat.

There was a conference on 30 May to discuss the details of the now officially confirmed move to [Syria](#). The Group were still discussing their 'flight into Egypt' (their own description of recent movements) when a warning order was received for 13 Construction Company and 1203 and 2209 Indian Pioneer Companies to stand by for a return to [Belhamed](#).

The Company, with attachments, moved out on 1 June. Camp was established at [Belhamed](#) and 4 Section, plus the Indians who had remained behind, joined them there. Track laying did not start until 4 June, during which period part of the unit was engaged in repairing the damage resulting from a serious derailment of a tank train at [Musaid](#). The Mechanical Equipment sub-section built a deviation over which 138 Indian Pioneers laid new track, 2 Section (Lieutenant Andrew) of 13 Company re-railed the locomotive, and 17 Operating Company helped to pull the damaged wagons clear. It was a quick job and earned the special commendation of the Commander-in-Chief.

Ballasting of the [Belhamed](#) Depot was finished by 10 June, likewise the formation past the dummy railhead as far as 225½ mile peg. The Mechanical Equipment section left for [Qasaba](#) and a section of 39 South African Railway Construction Company took over. By this time it had again been demonstrated, as at [Sidi Rezegh](#), that a lost battle need not necessarily stay lost, and the Eighth Army's counter-attack had been turned back in what has been called 'this mournful and unmitigated disaster, in the account of which there can be no comfort for our arms.'<sup>22</sup>

The following day (11 June) the southern bastion of the British line was lost when the Free French garrison was ordered to evacuate [Bir Hacheim](#). The next morning [Belhamed](#) was ready for complete use, the Kiwis again left for [Qasaba](#), and the line was in the hands of South African engineers and 138 Indian Railway Construction and Maintenance Company.

Two days before [Bir Hacheim](#) was evacuated 10 NZ Railway Construction Company left for [Syria](#) by rail, with the rear party following by MT. Civilian buses were waiting at [Haifa](#), but the Syrian border had been closed to civilians because of sabotage. The Company thereupon took over the driving itself and [Adloun](#) was reached at midday on the 12th.

After the desert climate the humidity was almost overpowering and the men spent the rest of the day on the beach. They were to take over on the 14th, the same day that the recall signal went out to the Division to return to Egypt.

No. 2 Section, Mechanical Equipment Company, left [Qasaba](#) on 12 June for a destination which, after many guesses, proved to be a fly-infested spot at [Kilo 40](#), about two hours' journey from [Alexandria](#), where they were to dig pits for harbours for huge Liberator bombers. It did not work out that way but they must be left there for the time being.

The 17th carried on working traffic between [Capuzzo](#) and [Belhamed](#), with a rail-motor patrol trolley reconnoitring the line ahead of the trains. They took up urgent requirements and brought back petrol and other valuable supplies.

On the 14th [Gazala](#) was evacuated and an attempt made to hold on the line [Acroma- El Adem](#), some 20 miles eastward and so much closer to railhead. After three weeks of almost unrelieved disaster, strength was again being collected for a counter-attack against an enemy who, it was thought, could not push on much farther without a pause for reorganisation. The situation, however, continued to crumble and the [Gazala- Tobruk](#) road was cut during the night 17–18 June.

Seventeenth Railway Operating Company was ordered to retire from [Capuzzo](#) to [Misheifa](#) and to haul back everything on wheels. The 16th cleared this rolling stock through to [Similla](#), where an English ROC moved it to [Daba](#), and finally the Egyptians hauled it back to [Alexandria](#). The 17th Company then moved back, first to [Garawla](#) and finally to [Burg el Arab](#), on the line between [Alamein](#) and [Alexandria](#).

Even if an army is withdrawing it still requires rations, ammunition and other supplies. Sixteenth Railway Operating Company continued to work traffic forward to [Misheifa](#), with a few trains going right through to [Capuzzo](#), then more or less in no-

man's land. On 20 June the unbelievable happened and [Tobruk](#) was captured about the same time as the first formations of the New Zealand Division were arriving at [Matruh](#). Railway transport then became too hazardous, so to avoid the risk of losing any rolling stock men and machines were pulled back to [Misheifa](#), which again became Eighth Army forward railhead. Only 92 miles ( [Similla- Misheifa](#)) remained operable of the 223½ miles of New Zealand built Desert Railway Extension. There was worse to come. Major Aickin was warned that a further withdrawal by Eighth Army was more than likely, in fact extremely probable, but that he would get eight hours' notice to cease removing stores from advanced supply dumps and pull out.

Just to keep things in perspective, a cricket match was played between 16 and 17 Operating Companies the day after [Tobruk](#) fell, but a section of the New Zealand Mobile Dental Unit who chose this moment to arrive to put the railway teeth in order was invited to postpone its operations to a later date. The invitation was accepted without delay.

Every man that could be spared was put to patching up and making 'runners' of rolling stock put out of action by enemy air raids, which had grown in intensity as the battle drew nearer to [Tobruk](#). What could not be made movable was blown up. Tents and gear of the nine block-posts between [Similla](#) and [Misheifa](#) were stacked alongside the track in readiness for a quick take-off.

Enemy planes had not been active along the railway since the fall of [Tobruk](#), but on the afternoon of the 23rd they came back in force. Major Aickin has a comment regarding the enemy tactics:

'I venture to say that if they had studied their targets better and concentrated more on the bottle-neck leading out of [Misheifa](#), they would have had more success than they achieved by bombing the railway, as they did, at half a dozen different places. Had the track been blocked for a few hours at the East end of [Misheifa](#), the prize which the enemy might have secured could have been substantial, and Rommel's supply problem would have been greatly simplified.... he might have captured several trains with locomotives complete, to say nothing of the stores.'

On the same afternoon General Rommel was nearing the frontier wire and arranging for the Italians to hold down the [Sollum- Sidi Omar](#) position while the

German [Africa Corps](#) swung round the British left and drove for the coast between [Sidi Barrani](#) and [Matruh](#). At Matruh New Zealand Divisional Engineers were working like beavers laying anti-tank mines.

Also on that same evening, about 8.30, the Area Commander at [Misheifa](#) received the evacuation order and passed it on to the railhead. Group Headquarters at [Matruh](#) was asked for confirmation and replied with Kiwi terseness, 'Get out smartly—repeat smartly.'

There was some fast movement. Train No. 9, comprising about sixty empty wagons, which had arrived less than an hour previously and at the time was being loaded with troops, departed at 8.40 p.m. No. 11, the first evacuation train, left at 9.38 p.m. with troops and stores; No. 13 with stores and armoured and other vehicles left at 10.48 p.m.; No. 15, a small train with a diesel-electric shunter, left at 11.30 p.m.; No. 17, a long two-engine troop-carrying train, left at 12.30 a.m. on 24 June.

Counting trains that had left [Misheifa](#) before the evacuation orders had been received, there were nine trains on the 92 miles of track between [Misheifa](#) and [Similla](#). The enemy was overhead—and the front train had ripped up five miles of track with a derailed patched-up wagon. Indian maintenance sappers worked feverishly to get the sleepers and rails back into alignment while eight trains and Rommel's tanks moved eastwards.

Above the toiling sappers and the wrecking gang working on the derailed truck, enemy planes wheeled and circled and turned the friendly darkness into daylight with flares. After a while they tired of the view and left for their 'target for tonight', which was a recently evacuated airfield nearby. It was a lucky break.

The best that could be done was to bring the damaged stretch of line up to a standard permitting crawling traffic, and five trains, each taking up to three-quarters of an hour, passed safely over before first light. In the meantime tablet control had been done away with and all trains were worked up as close as prudence permitted. Providence was on the side of the Kiwi railwaymen that night for bombs were dropped at various points along the line but did no serious damage.

At daylight (24th) the [RAF](#) shepherded the last of the trains into [Similla](#) and

maintained air cover over the [Similla- Mersa Matruh](#) area. That night the enemy was on the coast road only 32 miles west of [Matruh](#). All traffic staffs had boarded the last train as far as [Charing Cross](#), which with [Sigeifa](#) block-post was kept in operation and ran three more evacuation trains, the last of which arrived at [Similla](#) in the early hours of 25 June. That night the enemy lay in front of the [Matruh](#) defences, Field Marshal Rommel (he had been promoted after [Tobruk](#)) was planning a right hook to isolate [Matruh](#), and 2 NZ Division was heading for [Minqar Qaim](#), part of an escarpment about 25 miles due south, with the intention of being an embarrassment in the coming battle.

Sixteenth Company were ordered to evacuate by rail and MT back to [Daba](#) on the afternoon of the 25th, leaving only Lieutenants Chapman and McLenaghin and 35 other ranks, plus the Mohalafa and [Sigeifa](#) detachments, to help 193 Company, RE, by marshalling trains for the east. They came out on the last train from [Matruh](#) and rejoined the Company, which after several stops and starts arrived on 29 June at [Alexandria](#).

Thirteenth Company, whom we left at [Qasaba](#) after completing the [Belhamed](#) railhead and finding the 10th had departed, stayed there swimming and resting until the 25th, when they began an adventurous train journey that included dispersing all night in the scrub-covered desert near [Fuka](#) while enemy aircraft did their worst, getting out and repairing the track after another raid, spending a couple of days in [Cairo](#), and finally, on 2 July, finishing up at [Khalde](#), about six miles south of [Beirut](#).

April was the last normal month that 18 Armoured Troops Company was to experience for some considerable time. Air-raid warnings were not very numerous and the unit diary mentions the cleaning out of storage wells, salinity injections from the [Fuka](#) wells, chlorination of drinking water and the like. No. 4 Section had commenced the second tower for a Braithwaite tank to supply the railway locomotives with water, and two ditchers working on the pipeline were having trouble in rocky country.

May was different. An urgent request for 2000 drums of water was received. Headquarters Detachment had nearly forgotten what a water drum looked like and had none in stock. The next day the order was stepped up by another 500 drums, then within twenty-four hours another 770 had been added. Drums were located,

cleaned, filled, and began moving to the water-front within a week. Demands for drums of water poured in and the sappers worked a ten-hour day trying to fulfil the indents. The supply of containers ran out and the water ship Eocene was got ready again. She sailed in convoy from [Alexandria](#) for [Tobruk](#) with 2400 tons of water and 2200 tons of petrol, with Sappers [Bain](#) <sup>23</sup> and [Withington](#) <sup>24</sup> to operate the pumps, and was torpedoed en route. The New Zealanders were picked up unhurt.

Water barges Nos. 3, 4 and 5 lying at [Matruh](#) were to be re-equipped forthwith and crews supplied ready for operation by 1 June.

Out in the [Western Desert](#) the pipeline had been trenched as far as [Daba](#), and the railway storage tanks and cisterns finished at Hammam by the end of the month.

[Daba](#) received special enemy attention right through the month. Entries taken at random from No. 1 Detachment's diary show how a Kiwi line-of-communication unit reacts to a crisis.

May 8 2050 hrs. 3 or 4 planes over El Dabaa dropping parachute flares with reckless abandon followed immediately with most determined attack to date.... 5 Beduins killed in a slit trench. Ammo train set on fire and completely destroyed, fire lasting 5 hours. All telephone wires down. First blood to El Dabaa AA defences. 1 Junkers 88 shot down into PLOC camp and burned together with crew of 4.

May 9 2359 hrs. All quiet at El Dabaa thank heavens.

May 11 1230 hrs. Visits approximately every ten minutes from irate and thirsty individuals who had had their water supply reduced—very busy day.

May 17 1400 hrs. [Coldstream Guards](#) arrive and were defeated at cricket by this section.

May 24 1600 hrs. Visit from 193 Railway 2 I/C to enquire why his buckshee supply of 10 tons pipe water per day had been nipped in the bud.

May 26 1000 hrs. Drew sterilising powder and other assorted poisons <sup>25</sup> to adulterate our drinking water and took some to wells. Viewed bomb craters around wells.

Yes, May was different. So was June.

Railway Construction Group and Railway Operating Group casualties for the period January-July 1942 were:

16 Railway Operating Company

Wounded 4 Died on active service 2

17 Railway Operating  
Company

Killed in action 3 Wounded 10

10 Railway Construction Company

Died of wounds 5 Wounded 15

Died on active service 2

13 Railway Construction Company

Killed in action 1 Wounded 4

Died on active service 2

9 Railway  
Survey  
Company

Wounded 1

HQ NZ Railway C & M Group

Died of wounds 1 Wounded 1

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<sup>1</sup> Lt H. E. McLenaghin, m.i.d.; Upper Hutt; born NZ 16 Sep 1917; fitter; wounded 7 Dec 1943.

<sup>2</sup> S-Sgt E. W. Arnold; Christchurch; born NZ 7 Dec 1908; clerk, NZR.

<sup>3</sup> Letter, Lt McLenaghin.

<sup>4</sup> Maj A. J. Learmonth, m.i.d.; Meremere; born NZ 1 Sep 1901; civil engineer; OC 18 A Tps Coy 1942–43; seconded to Indian Army 1944–45.

<sup>5</sup> R. Trevor Smith, 'Military Railway Construction in Middle East, 1941–43'.

<sup>6</sup> Life of Kitchener, Vol. I, p. 208.

<sup>7</sup> Sgt T. M. Tangney; Waiouru Mil Camp; born Timaru, 30 Oct 1918; fireman.

<sup>8</sup> Letter, Lt McLenaghin.

<sup>9</sup> Spr C. Tombs; Lower Hutt; born Blenheim, 22 Oct 1901; fitter.

<sup>10</sup> Capt K. J. Mawson; Wellington; born Wellington, 17 May 1909; civil engineer.

<sup>11</sup> Lt T. B. Lucy, m.i.d.; Rarotonga; born NZ 3 Aug 1905; stationmaster.

<sup>12</sup> Unexploded bomb.

<sup>13</sup> D. D. Alderton, manuscript history of No. 2 Section, 21 Mechanical Equipment Company, p. 27.

<sup>14</sup> During the three months the 17 Company draft was working with 16 Company its casualties were two killed, three wounded, four scalded during attacks on locomotives, one injured in a shunting accident and twelve evacuated through sickness.

<sup>15</sup> Sgt G. J. King; Christchurch; born Christchurch, 9 Dec 1900; stationmaster.

<sup>16</sup> Lt J. W. Morgan; born NZ 1 May 1900; railway guard.

<sup>17</sup> Maj W. F. Young took command of 10 Construction Company on 17 May. Captain Halley, promoted major, became OC 9 Survey Company.

<sup>18</sup> Capt J. D. Ellis, m.i.d.; born Dunedin, 24 Sep 1915; engineering student.

<sup>19</sup> Capt C. J. Tustin; Lower Hutt; born Hastings, 9 Nov 1913; civil engineer.

<sup>20</sup> Maj A. A. Treloar; Lower Hutt; born Wanganui, 3 Apr 1911; civil engineer.

<sup>21</sup> Quoted in *Crisis in the Desert*, p. 24, an official South African war history.

<sup>22</sup> *The Tiger Kills*, p. 123.

<sup>23</sup> Spr J. Bain; born Scotland, 22 Nov 1899; engine driver; died Lower Hutt, 2 Mar 1951.

<sup>24</sup> Spr H. R. Withington; born NZ 13 Apr 1917; prospector.

<sup>25</sup> This diary entry might give a wrong impression. Wells and aqueducts were not poisoned but were rendered useless with quantities of bone oil and salts.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## CHAPTER 10 – NEAP TIDE IN EGYPT

## CHAPTER 10

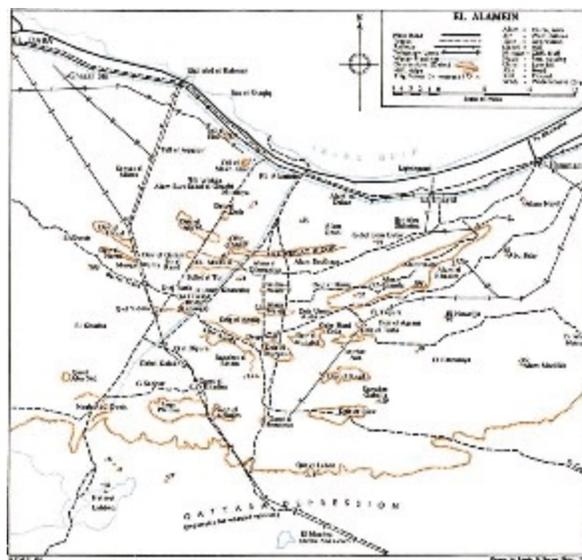
### *Neap Tide in Egypt*

On 20 June 1942, the day [Tobruk](#) was captured and [Misheifa](#) again became the railhead, Headquarters 2 NZ Division opened near the beach ten miles west of [Matruh](#). Fourth Brigade arrived the next day and took over the western [Matruh](#) perimeter from the [Sidi Barrani](#) road to the coast; 6 Field Company was ordered to 'recce' the mine belts and strengthen them where necessary. Fifth Brigade reached [Matruh](#) on the 23rd; the battalions covered the eastern perimeter and 7 Field Company shared in the mining. Rommel was nearing the frontier wire and the railway staff was being evacuated back as far as [Charing Cross](#).

Fifth Field Park Company came into the area on 24 June with Rear HQ 2 NZ Division; 6 Brigade, including 8 Field Company, had been halted at [Amiriya](#). It had taken just seven days to cover the 900 miles from [Syria](#) into Egypt—and the enemy was less than 30 miles away.

The intention was, at that date, to defend [Matruh](#) and every available sapper was working to restore the 'Rabone Line' that had been prepared against the first advance of the Italian Army. The decision to make [Matruh](#) a fortress like [Tobruk](#) was reversed in favour of keeping the Eighth Army mobile and fighting a battle of manoeuvre in the area between [Matruh](#), [El Alamein](#) and the [Qattara Depression](#). [General Freyberg](#) was instructed to organise his command into battle groups and deploy to the south of [Matruh](#).

To make the Division fully mobile the infantry battalions were reduced to three companies and 6 Brigade at [Amiriya](#) was denuded of desert-worthy vehicles. Fifth Field Park Company sent its bridging and folding-boat trucks back to [Maadi](#); sapper strength was reduced to approximately half. The LOB group, including the Divisional Postal Unit, less a section operating with 6 Brigade, also went back to [Maadi](#). For the coming operations 5 Field Park Company was to move with Divisional Headquarters Group, 6 Field Company with 4 Brigade and 7 Field Company with 5 Brigade. Eighth Field Company stayed with 6 Brigade.



Officers on the strength of Divisional Engineers companies on 14 June were:

#### Headquarters Divisional Engineers

Lt-Col F. M. H. Hanson

Capt C. F. Skinner

Lt T. W. Bowes

Lt F. M. McLaughlin

#### 5 Field Park Company

Maj J. N. Anderson

Capt K. Rix-Trott

Lt H. M. Scott

2 Lt E. R. Somerville

2 Lt W. H. Mandeno

Lt H. F. Hamilton (attached)

#### 6 Field Company

Maj H. C. S. Woolcott

Capt B. S. Smyth

Lt P. W. de B. Morgan

Lt C. M. Wheeler

Lt J. M. Dorreen

Lt St. G. W. Chapman

Lt A. Edmonds

Lt R. Hobday

#### 7 Field Company

Maj L. A. Lincoln

Capt H. C. Page

Lt R. M. Page

Lt F. E. Foster

Lt W. A. Scott

Lt J. W. Standish

2 Lt J. Galloway

#### 8 Field Company

Maj A. R. Currie

Capt H. M. Reid

Lt M. A. Andrew

Lt G. K. Miller

Lt M. H. Kemp

Lt R. A. Pickmere

Lt K. F. Jones

Following a night of indiscriminate bombing, 25 June was a very full day; mines and stores were rearranged, to the accompaniment of repeated air raids, on the reduced number of trucks and by midday the sappers were ready to move at a moment's notice. They moved, but not in the direction expected.

Field Marshal Rommel was pushing aside such opposition as Eighth Army could muster and was heading for a four-mile gap between the main mine belts covering [Matruh](#) on the west and south; the last train had arrived from [Charing Cross](#) and the last railway operating sappers had ridden in on a rail motor-lorry soon after. Every yard of the New Zealand built Desert Railway Extension was now inoperable or in the hands of the enemy.

The CRE was instructed to help close the minefield and to start from a point on the [Siwa](#) Road about 16 miles inland and work north-east towards the Indian sappers coming down from [Charing Cross](#).

The trucks were emptied of gear and refilled with mines; 6 Field Company (Major Reid, vice Major Woolcott in hospital) was joined by 7 Field Company and, protected by 20 Battalion, began work at that period when the desert dusk momentarily separates daylight from darkness. It was very comforting, with German flares lighting the western horizon, to know that the 20th were lying silent and watchful in an arc across the gap.

'Darkness set in as we settled down to work, and it was eerie out there by ourselves, with the enemy's lights illuminating the area at irregular intervals. We laid the mines to an unusual pattern in the hope of deceiving the enemy. Two rows were laid 10 yards apart on the enemy side of the field, another two rows 10 yards apart 200 yards further east, then another two rows 10 yards apart 200 yards further east still, finishing up with four rows 10 yards apart another 200 yards further east. This gave a total effective depth of field of 660 yards, and with the mines being laid in this way it gave the enemy a great deal of work before the pattern could be discovered. The supply problem as we moved ahead was very awkward, as more

mines had to be taken forward as the field lengthened. Due no doubt to the new work at night and the nearness of the enemy, some of the drivers were a little nervous, with the result that three trucks were blown up on our own mines.<sup>1</sup> Fortunately no one was injured, but the trucks had to be abandoned. Although we carried barbed wire and pickets to fence the field, time was so short that it was left unfenced. As things turned out in the end, this was all in our favour, as the Germans were well into the field and lost a large number of vehicles before it was discovered.<sup>2</sup>

Seventh Field Company finished its share, went back to [Matruh](#), drew 5000-odd mines to replace the divisional stores used at [Charing Cross](#) and then rejoined 5 Brigade.

Sixth Field Company was making ready to leave when a truck loaded with 350 mines blew up. Two sappers on the truck were killed instantly and six others wounded, including Lieutenant Wheeler who was over 100 yards away. While waiting for the ambulances it was found that there was still a gap on the Indian sector as they had run out of mines. The upshot was that Lieutenants [Dorreen](#)<sup>3</sup> and Chapman and a party of sappers had to stay and finish the job.

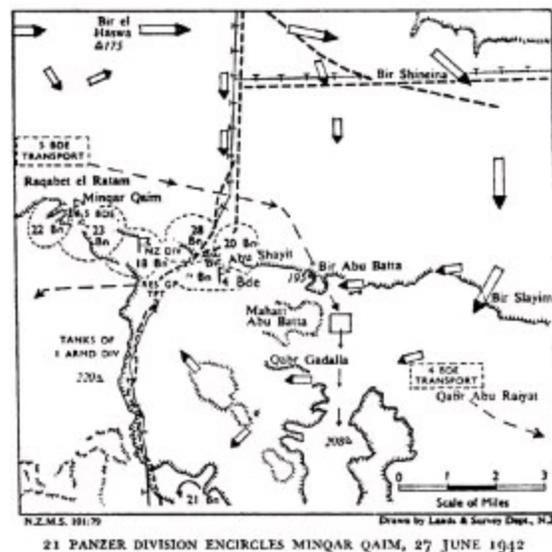
When 6 Field returned about 2 a.m. the Division had departed, the Indians were in command of the [Matruh](#) fortress but were preparing to move out, and nobody knew where the New Zealanders had gone.

There was no sleep for the sappers on account of marauding planes, nor for Major Reid trying to find somebody who knew the Division's whereabouts, nor for the rearguard minelayers who finally came out with 20 Battalion after daybreak and caught up with the company later in the day. With a rough idea as to where the Division might be, the company went via Smugglers' Cove to [Garawla](#), then south to the concentration area, where the brigades were on the point of breaking out into desert formation preparatory to a move farther to the south.

The Division made for [Minqar Qaim](#),<sup>4</sup> about 25 miles south of [Matruh](#). The [Minqar Qaim](#) feature itself is part of an escarpment parallel with the coast, and there is a wide but shallow valley that has its far side in the high country around [Matruh](#). It will be remembered that the Railway Construction Group had to surmount this rise

soon after leaving [Similla](#). An anti-tank ditch and mine belts of varying antiquity opposed the passage of armour through the valley, but it must be stressed that to a determined enemy a minefield, like a road demolition, is only as effective as the amount of fire covering it. There was very little fire covering that stretch of mines.

General Freyberg's instructions were, *inter alia*, to deny the [Minqar Qaim](#) escarpment to the enemy and to command with fire the approaches from both north and south of the feature. From [Garawla](#) a desert track ran right through the proposed position down to [Bir Khalda](#), about 12 miles farther south. Besides being on a possible line of approach to the rear of the Division, [Bir Khalda](#) was on the site of a field maintenance centre stocked chiefly for the refuelling of armoured formations.



**21 panzer division encircles minqar qaim, 27 june 1942**

Twenty-first Battalion, with a battery of field guns, a troop of anti-tank guns and a section of 7 Field Company (Second-Lieutenant [Galloway](#) <sup>5</sup>), was sent down the track to [Bir Khalda](#) to defend the centre.

The troops had seen enough of the unending stream of trucks, cars and other vehicles fleeing from the stricken fields to know that Eighth Army was in a bad way, but that sorry state of affairs clearly did not apply to the [RAF](#). Formations of from nine to twelve bombers were frequently overhead trying to stop the enemy avalanche—a very heartening spectacle to the formations waiting the enemy onfall.

But the [RAF](#) did not have complete control of the sky; the 21 Battalion column at [Bir Khalda](#) and 6 Field Company at [Minqar Qaim](#) were both bombed at dusk. Eleven of the 57 casualties suffered by 21 Battalion were sappers and there were two killed and seven wounded at [Minqar Qaim](#).

By midnight 26 - 27 June 2 NZ Division was deployed in mutually supporting positions on top of and below the escarpment of [Minqar Qaim](#) with, facing north, 4 Brigade on the right, Divisional Reserve Group centre, and 5 Brigade left.

In the [Charing Cross](#) area German sappers were worrying their way through the minefields. The enemy plan was for 90 Light Division to encircle and isolate [Matruh](#) while 21 Panzer and 15 Panzer Divisions, advancing westwards on axes north and south of the [Minqar Qaim](#) escarpment, destroyed or forced back the British armour. Panzerarmee Command had no idea that 2 NZ Division was settling itself between the paths of the two armoured divisions.

The infantry was dug in by daybreak (27 June) and the engineers began laying mines. Sixth Field Company worked along the north-east approach to 4 Brigade with a mile-long belt of eight rows of mines, then dog-legged back to connect with another belt covering the left flank of 4 Brigade, the responsibility of 5 Field Park Company which, owing to the reduced strength of the field companies, had to do work unusual to a Field Park. Seventh Field Company was to protect the shorter two-battalion 5 Brigade front.

Sixth Field Company was finished before midday and had shifted all its trucks to the top of [Minqar Qaim](#).

Fifth Field Park Company, working about one and a half miles in front of 28 (Maori) Battalion, was fired on as the approaching [21 Panzer Division](#) began the demonstration that should have been the cue for the opposition to depart. The sappers knew it was dangerous for men not fully practised to fuse mines and had heard what happens when a truckload of mines explodes.

It was in great measure due to the personal example and inspiring leadership of Major Anderson that the protective minefield was laid before the enemy attack reached the FDL's at [Minqar Qaim](#) on 27 June 42. Despite the intensity of the enemy

shelling of his parties and the development of the attack, 4,000 mines were rapidly laid. Where the shelling was heaviest Major Anderson was to be seen, encouraging his men and he, himself, fusing mines.' <sup>6</sup>

Sergeant [Duckworth](#) <sup>7</sup> was a tower of strength to his Company Commander, for his calm manner inspired confidence in sappers working far beyond infantry protection. Both were later decorated with a DSO and MM respectively.

Upon the completion of the job the company withdrew behind the Reserve Group area.

Seventh Field Company had completed its job and was back in 5 Brigade's transport area at the bottom of the escarpment when enemy ranging shells began to fall too close for comfort and all the trucks, acting under instructions, withdrew to the vicinity of 4 Brigade's vehicle park on top of [Minqar Qaim](#).

Soon afterwards No. 1 Section (Lieutenant Foster) was ordered to lay mines across the mouth of the wadi occupied by Headquarters 5 Brigade. They had every inducement to lay mines smartly for a 25-pounder battery which had gone out to inspect dubious visitors was falling back, attended by fifteen enemy tanks. The job was so clearly urgent that the mines were unpacked from their cases on the trays of the two trucks working towards each other from opposite sides of the wadi and then laid out roughly on the surface. Containers of firing mechanisms were put adjacent to the mines, which were then armed and placed in position. The running fight between the tanks and field guns came closer but the sappers carried on, and were half finished when they were fired on. [Brigadier Kippenberger](#) wrote later regarding this episode:

'I watched with my heart in my mouth. Several batteries were now shelling the tanks almost hidden in dust and shell bursts. Suddenly one tank moved swiftly in towards us and opened rapid fire on the sappers with its gun and heavy machine gun, vicious looking tracer. The second shell hit one truck and killed five and wounded three. The other truck and its party went resolutely on until I could make them hear me and then came calmly in. One man ran back and drove in the damaged truck.' <sup>8</sup>

The man who ran back was Lieutenant Foster, who was awarded an immediate

MC for his coolness and determination. He was supervising the job under instructions from Major Lincoln and remembers the incident vividly. 'When approaching our own lines, the damage to the other party was noticed so, instructing the truck to carry on, the writer, with Sapper Rex (Nobby) [Brydon](#)<sup>9</sup> made his way at the double out to the other truck. On the way we were passed first of all by some of the other party still capable of walking, and later by Major Lincoln who had Sapper Meecham,<sup>10</sup> severely wounded, on his back. Arriving at the truck a quick inspection showed that it would probably run, so loaded the wounded on and started for our lines. Sapper Brydon in the back attended to the wounded who were on top of the crates of mines, and from time to time shouted instructions to either "speed up" or "ease down" in accordance to his views of the situation.... Nobby was the heart of a group of old timers, always in trouble when in base, but the backbone of the Unit in the field. If things were sticky Nobby and his gang were always there.'

A battle badly begun is half lost. A change of plan and commander at the last moment; conflicting orders; two Army Corps fighting a battle independently of each other; sketchy communications, resulting in formations being unaware of what was going on a mile or so away; reflexes conditioned on one hand by a long retreat and on the other by a policy of being 'The fustest with the mostest', to resurrect an Americanism of the War of Independence, all contributed to another defeat, the fifth since the '[Gazala Gallop](#)' began.

All through the morning a duel between German tanks and New Zealand gunners went on, while farther back 6 Brigade (and 8 Field Company) was moved forward from [Amiriya](#) to [Kaponga](#). The enemy answer to the stubborn refusal of the unknown force to vacate the [Minqar Qaim](#) escarpment was to call forward the Italian [XX Corps](#). Four enemy divisions were thus being employed against the New Zealand Division, and to help Rommel a little, 1 Armoured Division to the south of [Minqar Qaim](#) was most inexplicably told that the 2 NZ Division had been pushed out of [Minqar Qaim](#) or had withdrawn, and was ordered to withdraw also.<sup>11</sup>

[General Freyberg](#), who had already been informed that a last-man stand was not contemplated in the defence of [Matruh](#) and to withdraw at his discretion, was watching an attack on 4 Brigade when he was wounded and Brigadier Inglis took command.

At that moment, mid-afternoon 27 June, 6 Field Company was with 4 Brigade transport, 7 Field Company with 5 Brigade transport nearby, and 5 Field Park Company with Divisional Reserve transport.

Two enemy columns, coming in from the south and east, fired on the 300 vehicles comprising 5 Brigade transport and 7 Field Company. The drivers on their own initiative made off south at high speed and avoided capture or destruction.

The demonstrable fact that the Division was cut off from [Matruh](#) in the north, and the knowledge that 1 Armoured Division in the south was moving out, added up to the conclusion that if 2 NZ Division was to continue its interest in the war it would have to break through the encircling enemy by its own efforts.

Twenty-first Battalion was informed by wireless that upon relief by a squadron of Divisional Cavalry it was to rejoin 5 Brigade, but by dusk it had not arrived. It had in fact started back at 4 p.m., but was having a very busy time dodging enemy formations which had passed and circled round to the south of [Minqar Qaim](#).

By now the plan to break through the ring around [Minqar Qaim](#) had been decided upon. Fourth Brigade was to arrange its battalions in arrowhead formation, advance unannounced by artillery and clear a road for the vehicles; first-line transport was to assemble in tight night formation in the assembly areas, with B Echelon and attached units following.

Fourth Brigade was able to so dispose itself, but the vehicles of 5 Brigade could not be found by LOs or contacted by wireless. Two battalions of infantry had perforce to be piled on to anything that had wheels, mostly artillery quads, limbers, and even on guns. Even the loaded engineers' mine trucks became transports. Infantrymen who would enter a bayonet charge with eagerness were very reluctant to take a seat on top of unarmed anti-tank mines. The grinning sappers told them it was quite safe but they were not believed.

Zero hour was 12.30 a.m., but it was over an hour later before the spearhead moved off, followed by Lieutenant Morgan with a twenty strong minesweeping party. No mines were found and the sappers waited at the agreed area for the trucks. Ahead of them and behind them there was complete silence, then a few startled

bullets preceded a roar that was part Maori haka, part football yell and part cheer. Very soon grenades and bayonets were at work, then the success signal, two red Very lights followed by a green, climbed into the moonlight.

For 6 Field Company the drama was acted out of sight and the curtain had been rung down when they jolted through the gap. The trucks bumped along until daylight, when a halt was made for breakfast and reorganisation. The journey eastward continued until nine that night when, tired and stiff after twenty-one hours in the trucks, they bivouacked on the [Alamein](#) road that 8 Field Company had made a few weeks previously.

The Divisional Reserve Group, including the scrambled 5 Brigade, nine trucks abreast in close desert formation, had been drawn up level with and south of 4 Brigade. Zero hour passed and all eyes were straining into the quiet moonlight for the signal to move. They were still straining over an hour later.

Brigadier Inglis, apprehensive that the column would not get out of the encircled position before daylight, decided to take it south around the area of probable fighting while the enemy was involved with 4 Brigade, which, though so late in starting, must soon begin its action.

Suddenly to the south tracer shot into the air. A muffled roar followed as three battalions charged into the night. Then, in the words of Sapper [MacFarlane](#) <sup>12</sup>:

'We turned away and hared S.E. until we ran into a flock of Hun tanks.... These were backed by mortars and machine guns, and they had a picnic, M.G.'s firing in lanes through our transport as we charged on to keep our appointments with the future. Two panzers crashed into the head of the column and opened rapid fire on anything in sight, which was enough to keep them busy for a week. Anti-tank gunners returned the fire as they went. The column kept on, zig-zagging, and cleared the heat forty five minutes after moving into it. At three we stopped.... We checked over personnel, finding the Field Park luck had not deserted us. The unit came out of that hot spot with only three wounded and five missing including 2/Lt Mandeno.

'One P.U., one G.M.C. compressor and one Albion truck were missing, and one Tommy Bedford that had been attached to us at [Matruh](#). The crews of the

compressor and Bedford had jumped to other trucks when their own were hit.'

What Sapper MacFarlane did not know was that they had bumped a German tank laager. The front trucks halted, the others closed up and there was a wild mêlée, tanks firing blindly, anti-tank guns en portée replying, rifles firing at random and grenades exploding.

Part of the column turned left (north-east) and got clear; part, including 5 Field Park Company, turned right and got clear, then turned again to the east and safety. Part turned right around and began to retrace its steps.

Fifth Brigade transport, after its unscheduled breakaway, was halted by the Brigade Staff Captain, the Brigade Transport Officer and Major Lincoln about nine miles to the south. No answer could be got to wireless requests for orders and the column was moved some five miles to the east or away from the enemy.

There was actually no lack of orders telling them to return at once, but they were not picked up through one of those mishaps that defy precaution. Brigade Headquarters' batteries were running down, the charging sets were with the trucks, and although there were charged batteries available, those who knew where they were did not know that they were needed.

An attempt to return to [Minqar Qaim](#) before nightfall was frustrated by running into a tank engagement. Major Lincoln and the Staff Captain located another tank formation farther south cosily moving into night laager and quite unconcerned about what was going on a few miles away. The Kiwis asked for a tank escort to get them back to the brigade but the request fell on deaf ears. They returned to the column even more frustrated.

Towards midnight a weak signal was picked up from 5 Brigade telling the vehicles to go back to [Amiriya](#). This was regarded as an enemy attempt to deceive, for a warning had earlier been issued that false messages were being circulated by the Germans on Eighth Army wavelengths. Nobody of course suspected that the Division was on the point of staging a breakout, and it was resolved to wait where they were until verification of the instruction was obtained. At first light Lieutenant-Colonel Russell, who had gathered up the stragglers who had turned back towards

[Minqar Qaim](#), met the lost 5 Brigade B Echelon, whereupon they safely journeyed eastwards together and harboured that night behind 4 Brigade, not far from [Kaponga](#), where the Division was to assemble.

Twenty-first Battalion, almost given up as captured, had been told by an Indian formation that the Division was leaving [Minqar Qaim](#) that night and had later run into another formation, this time decidedly hostile. There was a sharp engagement between the unit carriers and enemy anti-tank guns; the battalion was divided by a wadi during its withdrawal and each part spent the last daylight hours searching for the other. Eventually each group sheltered behind friendly armoured formations. Both made a safe return to [Kaponga](#), one that afternoon (28th) and the other the following morning.

A measure of the confusion existing in the highest echelons of command is the fact that 6 Brigade had been ferried from [Amiriya](#) to [Kaponga](#) Box with no supporting artillery and left there with very little transport. But this was remedied when 2 NZ Division was concentrated again.

Sixth Brigade was to put [Kaponga](#) in a state of defence. It found hordes of native labourers working under British direction, and they left as the Kiwis arrived. They were also taking two D8 bulldozers with them until Sergeant Bert [Church](#)<sup>13</sup> commandeered them at pistol point. Eighth Field Company used Church's captures for cutting anti-tank scarps and ditches, and for digging trenches in which reserve ammunition and stores were placed and then covered again. The water supply was also taken over by the Company. Anti-tank mines for the defence were obtained from a dump at [Alamein](#) by Lieutenant Ken [Jones](#),<sup>14</sup> who secured four South African trucks for the purpose. Enemy bombers who were a nightly nuisance were enticed away by the trick of setting up piles of rubbish outside the box around drums of petrol and explosives. When the first bomb fell the petrol was exploded and drew the rest of the bomb load. The idea worked well until, by a mistake, the petrol was exploded before the first bomb was dropped.

The end of June saw the Division back into shape once more. There had been a lull in the enemy onfall enforced by the fighting about [Matruh](#). The respite was used to deploy the only battle-worthy infantry divisions left to the Eighth Army in the last defences before the [Nile Delta](#). First South African Division was entrenched in the

**Alamein** 'box' or defended locality covering the road and railway to the west of the **Alamein** station; **18 Indian Brigade** went into the depression of **Deir el Shein**, about midway between the Springboks and the Kiwis, and 2 NZ Division was about 20 miles inland in and around Fortress A or, as better known to the troops who had helped in its construction, **Kaponga** Box. There was another defended locality, Fortress B, on the edge of the **Qattara Depression**, but it was unfinished and not held for a determined defence so that there were wide lines of approach along the 40 miles between the unturnable flanks of the sea and the depression. A sine qua non to a successful defence was a strong armoured force to operate in the gaps between the infantry localities, but owing to casualties and the long retreat the available armoured force was neither strong nor in good shape.

The importance of escarpments and ridges will need no stressing after reading of **Sidi Rezegh** and **Minqar Qaim**, but notice must now be taken of depressions, desert phenomena roughly analogous to empty lakes of varying size and depth. They were in effect slit trenches that could shelter a battalion or perhaps a division with all its vehicles. Ridges a few yards high and depressions a few yards deep were complementary; one gave observation, the other protection. Both will be frequently mentioned.

Engineer locations on 1 July were: 8 Field Company with 6 Brigade in **Kaponga** Box, 7 Field Company with 5 Brigade, 6 Field Company with 4 Brigade, and 5 Field Park Company with Headquarters Divisional Engineers in the **Munassib Depression** (Deir el Munassib), nine miles or so south-east of **Kaponga**. Both brigades were prepared to move against an attack on **Kaponga**.

Should the **Alamein** defences succumb to the victorious Rommel there were plans to retire to the Delta, where further defences were being built. There were even plans to give up Egypt if necessary.

On 1 July the German commander opened the final phase of his conquest of Egypt with his five times successful manoeuvre of thrusting in the coastal area, then taking the rest of the defences in the rear. He found the Springboks in no mood to be pushed around; they had a division lost at **Tobruk** to avenge, and after two days' hard fighting little had been gained beyond overrunning **18 Indian Brigade** and getting on to the western end of **Ruweisat Ridge**, halfway between **Alamein** and

**Kaponga**. It ran east and west and its total occupation would seriously depreciate the value of **Kaponga**. Sixth Brigade was ordered to be ready to leave the fortress to a caretaker battle group. Transport would be produced from somewhere, and in the meantime 8 Field Company would dump surplus stores into deep trenches ready for their bulldozers to cover.

July the 3rd was a day of orders and counter-orders. The indications were that the invasion had been stopped at last and a counter-offensive was being considered. Every change in a liquid situation brought new movement orders for the fighting troops, but from the sapper angle what happened was as follows:

Sixth Field Company accompanied 4 Brigade to assist a New Zealand gun column north of **Alam Nayil**, where the Italian **Ariete Division**, under urgent orders to drive south-east and encircle the New Zealanders and anybody in the vicinity, was so hustled by a British armoured brigade that it split in two and its artillery component came into action against the Kiwi gun column.

The issue was resolved when 19 Battalion attacked from a flank and captured most of the Italian guns and many gunners and vehicles. The **Ariete Division** was never quite the same again. The sappers, beyond holding part of a defensive line in an infantry role, were not involved.

In **Kaponga** 8 Field Company, with new instructions, was waiting for 7 Field Company to take over. Some desert-worthy transport arrived and was loaded with stores, surplus ammunition was buried by the acquired bulldozers and, upon relief by 7 Field Company, the Company left **Kaponga** behind Brigade Headquarters through the gapped minefield. The sappers travelled about 15 miles through Munassib to the **Himeimat** area, where the withdrawn Indian garrison of Fortress B was concentrating and from where, the next day, Lieutenant Jones and 47 sappers were sent back to LOB camp.

Fifth Brigade was now required to intercept the gunless **Ariete Division** at **El Mreir**, a depression some five miles northwest of **Kaponga**. Lieutenant **Scott**,<sup>15</sup> with three trucks and sixteen sappers, was detailed to accompany the brigade but did not get involved in the fighting that night and the next day in and on the far lip of **El Mreir**.

The [Ariete Division](#) did not, as a matter of interest, come that way, but the pressure exerted against the inland enemy flank drew active retaliation from the enemy air force. Two 7 Field Company trucks were damaged, one a write-off, and there were two casualties, one fatal.

In the midst of these moves and counter-moves 5 Field Park Company built a PW cage for some 350 guests from the [Ariete Division](#); the Company did not have to provide guards, for which there was gratitude—after the experience at [Sidi Rezegh](#) it was not a popular occupation. During the afternoon a subsection (Lieutenant Murray [Scott](#) <sup>16</sup>) escorted by a platoon from 19 Battalion had the interesting job of destroying enemy guns and vehicles on the late Ariete-New Zealand battleground. The Italians still had sufficient fire power to make work dangerous around what the Kiwi gunners had left after taking their pick of forty-four field guns, including five of our own 25-pounders, sundry vehicles and equipment captured in the encounter. Sergeant O'Brien <sup>17</sup> searched the two square miles of battlefield and was awarded an MM for his courage and devotion to duty. The guns were destroyed by stuffing the muzzles with explosive and igniting it from a safe distance, while vehicles were dealt with by detonating a slab of gun-cotton against the engine. Trucks that were still runners made a welcome addition to the New Zealand transport.

By now it was the end of the day but not the end of the counter-marching. An exciting day was over and the troops were settling down for the night. Fourth Brigade was ordered to move into [Kaponga](#), with 6 Field Company leading and Major Reid navigating. En route the destination was altered and the brigade bivouacked just outside the fortress minefield until daylight, whereupon it was deployed facing south, that is overlooking [Munassib Depression](#). Sixth Field Company found itself again in the line on the right of 20 Battalion.

Fifth Field Park Company were not left to enjoy any sleep that night either. Eighteenth Battalion moved into the area and the sappers left on a bewildering roundabout march. First leg was ten miles south, which took over three hours, pulling trucks clear of treacherous sandy patches. After a short rest there were more moves until the Company ended up at midday (4 July) inside [Kaponga](#).

After the rushing hither and thither that has been indicated, the 4th was a quiet day. The enemy had been denied the shelter of [El Mreir](#) and 9 Australian Division,

with [Tobruk](#) on its mind, had journeyed to Egypt from Palestine and was almost ready for the fray. Fifth Brigade was waiting for darkness to complete the capture of [El Mreir](#).

These night operations were not very successful and by first light the position was largely as before—5 Brigade held one side of the depression and the enemy held the other. But a counter-offensive by Eighth Army was in course of preparation. If things went well, 2 NZ Division was to strike for [Daba](#), hold the steep escarpment there and cut off the retreat of enemy vehicles along the coast road.

Sixth Brigade, under orders to go back into reserve, had its role altered as a result of the changing picture and 5 July saw it in [Kaponga](#) again, where 7 Field Company was still waiting for the return of its section away with 5 Brigade, and where 8 Field Company, having preceded the brigade, was heartily sick of being picked on by enemy raiding aircraft. The raids themselves were bad enough but the aftermath, the exploding of resultant unexploded bombs, UXB as they were called for short, called for a steady nerve. All sapper companies had this work to do from time to time and this was the way of it. Whenever a UXB was located or reported and its disposal required, a slab of about two pounds of gun-cotton was prepared with a length of slow-burning safety fuse. A driver with a very, accent on the very, reliable truck took another sapper to the scene of the demolition. The gun-cotton was fixed as close as possible to the bomb fuse, the igniter was lit and the truck with its occupants departed smartly.

Fourth Brigade was ordered to make a wide sweep out to the left rear of 5 Brigade, still at [El Mreir](#), and was bombed twice on the move before it dug in at [Qaret el Yidma](#). Another two-mile advance the next night (6 - 7 July) ended in a bloodless victory at [Mungar Wahla](#). The Division was now poised for its strike for [Daba](#). The enemy was also apparently poised to prevent any such thing, for the brigade was warned to get back quickly to [Qaret el Yidma](#). The sappers had spent laborious hours in very stony ground building parallel rock walls for shelter and did not know whether to be glad or sorry that their 'above ground trenches' were not to be tested.

The return to [Qaret el Yidma](#) had scarcely been completed when another order came from Division to get behind the shelter of [Kaponga](#) again. The return by night

was an arduous affair of winching trucks out of sand drifts. The sapper company led the way piloted by Major Reid, and soon after daybreak (8 July) the brigade was back in Munassib and wondering what a nice night's sleep would be like.

Fifth Brigade, also ordered to withdraw, had an equally trying night negotiating the 20 miles to Munassib.

There was another dispositional shuffle that put 5 Brigade in the [Deir Alinda](#) depression between 4 Brigade and [Kaponga](#), and 4 Brigade into [Muhafid Depression](#) a little east of Munassib. While these moves were being performed in the profane darkness, 6 Brigade was preparing to retire once more into reserve and 8 Field Company, moving via [Deir Alinda](#), Deir el Munassib, [Himeimat](#) and [Burg el Arab](#), reached [Amiriya](#) on the 10th and camped next to the [NAAFI](#), which was good judgment on somebody's part.

Seventh Field Company also left [Kaponga](#) with 6 Brigade and joined up with 5 Brigade again.

Fifth Field Park Company moved out during the night, dropped Lieutenant [Somerville](#) <sup>18</sup> and ten sappers with three trucks at CRE Headquarters in Munassib, and arrived at [Amiriya](#) on the 11th to find that 8 Field Company had departed.

Major Currie and his sappers, now under command of [5 Indian Division](#), were preparing positions on [Alam Halfa](#) ridge, on the New Zealand line of retreat should the [Alamein](#) position go the way that [Gazala](#) and [Tobruk](#) had gone. Lieutenant [Claridge](#) <sup>19</sup> and 24 sappers from 5 Field Park Company, plus the field company's compressors and crews from the LOB camp at [Maadi](#), reinforced 8 Field Company.

It only remains to describe the changeover of [Kaponga](#) from New Zealand to German possession; the fortress from which so much was expected, and of which so little use was made, was abandoned soon after the sappers pulled out and an enemy patrol made cautious entry. Even German military efficiency sometimes slips for the next day (9th) Rommel personally directed a full-scale operation, infantry, artillery and air force, in a neat textbook movement and captured [Kaponga](#) all over again.

He describes in his memoirs how 21 Panzer, Littorio and 90 Light Divisions 'broke through the southern part of the [Alamein](#) position penetrating to a point as far

to the east as the break-through in the central sector had reached.'

It is a nice piece of irony that [Kaponga](#) which cost so much Kiwi sweat was used by Field Marshal Rommel as Advanced Headquarters. No doubt he and his staff approved of the bombproof concrete shelters and other amenities placed at his disposal.

That serio-comic operation was, according to some, the real turning point in the war in North Africa, for it was the last victorious march against the Eighth Army. In the morning 9 Australian Division attacked at [Tell el Eisa](#). The Eighth Army had at long last changed over to the offensive, a fumbling and ineffective offensive in the beginning as 2 NZ Division found to its cost.

By the middle of the week the Australians had made their presence felt at [Alamein](#), the enemy lapping around the Division from the north and south had been chased away by mobile columns, and the plan was now to capture [Ruweisat Ridge](#) and so provide a path for armour to strike at the enemy flank.

This is admittedly all very confusing, because preparations were being made on the one hand to attack and on the other to prepare a last-ditch stand at [Wadi Natrun](#). The following note, which survived in spite of directions to the contrary, is informative:

most secret

11/7/42

Dear Andy, <sup>20</sup>

Will you please send someone to [Maadi](#) to have in maximum readiness all bridging material such as small box girder and folding boats. If any difficulty over decking must improvise somehow. Also look around and ascertain where any other bridging material for 50 to 60 foot trestle bridges could be obtained, confiscated, pinched or as you would.

The General wishes to be in full readiness to cross [El Nubariya Canal](#) to North East of [Wadi Natrun](#) at several places and then proceed over Delta. Therefore at same time (not of same importance as preparation for bridging) some recce of

routes across Delta would be useful.

It is hoped that these extreme measures will not be necessary but the General wishes to be fully prepared and insured.

This is most secret and should not be discussed with Anyone except to tell them what to do. Give any reason but the right one.

Destroy this note.

F. M. Hanson

Meanwhile an assault by 2 NZ Division ( 13 Corps) and 5 Indian Division ( 30 Corps) on Ruweisat Ridge, about six miles north of Alam Nayil, the area where Ariete Division had met its Waterloo and where another tank engagement had since been fought, was being planned by Eighth Army.

Shortly, the result was an operation order which gave the eastern end of the objective to one brigade of 5 Indian Division and the western end to two brigades of 2 NZ Division; an armoured brigade would follow along the inter-corps boundary, while another armoured brigade would move behind the open left New Zealand flank. The actual attack would be a silent one by night, the Air Force and gunners would soften up the objective and the tanks would be in position to deal with counter-attacks by first light.

The occupation of the start line, with the infantry spread along the northern slopes of Alam Nayil and the engineers with Brigade Headquarters in the shallow wadis of the reverse slope, was completed late in the afternoon of 12 July Field Marshal Rommel was sealing off the Australian penetration near the coast and daily, until the conflict was resolved, the New Zealand/Indian attack, codeword Bacon, was declared off; finally, on the 14th the advance in the north was halted, but with the enemy strength now concentrated in that sector Bacon was on.

The engineer dispositions were, in 5 Brigade, for an officer and five sappers to accompany the headquarters of each battalion as a mine clearing and demolition squad. All carried explosive packs, i.e., small charges already made up with igniter, fuse and detonator ready to insert but carried in separate haversacks. Lieutenant

Galloway was assigned to 21 Battalion, Lieutenant Foster to 23 Battalion and Lieutenant Scott to the supporting 22 Battalion. Lieutenant [Standish](#),<sup>21</sup> who had joined up in [Syria](#) from the Madras Sappers and Miners of [10 Indian Division](#), went at his own request as an observer with 22 Battalion. The rest of 7 Field Company was to stay near 5 Brigade Rear Headquarters.



RUWEISAT RIDGE, DAWN 15 JULY 1942  
**ruweisat ridge, dawn 15 july 1942**

At 11 p.m. 1500 New Zealand infantry left their start line for the six-mile march across the shallow valley to the hardly discernible heave in the sandy flatness that was called [Ruweisat Ridge](#). The first intimation the 7th Field Engineers had that the attack had been a success was the sight at midday on the 15th of a long column of prisoners marching eastwards; they did not know that another long column of prisoners was marching westwards—the greater part of 22 Battalion, including the sapper party, had been overrun by a few enemy tanks, while only four miles away British armour was waiting orders to advance. It was, as was the custom at that period, 'in support' and not 'under command', and fought according to its own rules.

The engineer set-up in 4 Brigade was somewhat different. Four sappers under an NCO were detailed to each battalion to locate, mark and clear mines; Lieutenant [Edmonds](#)<sup>22</sup> with twenty sappers reported to the brigade artillery group with the same instructions; Major Reid, Lieutenants Dorreen and Morgan with twelve sappers, a PU and two 30-cwt trucks loaded with mines, moved with the brigade transport column close behind the support battalion. Lieutenant Chapman took the rest of the company back to [Divisional Headquarters](#) south of [Alam Nayil](#).

Sixth Field Company had a very nasty time during the waiting period for they were nearest to and under observation from [Kaponga](#), where enemy gunners were active and well supplied with ammunition.

The sappers, with Major Reid navigating, led the brigade transport column. For the first hour there was silence, with the engineers shivering in the coolness of the desert air as the drivers felt their way, as all drivers learnt to do, over unseen inequalities of the open desert. Apprehensive flares and faint yells from the infantry battle going on ahead of them halted the column from time to time. There was a longer halt while a single wire looped on pickets and suggesting a minefield was investigated and found to be a dummy. The column pushed on through empty field works, abandoned guns, quads, trucks and groups of Italians waiting for somebody to collect them.

Just on dawn the trucks were fired on from the open left flank and a barbed-wire fence could be seen against the skyline of [Ruweisat Ridge](#). Machine-gunners smothered the enemy fire but no gaps could be readily found in the wire, and although the anti-tank portées managed to cross the ridge, most of the vehicles had to be left while the men sought cover.

They were actually in the selected brigade headquarters locality but it was an uninviting place. The ridge, flat and featureless, offered no concealment, the infantry were somewhere out in front and the dispossessed enemy had enough mortars and guns to make the spot decidedly unattractive. There was no immediate work for the sappers, so after enduring hostile attentions for some time from the lee of stone sangars, they found a better area behind Brigade Headquarters and occupied some deep trenches. There were a number of wounded lying about without attention, so a couple of small Italian tents were pitched and the wounded brought in out of the hot sun.

The position on Ruweisat was that on the right the Indian attack did not fully succeed but the two New Zealand brigades, depleted, were on their objectives; enemy strongpoints had been bypassed in the long night advance and were becoming actively hostile again and preventing the passage of supporting arms; some tanks that had been flushed in night harbour had been set on fire, but it was suspected that there were others in a strip of country not cleared by the attack,

between the Indian and the New Zealand divisions. Both the surviving tanks and revitalised defended posts were more a nuisance than a menace, for the support tanks were due soon after daylight and would take care of the situation. The tanks were in fact ready and only awaiting orders to advance. It has never been satisfactorily explained why their orders never arrived until it was too late.

Lieutenant Foster and party returned from 23 Battalion during the afternoon; their services as engineers had not been required and the battalion was firmly in possession of its part of [Ruweisat Ridge](#). There was no news of the party with 21 Battalion.

Headquarters 4 Brigade's area was under intermittent fire during the day but Major Reid's party, safely ensconced in their deep trenches, had only one man lightly wounded until about 4 p.m., when twelve tanks with lorried infantry were seen approaching from the west. The brigade defence platoon and everybody else in the vicinity stopped the enemy infantry, the tanks veered off and began to roll up the New Zealand infantry and an armoured car came straight at the sappers, the occupants throwing hand grenades into trenches as it came.

To quote part of a citation that resulted in an award of an MC, 'Major Reid came forward by himself, threw back two Italian hand grenades which he had found in the area, and the armoured car moved away.'

By this time Brigade Headquarters and much of 4 Brigade had been rounded up and the only area not occupied by the enemy was towards 5 Brigade which, although it had lost its support unit, was still holding its objective. To stay any longer would be to go 'in the bag' with the rest of the brigade. The mixed party of engineers, defence platoon and oddments moved off at five paces interval and got safely away, but Lieutenant Dorreen was missing.

'... we saw some of our tanks on the ridge to the south. Imagine our surprise and disgust on topping the ridge to see a large number of them all lying snugly below the crest. Here were the tanks we had been expecting, practically within range of our recent positions, and yet not one of them had come to our assistance. The crews were all very sympathetic with us and just yearning for a fight, but were sorry nothing could be done without orders. It made us mad to think that the tanks

had been so close and that we had had no support from them. Had they moved forward over the ridge an hour before, the position undoubtedly would have been saved, as I understand there were no more than sixteen tanks to be dealt with. We were cut off for some hours, and lack of communication and knowledge of the forward situation evidently had been responsible for the hold up. As shells were still falling in this area and we considered we had had our share for the day we wasted no more time in argument, but continued our journey to the rear.' <sup>23</sup>

Fifth Brigade was withdrawn from the ridge that night (15th–16th) and Lieutenant Galloway reported in with his party intact. Lieutenant Standish, supposedly a prisoner with 22 Battalion, had already returned. When the German tanks stood off and covered the area with their guns he decided that if he just moved casually away he might have a chance, whereas if he ran he most assuredly would have been shot. The plan worked until he tried to board a portée that was making a dash for safety. A shell stopped the portée and a soldier, who appeared from somewhere, was wounded. Standish carried him to a patch of scrub which offered some shade and stayed with him until 'after about an hour or so of milling around, the German tanks and infantry moved off and the depression was taken over by Italian troops. A NZ Fd Amb truck had meanwhile arrived, with a Dr [Thompson](#) <sup>24</sup> in charge, and I managed to get my wounded pal who was now a bit delirious over to him.... at this stage we were being guarded by Italian troops and as the battle moved away so did the Italians until there were only three left, who were becoming friendlier and friendlier, until eventually everyone else having gone and the sound of battle being well away, these three Italians became our prisoners, instead of we being theirs. We all piled into the ambulance and Dr Thompson drove us back to our own lines, which we reached at nightfall after a rather exciting day.'

Standish was congratulated on his lucky escape but nobody was more pleased than Ben. Ben was a bull terrier owned by 'Handle Bar Harry', as Lieutenant Standish was known to all and sundry on account of a magnificent moustache he had grown in a competition. Ben, with his owner, had joined up in England at the outbreak of war; while his boss passed through an OCTU he had resided in a dogs' home and then, by divers unlawful means, travelled to [India](#), served in the [Iraq](#) revolt and the occupation of [Baghdad](#), against the Vichy French in [Syria](#) and was looking after a road in [Persia](#) ( [Teheran](#) to Bushire) when the transfer to 2 NZ Division came

through. Ben was on the Company strength, dived for a slit trench when planes were over, fought through the North African campaign, and died, mourned by all, of canine typhus in [Italy](#).

So ended, with twenty all ranks killed, wounded or missing, the Engineers' share of a battle that began with high hopes, achieved temporary victory, and ended in utter defeat.

The Division reorganised and regrouped along a six-mile arc between Ruweisat and [Alam Nayil](#), 5 Field Park Company was brought forward again and 6 Infantry Brigade relieved the shattered 4th. Two sub-sections (Lieutenants [Miller](#)<sup>25</sup> and Andrew) commanded by Captain Pemberton were formed from forty-one sappers of 8 Field Company working at [Alam Halfa](#) and became the engineer component of 6 Brigade.

Fourth Brigade had in fact fought its last infantry battle and its last action in North Africa; it began training soon afterwards for a new role wherein each battalion became an armoured regiment in [4 NZ Armoured Brigade](#).

The four days from 16 to 20 July were taken up by the field companies in cleaning up the battlefield, or rather that part of it which we still held. Enemy guns were dealt with according to a recipe that did not conform strictly to the book of rules:

'Routine for demolition, irrespective of orders, was firstly, personally salvage Binoculars and Lugers, then group automatics and similar weapons, remove and bash the sights and firing mechanism. Larger pieces of 47 and 88 m.m. the same routine plus putting a quantity of the propellant charges, usually adjacent to the guns, down the spout, then our charges with detonator, with a reasonable length of fuse, give a warning, pull the igniter and move off. We certainly cleaned up a pile of enemy weapons in the three days, as follows:—

2 — 88 m.m.

18 — 47 m.m.

27 — 25 m.m.

Unexploded bombs were dealt with, gaps were made through enemy mine belts and new fields put down prior to lifting the rest of the enemy mines and stacking them for further use. It was a sad period for 7 Field Company. A truck with a load of Mark II English mines, first lifted from one of our fields and used by the enemy in his defensive layout, was being unloaded at the dump, which already contained many hundreds of such mines, when the whole stack went up. Six sappers and the RMT driver were killed instantly and the truck simply disappeared.

Another engineer job at this time was for small parties carrying explosive packs to go out with infantry patrols, including a very business-like raid by 24 Battalion. Lieutenant Andrew and party cleared the way for a carrier section supporting thirty raiders; while the infantry collected forty-odd prisoners, four field guns of various calibre and four machine guns were destroyed.

This feverish activity was intended to indicate that the Division was going to settle down behind prepared defences, but in fact Eighth Army, undeterred by the debacle on [Ruweisat Ridge](#), was preparing for another and even more ambitious attempt to open the way for the armour to reach the rear of the invading enemy.

The [13 Corps](#) battle was planned in four phases, the first being an advance along [Ruweisat Ridge](#) by [5 Indian Division](#), which still held the eastern end, and the capture by 6 NZ Brigade of the eastern end of the [El Mreir](#) Depression and ground to the north to [Deir el Shein](#). While this was being done the CRE was to co-operate with the Indians in clearing suspected mines from a 2000-yard-wide gap between [Ruweisat](#) and [El Mreir](#) for 23 Armoured Brigade to exploit through. Phases 2 and 3 concerned the operations of 23 Armoured Brigade, and finally the Corps would pursue or deal with any remaining opposition.

Judged by later standards, [El Mreir](#) was hastily mounted and loosely organised. [Brigadier Clifton](#) had no direct command over the tanks which were to support his brigade and received his instructions only a few hours before the attack was due to be mounted, which was at 8.30 that night (21 July).

The resulting late orders to subordinate formations gave little time for detailed planning and liaison. The era was still to come when sappers worked to a precise mine-gapping, lane-marking drill, and when there was full appreciation of the necessity for a close tie-up between forward infantry, sapper gapping parties, provosts, unit support weapons and the 'under command' armour.

The brigade plan was to attack in the waning moonlight with two battalions up. An 8 Field Company detachment was to clear routes along the battalion axes while trucks of armed anti-tank mines would move with Brigade Headquarters. There are few more dangerous jobs than driving a truck loaded with armed mines into battle.

At least one 300-yard-deep minefield was to be gapped. A party commanded by Sergeant Bartholomew <sup>27</sup> which had been working with 26 Battalion patrols was to clear a track for that unit. The rest of the 8 Field Company detachment were to move with 24 Battalion and clear three forty-foot lanes for the passage of its transport and the brigade fighting transport.

Lieutenant Miller and party were to remain working on the main minefield, marking, widening and maintaining the gaps, while Lieutenant Andrew and party were to carry on forward to deal with any further minefields.

Not long after zero hour, Captain Pemberton, after supervising both parties, joined Brigadier Clifton when his Brigade Headquarters appeared. Largely through the daring and inspiring leadership of Sergeant Bartholomew, who had already done sterling work with the battalion patrols and was later awarded a DCM, there was a track ready for the unit support arms, but the column had veered off course and ran into the field. Two carriers were blown up and an ammunition truck was set on fire. The blaze lit up the dusty desert and soon there were more trucks burning. In the depression itself 26 Battalion had run into a tank laager; there were enemy troops separating them from the rest of the brigade and, when it was almost dawn, Colonel Peart <sup>28</sup> ordered his battalion to withdraw while there was still time. Two companies moved east and the others retraced their steps towards their start line.

The two detachments under Miller and Andrew had a narrow track ready for 24 Battalion's transport and were widening it under fire when the brigade column arrived and, packed nose to tail, disappeared into the smoke. Brigade Headquarters

encountered another mine belt which was crossed after some delay. Andrews and party, who had arrived in the meantime, began to widen the lane. This took so long that, fortunately for them, they never reached the objective.



**el mreir depression, 22 july 1942**

Down in El Mreir Brigadier Clifton was waiting for dawn to press on with the clearing of the depression. With him were Captain Pemberton, his driver-batman, Sapper Felix Brown,<sup>29</sup> and the mine-laden trucks. Pemberton suggested laying some mines, for a tank had been reported on the outskirts of the position, and asked for some infantry to help his batman, the truck drivers and himself to do the job. But our tanks would be along at the crack of dawn and it was considered that mines would be more of a hindrance than a help.

Concerning this situation Captain Pemberton wrote later:

' 24 Bn were thin on the ground, almost exhausted and it was quite dark. It would have been well nigh hopeless to get any sort of minefield laid around part of the perimeter even had infantry parties and guides been forthcoming. It was barely first light when the Panzers attacked and it seemed only a matter of minutes before our A/T guns were knocked out.'

The German gunners were aided by a chance shell that set a vehicle burning, and then another detonated a mine-laden truck which exploded with a roar and lit the whole area like lightning. Pemberton was wounded although he was over a

hundred yards away.

It was now light enough for the enemy tanks to roll down into the depression and round up our helpless infantry. The support armour, as at [Ruweisat Ridge](#), had not come forward.

The Indians were also not able to hold their initial gains on [Ruweisat Ridge](#) so there were no more phases to that operation.

The CRE's task in the Corps plan, to help test the ground between [Ruweisat](#) and [El Mreir](#) for mines, was undertaken by Captain Page with a party of approximately sixty sappers spread across a front of 1000 yards. Captain Page had 'recced' most of the area previously and a continuous field was not expected, but there was a definite likelihood of small scattered patches of mined desert.

There was no alternative but to advance in line at about ten paces interval, with each sapper searching some five yards to either side; following the men were a few heavily sandbagged vehicles. It was hoped that if there were patches of mines which the sappers did not detect, the drivers would not be hurt in the resulting explosions.

It was manifestly impossible to sweep such an area with mine detectors and the sappers had to depend on their eyes and a cloudless moonlight night. They could be certain that any minefields large or small would be marked, at least on the enemy side, by wire, rock cairns, rows of tins, stakes or something of the sort so that enemy tanks could recognise their own defences. But a sapper or a truck could be blown up before the boundary signs were detected. It is not unnatural that sappers became very expert in locating mines. A portion of a mine exposed by a sandstorm or a shell explosion, pieces of mine crates or fuses dropped in the darkness, a suspicious mound, often gave a clue. It was said that a sapper could smell a mine like a mouse could smell cheese. But if the night was dark or the field well concealed, the first sign was often a blown-up sapper or truck. The engineers well knew this and knew that it was a risk that must be taken.

The line moved slowly westwards to where it was expected to meet the infantry after the capture of [El Mreir](#). There was scattered fire from the ridge where the Indians were attacking, and there were enemy tanks milling around in the distance but there were no New Zealand infantry. Captain Page reported this to Lieutenant-

Colonel Hanson and the sappers were pulled back to the start line. Up to this stage no mines had been located. The CRE wrote later:

'This seemed to indicate that my particular problem of clearing mines to the west was finished but it left me in a quandary as to what had become of [6 Bde](#). Following some further investigation we saw a wire which might have marked an enemy minefield, but as it was somewhat to the north of the axis of our route it did not appear of great moment. Had any of our own tanks been sent forward along our cleared lane to where we met the enemy tanks it seemed to us that the route taken by these enemy tanks could have been followed from this point.'

The further investigation mentioned by the CRE was a reconnaissance by Page and his officers, but because of heavy fire they were not able to approach the wire very closely. The failure of the Indian attack on the key position, Point 63 on the western extremity of [Ruweisat Ridge](#), had prevented them from searching much of their section of the lane.

It only remains to state that when 23 British Armoured Brigade attacked along an axis between the New Zealanders and Indians, only seven tanks out of 87 reached their objectives. Mines and guns stopped the others, about half of which were later recovered.

Eighth Field Company's loss of 1 killed, 4 wounded, 5 prisoners of war (2 wounded) and 1 missing, 11 all told, 25 per cent of the number involved, including two of the three officers, was reduced by one when Captain Pemberton staggered in with the dawn next day. He, together with [Brigadier Clifton](#), had managed to discard their badges of rank and, throughout the day, alternatively tended the wounded and shammed being casualties themselves. Pemberton did not have to sham very much for he had been hit by many splinters from the exploding truck and was in pretty poor shape. He did not clearly remember all the events of that day.

'Details of that day are rather hazy,' he says. 'I remember helping "[Sapper](#)" [George Clifton](#) to support the chap with the wounded leg and our comical efforts while supporting him, to empty each other's pockets of personal bits and pieces and hand grenades practically right under the eye of a suspicious German with a tommy gun. I remember the cup of tea [George](#) and [McQuarrie](#) <sup>30</sup> organised. I didn't watch

the battle. I have hazy recollections of looking over the vehicles the enemy had not removed but clear memory of helping to bury Col [Greville](#) <sup>31</sup> and of meeting and of later in the day saying goodbye to my [Felix](#) who was wounded in the leg looking after my interests and destroying maps in our PU as the enemy overran our area. [Felix](#) had been with me since early in the war and was a grand little man, very discreet, always extremely conscientious and loyal, a companion and friend—and I left him to go wounded into the bag because I could never have carried him. The next morning I talked to the CRE—what about I haven't a clue and I can hardly remember the trip by ambulance back to [Alexandria](#).'

On 27 July there was one more attack, this time by 9 Australian Division in the north; again the infantry succeeded and were overrun by tanks. By this time the enemy had hardly any armour left fit to fight and the Eighth Army had hardly any infantry divisions fit to attack. But the over-all advantage still remained with Field Marshal Rommel, whose skilful use of smaller forces had blocked every lead made by General Auchinleck. The enemy appreciation describes the position exactly:

'This successful defence against the enemy attacks on 27 July brought the summer defensive battles in the [Alamein](#) line to a close. Apparently the continued failures had convinced the British command that the Axis front could not be broken with the forces at its disposal, and it therefore discontinued attacking. Our casualties had not been light, but commanders and troops alike were more and more certain that our [Alamein](#) positions had withstood their hardest test.'

For three months there was no large-scale fighting and the sappers, who more often than not had been used as second-class infantry rather than first-class engineers, came into their own. On account of the confused fighting and frequent moves there were no protecting minefields in the New Zealand area. This state of affairs was to be remedied forthwith.

Major Currie was ordered forward with the balance of 8 Field Company, less sixty-five all ranks LOB, to help cope with the work envisaged.

The CRE's plan was to mix mines and guile for the confusing of the enemy. The pattern laid down was to place two or three rows five to eight hundred yards ahead of the FDLs according to the lie of the land, and marked with wire on our side as in

the normal way. Then a gap of three or four hundred yards was left before the unmarked main field of eight rows of mines, giving a density of one mine per yard of front, was put down close to the infantry positions where hostile night patrols were not likely to penetrate. In an attack the enemy armour would think that the only minefield was the far-out one marked with the wire in the usual manner. It was hoped that they would organise the clearing of the first mines, launch an attack on the infantry and go up in large numbers on the unmarked field.

The routine of minelaying on the [Alamein](#) line seldom varied. In the early afternoon haze an officer and a couple of sappers would go out into no-man's land, make quick compass readings and build small cairns of stones to mark the line for direction finding and boundaries at night. Such a small party was seldom accepted as a target, but all the same nobody lingered on the job. Sometimes the 'wo-oof bang!' of a field gun speeded up an already speedy job.

Back in the engineer lines mines were counted, checked and loaded on to the trucks; fencing wire, heavy hammers and iron pickets were loaded on other trucks. After dark the vehicles, in line ahead, would be driven across a maze of slit trenches and sleeping infantry to the stone cairns set up during the day. The fencing party would move along the line dropping material as it went, an eerie business, well knowing that Jerry was probably doing the same thing not so very far away. But it was comforting to remember that between them and Jerry were infantry covering parties.... First came the fence around the field and then the mine-carrying trucks and laying parties, one to each line of mines and generally six sappers to each party, working to a fixed routine:

1st Sapper paced the distance between mines and marked the spot with a pick.

2nd Sapper dug the hole with a shovel.

3rd Sapper placed the unarmed mine alongside the hole.

4th Sapper placed the exploder by the mines.

5th Sapper placed the mine in the hole and armed it with exploder and detonator.

6th Sapper buried the mine and scattered the surplus sand.

By the end of July a belt of mines had been laid around three sides of the New Zealand area, but not without further loss of men and trucks as extracts from the war diaries of the two Field Companies involved testify:

24 July. Major Currie <sup>32</sup> and one sapper wounded when his truck ran on to an uncharted mine.

25 July. Three killed and eight wounded when a mine exploded.

26 July. Lt Galloway killed and two sappers wounded by mine explosion.

27 July. One killed and one wounded when a truck detonated an uncharted enemy mine.

Those not engaged with mines worked compressors in shifts to assist the infantry to sink their trenches in the solid rock under the few inches of sand, or exploded UXBs, or accompanied the infantry patrols which went out nightly to annoy the enemy and locate his minefields. It was now the height of one of the hottest summers on record and the sappers discarded more and more clothing until their uniform consisted of boots, shorts and pith helmets. The great disadvantage of the sappers' 'working uniform' was that it provided more landing grounds for the untold millions of flies that infested the battlefield during the hours of daylight. They were, to misquote the poet, 'a very bloody plague'.

It was about this time that planes began dropping butterfly bombs in great numbers, thus adding another danger to the infantry and another chore to the sappers' daily tasks. The enemy pilots dropped overboard a container holding twenty-four bombs; the container opened during the descent and the bomb's outer covering was released and became a propeller, which unwound safety devices in the fuses and armed the bombs. Once safely on the ground the slightest movement would explode them. They were dropped in hundreds in the ensuing weeks, were heartily disliked by the infantry and left for the engineers to deal with.

Most of the urgent jobs were completed early in August but there were many miles of subsidiary mine belts to be worked on. August was an important month, for

up to that date Eighth Army Command was still looking both ways; preparing to defend its present location and preparing for a possible withdrawal to the [Nile Delta](#) by way of an intermediate position along the [Alam Halfa](#) ridge.

[General Freyberg](#), recovered from the wound taken at [Minqar Qaim](#), returned to the Division on 10 August, and about the same time a change in leadership put General Montgomery in command of the Eighth Army. But perhaps of more immediate importance from the sapper viewpoint (there is some distance between the spheres of a sapper and a general) was the implementation of two Army messages:

- (a) No further issues of rum will be drawn after 31 July.
- (b) Until further notice four cans of beer will be available.

The new general met his commanders and said simply and positively that there would be no withdrawal and no surrender; the Army would fight to the last man and the last round right where it stood at that moment and in no other place. Work on the Delta positions was to be stopped forthwith; surplus vehicles were to be sent back and others dug in; the [Alamein](#) line was to be strengthened with all speed; any attempt to outflank from the south would be countered from [Alam Halfa](#) ridge, where the defences were also to be strengthened and reserve armour deployed.

The electrifying new strategy meant more urgent minelaying for the Field Companies. The Division had at this period a continuous mine belt on its western front facing from [El Mreir](#) and [Kaponga](#), and another along the [Alam Nayil](#) ridge to the south. The proposal was now to surround the whole area with a belt of mines.

The garrison of the [New Zealand Box](#), as it began to be called in spite of all orders to the contrary, was increased by the marching in to that 35 square mile area of the infantry, artillery and support arms of 132 Brigade of 44 Division. It had been only three weeks in Egypt and was grass green to desert warfare.

Eighth Field Company worked flat out on the northern and eastern boundaries of the [New Zealand Box](#); 5 Field Park Company, augmented by eighty sappers from 6 Field Company, alternated between minefields south of [Alam Nayil](#) and along [Alam Halfa](#) ridges; 7 Field Company was transferred to preparing new accommodation for [Divisional Headquarters](#); and all the time compressor crews were helping the

infantry to 'make assurance double sure and take a bond of fate'. Towards the end of August there was some changing about of engineer personnel; 7 Field Company was due for a spell for they had been up in the 'blue' since their return from [Syria](#), and the dirty bandages around their desert sores made them look more like walking wounded than working engineers. The sappers from 6 Field Company attached to 5 Field Park were withdrawn, and Major Woolcott was requested to assemble a skeleton company of 100 all ranks under the command of Lieutenant Goodsir and take over from 7 Field Company, which was to leave seventy-odd sappers (Lieutenants Foster and Page) attached to the CRE under command of Lieutenant [Hamilton](#)<sup>33</sup> and bring the rest back to B Echelon area on [Alam Halfa](#) ridge.

These movements were completed by 28 August. Meanwhile there had been considerable disruption to the schedule of the enemy troops in [El Mreir](#). During the night 26 - 27 August the Maoris had put on a two-company raid and Lieutenant Hamilton with twelve sappers had assisted by blowing gaps in the wire with Bangalore torpedoes. Demolition parties added to the Maori yells and snatches of haka the noise of exploding slabs of gun-cotton, as they demolished enemy machine guns whose crews had been cut down by automatics or had fallen to Polynesian bayonets. The Maori Battalion was very thorough with this weapon, and in the official report of the affair there is complaint that the enemy did not supply the expected opposition. However, thirty-five samples were brought back for identification—the real purpose of the raid. Sapper casualties were three wounded and one wounded and missing. The group then rejoined the Company at B Echelon, leaving only the sixteen sappers comprising the compressor crews attached to Engineer Headquarters. The CRE later passed on the 5 Brigade Commander's compliments:

` Acting OC, 7 NZ Fd Coy.

`The Comd 5 NZ Inf Bde rang me offering his own and the congratulations of the 28 Bn to the men of the 7 Field Coy who took part in the very successful raid last night.

` [Brigadier Kippenberger](#) said that the bangalore torpedo men never hesitated but proceeded straight out in front of the infantry and, despite the shelling and the proximity of the enemy, ample gaps were quickly blown through the enemy wire.

Also, he stated that the demolition parties displayed dash and courage in pushing on with the first waves, seeking out anything to be demolished.

'Will you please convey the Brigadier's remarks to the men concerned, and indeed, to your whole Company and will you also offer my heartiest congratulations.

'It was a very good "show" and everyone is very pleased with the part which Lieut. Hamilton and his engineer parties played.

CRE 2 NZ Division.'

Little has been mentioned of Field Marshal Rommel since the virtual armistice by exhaustion that resulted after Ruweisat and [El Mreir](#). In the ensuing weeks he had built up his resources faster than his enemy, but the time was close when he would have to go forward or retire in the face of growing British strength. He planned, therefore, to go forward.

By the middle of August his mobile formations had been withdrawn from their forward positions; during the last week of the month the panzer divisions moved by night to assembly areas; on the night 30 - 31 August they advanced to their start lines. The plan was to break through the minefields south of the [New Zealand Box](#) before they became too thick to be readily penetrated, and to fight a war of manoeuvre in the open desert before [Alexandria](#), cutting off the Eighth Army.

The [Africa Corps](#)' diary for 30 August surveyed the position with satisfaction:

'2300 hours: After a pause of about three weeks [Africa Corps](#) once more advanced to the attack. During this time the strength of the Corps had been considerably increased. Morale was good and confident. The Panzer regiments had a total of 237 runners. The infantry regiments, which had had heavy casualties, were not yet up to full strength again. The artillery had its full establishment of guns, plus the newly arrived self-propelled field howitzers.'

Eighth Army had appreciated that the attack was coming, the enemy concentrations had been correctly interpreted and counter-moves ordered. Twelvebore was the signal to put them into operation and only the date was unknown. Nightly eyes strained westwards for the red over white over green Very

lights that the forward troops would fire in the case of an alarm anywhere along the front. The code-word twelvebore was circulated from [Divisional Headquarters](#) at 1.15 a.m. on 31 August and at 2 a.m. Panzer Corps was not so pleased with itself:

'0200 hours: The advance halted as both divisions encountered minefields covered by enemy posts. The divisions immediately sent Panzer Grenadiers forward to the attack and brought up engineers to clear gaps. This wasted a great deal of time as the mines alternated between scattered single mines and thick fields. The country was also under hostile fire from mortars and MGs.'

Sapper parties already detailed closed gaps and were prepared to open others for patrols when wanted; trucks with mines and fencing material stood by to close the main entrance to the [New Zealand Box](#), the 600-yard gap in the safe or eastern face. Swarms of butterfly bombs were delivered by enemy planes, some of which were seen to fall to the incessantly firing Bofors. Colonel Hanson was evacuated with dysentery and Major Anderson took over.<sup>34</sup> And that was the engineers', and for that matter the infantry's share of the first day of Rommel's last throw. The artillery, though, hardly ever stopped firing.

It is difficult for seasoned troops to get excited over a battle they can't even hear very well, for Rommel had elected to force his way, covered by diversionary thrusts elsewhere, through a gap in the ten-mile space which separates [Alam Nayil](#) ridge and the tank-proof [Qattara Depression](#).

As the [Africa Corps'](#) diary suggests, it was not an easy passage, for in addition to minefields, real and dummy, there were formations of planes dropping bombs by day and by the light of parachute flares, mobile armour backstepping but firing hard as it went, and artillery of all calibres just waiting for targets.

The enemy timetable called for the early capture of [Alam Halfa](#) ridge and the consequent abandonment by Eighth Army of the whole [Alamein](#) line, but by last light (31 August) [Alam Halfa](#) was untaken and the attackers were on the defensive.

September the 1st was also quiet in the [New Zealand Box](#) except for a report that the enemy might be trying to work around to the east of the position. The result was more work for the engineers. The gap in the eastern face was to be closed to 130 yards and the whole face stiffened forthwith. Every available sapper worked

non-stop through the afternoon and early night preparing mines; the trucks were loaded by midnight and on the line soon afterwards. At 5 a.m. a relief took over, the last mine was laid at midday and the weary sappers went to sleep. In actual fact Rommel had decided that the job was too tough and was making preparations to withdraw.

The 2nd was quiet on the engineer front, but plans were being made to render the enemy withdrawal an even more difficult operation than his advance had been. The outcome was that [5 Indian Division](#) on [Ruweisat Ridge](#) was to assume responsibility for the eastern face of the [New Zealand Box](#), thus freeing 132 Brigade to take part, with 26 Battalion on its right and 5 Brigade on its left, in an advance as far as the northern edge of the depressions [Alinda](#), [Munassib](#) and [Muhafid](#). These were used by the enemy as his axis. The method was to be a silent attack with the bayonet and the time 10.30 p.m. on 3 September, the third anniversary of the declaration of war.

A working party from 8 Field Company (Lieutenant Hanger, two 13-strong sub-sections, two trucks and 600 mines) would first clear a lane in the containing mine belt then accompany 26 Battalion, which was to follow 132 Brigade for a short distance, then turn west and cover the right flank of the attack behind a minefield that ran south from the [New Zealand Box](#). The sappers were also to fill a reported enemy-made gap in the flanking belt and be ready to pass Divisional Cavalry through at first light should the situation warrant.

On the left sector 6 Field Company was to gap the mine belt. With 21 Battalion, which was to cover the left flank of the attack in a similar manner to 26 Battalion along a further north to south minefield, went a section to 'recce' the field and report on its condition. The rest of the Company, with the aid of B Company, 22 Battalion, was to put down a new mine belt between the [Munassib](#) and [Muhafid](#) depressions, that is on the left of the [Maoris](#) and at their junction with 21 Battalion. The wire where the gap was to be made was marked by Lieutenant Brady with some white cloth during the afternoon heat haze when visibility was at a minimum.

Preparations for the attack were made against a background of explosive noises and earth shakings. The RAF, with practically unchallenged superiority, dropped during this peak day of the Battle of [Alam Halfa](#) over one thousand bombs weighing

over three-quarters of a million pounds. This represents nearly a bomb a minute for the whole twenty-four hours—and some of them were 4000-pounders.

It is of course a truism that you cannot command all the air all the time and the enemy planes did their best to help their ground forces. They did most of the helping over the [New Zealand Box](#) by night, with nuisance raiding, tracer spraying, butterfly bomb dropping and banshee screaming as in the forgotten days of the [Olympus](#) line in [Greece](#).

All this circus acting possibly had some effect on the apprentice 132 Brigade going forward to its first fight. There was, however, nothing circus-like about the continuous shelling and mortaring of the minefield gap. The enemy must have been aware of its location and purpose for he covered it to such good effect that the brigade transport was caught passing through the gap and became hopelessly disorganised. Lieutenant Hanger's party with Headquarters 26 Battalion got its share of the fire as they followed close on the heels of the British infantry. The engineers escaped casualties, but Colonel Peart commanding the 26th was mortally wounded and his headquarters disorganised. To make matters worse, of the 132 Brigade trucks that had managed to get through the gap, some were on fire, some had been abandoned and some were rushing aimlessly around and got mixed with the battalion transport of which 8 Field Company's section was a part.

Lieutenant Hanger writes:

'We were chased from spot to spot by very heavy Mortar fire, about as bad as I experienced except for Moaning Minnies at [Enfidaville](#)!! We were not very happy with three trucks of mines as you can imagine.... We were eventually ordered out by [Brig Clifton](#) (over the blower). Told to get back behind the Ridge as quickly as possible.... my 2 I/C for the show CSM Jerry [Gowan](#) <sup>35</sup> did a grand job that night.'

In 5 Brigade sector gapping the minefield did not begin until well after dark and was completed by 10 p.m. Enemy listening parties must have been very much on the qui vive for this gap also came under fairly heavy fire. Sixth Field Company, less Lieutenant Goodsir who travelled with 5 Brigade Tactical Headquarters, took its place in the brigade transport column. Soon after 1 a.m. 21 Battalion reported itself on its objective and the unit transport was sent forward, and with it Lieutenant

Brady and No. 1 section of sappers. He writes:

'My job was to recce the area in front of their positions and report on the state of an alleged mine field. It turned out to be a dummy field with no mines at all. This caused some consternation and I remember we had to recheck the area in daylight with the same result.'

Another hour passed, and then in response to a message from the Maori Battalion Lieutenants Edmonds and Hamilton took the rest of 6 Field Company, plus the 22 Battalion covering party, forward along the line of shaded lights set up by the Provost Section until they met the transport column that had preceded them. The Maoris thought to have been in the area could not be found; in actual fact they were down in the [Munassib Depression](#), quite out of touch with everybody but having the time of their lives among the enemy transport.

The group probed about and finally returned to the end of the lighted axis. Meanwhile Tactical Headquarters 5 Brigade, from odd reports, and by deduction from the too numerous fires in 132 Brigade's area that all was not well with them, ordered the sappers to return and B Company, 22 Battalion, to remain forward.

It is another story how 22 Battalion formed a line behind which the [Maori Battalion](#) was able to withdraw, how 132 Brigade was decimated by guns, mortars and small arms and never re-formed, how the attack was called off and how the enemy remained in command of the depressions until he completed his withdrawal.

Five days later 6 Field Company group was back at a rest camp near the beach at [Burg el Arab](#). Fifth Field Park Company and 8 Field Company, plus 7 Field Company compressor crews, arrived the next day.

By 19 September, 2 NZ Division less 4 Brigade, <sup>36</sup> after a week of rest, sea and sun bathing, entertainment and leave, was in 'Swordfish area' about 20 miles inland ready to begin training for the next round with Panzerarmee Afrika.

The tide was almost on the turn, for the Eighth Army, basking in its first success under Lieutenant-General Montgomery, and with General Alexander Commander-in-Chief, [Middle East](#), was being prepared for an offensive designed to win North Africa from the enemy.

The enemy was now on the defensive holding a line with unturnable flanks, and broadly speaking the Montgomery plan was, in the tradition of 1914 - 18, an assault by infantry against his entrenched positions in depth to force a gap to pass the armour through.

Another method of the days of 1914 - 18 that was to be employed was a barrage—a moving wall of artillery missiles, behind the shelter of which the infantry would advance. It was considered that an attack by day would be too costly and, owing to the distances involved, an attack on a dark night too hazardous. The Eighth Army, therefore, would attack by moonlight, to be precise the night of 23 - 24 October, the night before full moon. But these were early days and few yet knew of the design for battle or the date proposed. Nor did the Divisional Engineers yet know precisely what their part would be, or how they would accomplish it.

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<sup>1</sup> [7 Fd Coy](#) also lost a truck from the same cause.

<sup>2</sup> [Lt-Col H. M. Reid](#), *The Turning Point*, p. 33.

<sup>3</sup> [Capt J. M. Dorreen](#); [Gisborne](#); born NZ 11 Jan 1915; geologist; p.w. 15 Jul 1942.

<sup>4</sup> The cliffs of Qaim.

<sup>5</sup> [2 Lt J. Galloway](#); born NZ 14 Jun 1916; mining engineer; killed in action 26 Jul 1942.

<sup>6</sup> Extract from citation supporting Maj Anderson's DSO.

<sup>7</sup> [Sgt A. J. Duckworth](#), MM; [Cambridge](#); born [Rotorua](#), 9 Apr 1916; labourer.

<sup>8</sup> Infantry Brigadier.

<sup>9</sup> [Spr R. D. Brydon](#); born [Blenheim](#), 13 Jan 1906; farrier and miner; three

times wounded.

<sup>10</sup> Spr R. M. Machen; born NZ 10 Sep 1917; tractor driver; died of wounds 27 Jun 1942.

<sup>11</sup> J. L. Scoullar, Battle for Egypt, p. 99.

<sup>12</sup> Spr I. T. MacFarlane; Richmond, Nelson; born Sth Africa, 28 Dec 1912; clerk; wounded 21 Jan 1943.

<sup>13</sup> Sgt A. J. Church, m.i.d.; Rotorua; born Ashburton, 17 Apr 1918; diesel operator.

<sup>14</sup> Maj K. F. Jones, m.i.d.; Gisborne; born NZ 20 Mar 1903; civil engineer.

<sup>15</sup> Capt W. A. Scott; born Dunedin, 23 Mar 1913; chainman; p.w. 15 Jul 1942.

<sup>16</sup> Capt H. M. Scott; Wellington; born Christchurch, 10 Oct 1905; electrical engineer.

<sup>17</sup> Sgt K. J. O'Brien, MM; Lower Hutt; born NZ 9 May 1917; tunneller; wounded 16 Aug 1942.

<sup>18</sup> Capt E. R. Somerville; Okoroire, Waikato; born Blenheim, 1 Oct 1910; architect; twice wounded.

<sup>19</sup> Lt H. G. A. Claridge; born NZ 13 Dec 1909; architect.

<sup>20</sup> 'Andy' is of course Maj Anderson, OC 5 Fd Pk Coy.

<sup>21</sup> Capt J. W. Standish, MC; Wellington; born Wellington, 28 Feb 1910; architect; transferred from Madras Sappers & Miners, 10 Ind Div, to NZ Div Jan 1942.

- <sup>22</sup> Lt-Col A. Edmonds, MC, m.i.d., MC (Gk); Putaruru; born Auckland, 10 Nov 1915; PWD chainman; seconded GHQ ME Sep 1942-Mar 1945; parachuted into Greece 1 Oct 1942 and served with Greek guerrillas.
- <sup>23</sup> Lt-Col Reid, op. cit.
- <sup>24</sup> Capt S. B. Thompson, DSO; Christchurch; born Christchurch, 19 Dec 1916; medical practitioner; RMO 18 Bn Mar 1942-Feb 1944; 2 Gen Hosp May 1944-Jan 1945.
- <sup>25</sup> Lt G. K. Miller; born Owaka, 14 Oct 1910; civil engineer; died of wounds 25 Oct 1942.
- <sup>26</sup> Letter, Lt Standish.
- <sup>27</sup> Sgt G. B. Bartholomew, DCM; born London, 26 Nov 1911; labourer; killed in action 26 Oct 1942.
- <sup>28</sup> Lt-Col J. N. Peart, DSO, m.i.d.; born Collingwood, 12 Feb 1900; schoolmaster; CO 18 Bn Nov 1941-Mar 1942; 26 Bn May-Sep 1942; died of wounds 4 Sep 1942.
- <sup>29</sup> Spr F. J. Brown; Wellington; born Napier, 10 Jun 1917; cook; wounded and p.w. 22 Jul 1942.
- <sup>30</sup> Pte I. M. McQuarrie, MM; Wellington; born NZ, 31 Mar 1919; radio assembler; p.w. 26 Mar 1943.
- <sup>31</sup> Lt-Col A. W. Greville, m.i.d.; born NZ 5 Aug 1897; Regular soldier; comd Advanced Party 2 NZEF1939; DAQMG 1940-41; CO 24 Bn Dec
- <sup>32</sup> Maj Reid came up from Base to command 8 Fd Coy, vice Maj Currie, wounded. Maj Woolcott returned from hospital and resumed command of 6 Fd Coy.

<sup>33</sup> Maj H. F. Hamilton, m.i.d.; Gisborne; born Gisborne, 15 Jun 1906; salesman.

<sup>34</sup> Maj Pemberton returned from hospital to command 5 Fd Pk Coy on 5 September.

<sup>35</sup> Maj J. G. Gowan, MC, m.i.d.; Auckland; born Ireland, 20 Sep 1912; engineer's assistant; wounded 3 Jun 1944.

<sup>36</sup> 6 Fd Coy joined the Division a week later.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## CHAPTER 11 – BEHIND THE RETREAT

## CHAPTER 11

### *Behind the Retreat*

(June to October 1942)

On 27 June, while the field companies were minelaying at [Minqar Qaim](#), No. 2 Detachment, 18 Army Troops Company, maintaining the [Western Desert](#) water supply from [Fuka](#) to [Charing Cross](#), the aqueducts in [Baggush](#) and the wells in [Fuka](#), was getting ready to move out of [Burbeita](#) Oasis. Everybody else had already left, some in rather a hurry. The section diarist, whose unconventional remarks are a bright patch in a monochrome of near panic in the back areas, put on record:

'2400 hours. Last party with the exception of ourselves, in [Burbeita](#) moved out. This was War Correspondents. They had been a pain in the neck for 3 days, having tapped our telephone line and monopolised the phone continuously without even taking the courtesy of asking us first. Put up a very poor show on evacuation with every appearance of flight; abandoned stores, tentage etc., as they stood.'

The sappers waited all day for firm orders and at 9 p.m., again to quote the section diary, 'No news or appearance of enemy so people began to look for somewhere to sleep for night.' [A verbal order to evacuate was eventually received and the convoy moved off an hour later.] 'Meanwhile, five minutes after our departure [Burbeita](#) workshops etc., went up and a heavy pall of smoke indicated success of our incendiary efforts. Passed road block at East end of [Baggush](#) Box. Touch of amusement added to situation by white faced MP appearing at window of truck to ask if we were being chased.'

The rest of the detachment was picked up at [Fuka](#), and after failing to locate anybody who wanted to make use of them at [Alamein](#) or [Burg el Arab](#), No. 2 Detachment reported to Company Headquarters at Alex on 30 June.

No. 1 Detachment left [Daba](#) two days after the evacuation of [Burbeita](#), during which period 2 NZ Division was sorting itself out at [Alamein](#) following the breakout from [Minqar Qaim](#). These Line-of-Communication sappers were thus, for a brief time, many miles nearer the enemy than the New Zealand fighting troops.

Extracts from the section diary are more eloquent on the events that led up to their withdrawal than any secondhand description:

2205 hours 11 June—Air raid. First on local dromes East and West Daba dozens and dozens of flares (Parachute and ground) and HE bombs. Later new planes attacked [Daba](#) with flares, HE bombs and incendiaries. Considerable casualties in Daba CCS—Padre busy.

0745 hours 15 June—Weekly parade and rifle inspection. 21 members of section volunteered for blood transfusion after heavy air raid.

0600 hours 22 June—German invasion warning received.

1300 hours 27 June—Continuous air raids all night. Everything he had.

2230 hours 29 June—Terrific bombardment started up just west of [El Daba](#). Very lights, 25 pounders, machine guns etc., and tanks and armoured cars hurried into [Daba](#).

2235 hours ... RE Captain dashed up to advise Jerry broken through and we must clear out as best we could. No time for demolitions.

2357 hours ... DCRE arrived and ordered demolitions to be carried out and advised dump would be blown in 25 minutes. Demolitions carried out—in one instance in presence of enemy tank—and section departed, standing less on the order of its going than on the speed of their departure.

0900 hours 30 June ... arrived in [Alexandria](#) and proceeded to [Sidi Bishr](#) where we sorted ourselves out.

No. 4 Section carried on with the erection of Braithwaite tank towers for the railway at [Alamein](#) until 30 June, when it also was ordered back to [Sidi Bishr](#).

No. 3 Section pumped water forward and filled water drums as fast as they could be obtained.

Headquarters 18 Army Troops Company was driven nearly crazy with orders and counter-orders. One asked for a detailed list of essential parts taken from pumps

before evacuation, notwithstanding that most of the demolitions were undertaken by REs; another demanded the whereabouts of the parts the Company did not even know had been removed; yet another was to pack all non-essential gear forthwith and draw seven days' reserve rations. Water-barge crews stood by for orders; none came.

The forward sections had scarcely settled in at [Sidi Bishr](#) when they also began to try to obey orders and counter-orders. One party took over the operation of water points at [Burg el Arab](#), while another opened up the pipeline and marked it for demolition; the pumphouse staff at Hammam was withdrawn, with the exception of the actual pump operators and an emergency repair gang; three RE officers arrived, each apparently without knowledge of the other, with demolition schemes.

On 4 July the Company, less No. 4 Section which was to fill every available water drum and stand by for a large issue, was ordered to take its electric welding set to [Burg el Arab](#). Nothing happened. This was in connection with the first attack by 5 Brigade on [El Mreir](#) and the possible strike for [Daba](#). We know what happened to that.

Eighteenth Army Troops Company war diary for 7 July reads: 'Fairly quiet day. Just waiting to evacuate or to go forward and repair damage (to water pipes and pump stations).'

The Company went back again to [Sidi Bishr](#) but left enough sappers to reinstate the pumphouses from [Alamein](#) to [Daba](#). Planning for the attack on [Ruweisat Ridge](#) was the probable reason for this move—and also we know what happened there.

On 22 July all 18 Army Troops Company men not actively engaged on pipeline or pumping duty were back once more at [Burg el Arab](#), but as has been related, the big effort at [El Mreir](#) did not get past Phase 1. <sup>1</sup>

During August, while the Divisional Engineers surrounded the [New Zealand Box](#) with belts of mines and helped with the defences on [Alam Halfa](#) ridge, 18 Army Troops Company stayed at [Burg el Arab](#) maintaining plant, operating water points, carrying out internal reliefs, practising with small arms, taking a little leave and doing some swimming. They were still there when 6 Field Company arrived on 9 September, with Rommel back again behind his own minefields and explaining that

his late foray towards [Alam Halfa](#) ridge was only a reconnaissance in force. In the meantime there was surplus labour in the pipeline Army Troops Company. When it was realised that many of the Company were doing only odd jobs in the [Abd el Qadir- Alamein](#) area, the Director of Works, [Middle East](#), instructed that work be found for them and that it was to be in a decent locality while the opportunity offered of giving the sappers a change after their long spell in the desert.

The new locality turned out to be on the [Suez Canal](#) and was concerned with the changeover from coal to oil by the [Egyptian State Railways](#). A Section, located at [Ismailia](#), was to undertake the installation of a 10-inch pipeline to carry fuel oil from tankers in the Canal to storage reservoirs at Nifisha. It entailed the construction of a timber jetty approximately 1800 feet long to carry the pipeline from Chevalier Island across [Lake Timsah](#) to a navigable depth of water, and the laying of the remainder of the pipeline underground from Chevalier Island through [Ismailia](#) and [Moascar](#) to Nifisha.

Lieutenant Mawson was given command of a group which became No. 2 Detachment, irrespective of which section the sappers belonged to. He spent a few very busy days getting indents through and looking over the route. The advance party arrived on 6 October and the main body the following day. It was an interesting job and a pleasant change from the desert.

Meanwhile the shape of things to come was taking form. On 14 October Major Learmonth was informed most secretly that when the Army moved forward (note, not if the Army moved forward) the repair of pumps and piping in pumphouses would be carried out by 18 Army Troops Company. If extensive damage had been done to the pumphouses and adjacent reservoirs additional personnel would be allotted as required.

Mid-June was a momentous period for the sapper gangs of 19 Army Troops Company at [Safaga](#). The caissons for the anchor wall were well advanced; there were disquieting reports that things were not going well in the [Western Desert](#); the New Zealand Base Band was coming down the coast to pay a weekend visit. Up to this weekend (18 - 19 June) the only Kiwis the Company had seen in months had been a few sappers from [9 NZ Railway Survey Company](#) who had spent a few weeks in April and May making a metric gauge connection between [Safaga](#) and the [Nile](#)

railway at [Qena](#). The news of the visit was acclaimed with enthusiasm, and when the band did arrive it was received almost with full military honours.

The concerts drew big audiences from the surrounding British units, as well as from the South African native pioneer troops and other natives in the vicinity. In fact the only people who didn't enjoy the music in the oven heat of [Safaga](#) were the bandsmen themselves, although the obvious pleasure with which their efforts were received was probably some compensation for the discomfort they endured.

The news leaked through that [Tobruk](#) had fallen and that the New Zealand Division had been rushed from [Syria](#) to stop Rommel's push through the [Western Desert](#). The sappers began to talk of the good old days in [Greece](#) and [Crete](#) when a man wore a rifle instead of a bloody screw wrench; most of them hopefully regarded the prospect of leaving the heat and monotony of [Safaga](#) and rejoining the Division. But the rumours were without foundation.

As the battle line drew closer to [Cairo](#) the Director of Works was in almost hourly communication with the Commanders RE at [Safaga](#). Work must, repeat must, be stepped up. Jobs that would normally take weeks must be ready in days; if tie rods and such-like items did not come down from Base RE Stores they must be improvised—somehow; there was more than a possibility that [Safaga](#) would be used as an evacuation point; the men must, repeat must, be pushed to the very last ounce of endurance.

One large party of refugees from the Delta did arrive at [Qena](#), but as there were no shipping or embarkation facilities at [Safaga](#) they were sent on to the [Sudan](#). Plans were then made for the use of Cookson's wharf for the evacuation of the women running the New Zealand Forces Club and for any other British women and children still in the Delta; lighters to ferry the refugees from the wharf to the ships would be sent down to the Bay.

Work along the foreshore went on feverishly, for the men needed no pressing in that blistering spot of sandy super-heated desert on the edge of the [Red Sea](#); Bren guns were mounted, everybody sweltered in battle order and a 400-strong Indian Dock Operating Company arrived to work the non-existent docks. These Indians, however, did a great deal of good work unloading stores from lighters. The position

on 4 July was that three-quarters of the piles had been driven along the foreshore and thirty reinforced crane beams had been completed; and reclamation work in connection with the deep-water berth, the main consideration at [Safaga](#), had recovered from a major setback.

This job had been completed to the point when pile driving with land frames was in the initial stages when, without warning, thousands of yards of new reclamation disappeared under water. Visiting engineers of high and low degree were consulted but nobody had an answer. Another set of soundings was taken and it was discovered that under the steep shelf of sand rested a coral reef that was breaking with the extra weight. There was no simple short-cut, and the sappers had to carry on dumping spoil until all the weak parts had collapsed and the coral formation had been packed down into a solid mass on the rock base.

Another obstacle to speedy work was the necessity to mount guard over the plant at night. The enemy propaganda machine was working to good effect and Arab saboteurs did a lot of damage by putting sand or salt water in the sumps of concrete mixers, tractors and water pumps. No matter what trap was devised, the wily Wog evaded detection and increased the already long working day of the sappers. The wave of sabotage died down with the stabilising of the line at [Alamein](#), but another curse took its place. Instructions, sheets and sheets of instructions, came down from GHQ Middle East Forces regarding the possibility of paratroop landings and how to deal with them. To men who had already dealt with them on [Crete](#), the elaborate precautions and carefully detailed injunctions suggested that those responsible for the square yards of memoranda knew more of the theoretical than the practical side of the question. But roads had to be picketed and patrols kept watch.

The progress of the project was accelerated by increasing the size of the Egyptian working population by several more hundred, which in turn put such a strain on the water supply that strict rationing was again enforced. The two water distillation plants installed by 19 Army Troops Company produced 20 tons of water for one ton of coal in twenty-four hours, which was now barely sufficient for drinking purposes alone. Water was shipped down from [Suez](#) in tankers at the rate of about 2000 tons per fortnight. There was a scheme for bringing water from the [Nile](#) at [Qena](#), about 100 miles away, to [Safaga](#) but not much work had yet been done on it.

By the middle of July the deep-water berth scheme had advanced to a stage where it could be of some use as an evacuation point, and the driving of the last of the 446 piles under the supervision of the Army Troops sappers marked the successful ending of one of the most difficult phases of the work.

When Major Marchbanks assumed command of 19 Army Troops Company from Major Langbein, the new OC of the New Zealand Engineer Training Depot, on 24 July the other assignment, the construction of crane beams, was 63 per cent complete.

Lesser projects finished about the same time were wiring the wards and installing generators at the recently built hospital, and the installation of a 10-ton methyl-chloride refrigerating plant. As the sappers also had to maintain the plant, it came in handy for the cooling of the Army Troops Company beer ration.

One job for which the Company could claim no qualification whatever was successfully carried through. The railway between [Qena](#) and [Safaga](#) was all but completed when the Indian Railway Construction Company was hurriedly withdrawn for work in the Delta. There remained the construction and laying down of marshalling yards and shunting lines to the waterfront. Nineteenth Army Troops Company was by no stretch of imagination a railway unit, but it received an urgent request to consider itself one and complete the port railway facilities. The instruction stressed that the work was to be of a temporary nature in case the necessity arose of using [Safaga](#) as an evacuation port. Sappers who had had any experience in railroad work were formed into a detachment; they started on the job and had got a line of sorts to the waterfront when a South African Railway Construction Company arrived and took over the project.

August will long be remembered by the Kiwis at [Safaga](#) for a severe tobacco shortage. Large stocks were known to be held in the British DID but the staff steadfastly refused to release any to the Kiwi canteen. A 'cigarette patrol' made cautious entry by night and had soon located a stack of 'V's' and other equally vile brands when a sentry's voice in broken English came out of the darkness—'Not those Kiwi. See here, plenty Ardath.' The Indians and the Kiwis had always got on well together. In due course a horde of Redcaps descended on the New Zealand camp and searched tents and probed all the loose sand in the area, which was plenty. The theft was attributed to Arab labourers and the good name of New Zealand remained

undefiled. Eventually the well trodden main path leading from the men's mess to the tents was dug up and the loot disinterred.

Nos. 1 and 3 Sections had practically completed their work on crane beams in early August, and with work on the deep-water berth held up pending the arrival of tie rods, No. 1 Section was transferred to a proposed oil berth while No. 3 Section supervised and worked on the project for the [Kima Saddle](#) – Bula – [Mons Claudianus](#) – [Safaga](#) water pipeline and the construction of three reservoirs, two at [Mons Claudianus](#) and one at Bula Wadi. It is interesting that granite for the masonry work involved at [Mons Claudianus](#) was secured by 'barring' off slabs in a quarry that had last been worked by Egyptian slaves of Roman masters over two thousand years earlier.

Nos. 2 and 4 Sections had by the end of August also done all the work that could be done on the caissons in the absence of the tie rods and were put to construction of transit sheds and general cleaning up.

The last day of August was notable for the arrival at [Safaga](#) of the *Ronaldshay*, a modern suction dredge which had been sent from [India](#) to dredge a berth in front of the main wharf. The *Ronaldshay* had been designed for work in canals and so had little freeboard and no bulkheads. It was a fine feat of seamanship getting her to Egypt. Her suction and delivery pipes had been shipped separately but failed to arrive, and the Chief Engineer, an elderly Scot, performed miracles of improvisation before the Indian crew could start work.

Rommel's repulse at [Alam Halfa](#) ushered in a less strenuous time at [Safaga](#). The weather was cooler, there was time for cricket and, towards the end of September, with the major work on the deep-water berth completed, the first batch of ten sappers went to Palestine for a long-overdue leave.

To return to [Mons Claudianus](#), where two wells had been cleaned out in July.<sup>2</sup> It was thought that the Romans would have needed more than one well to supply the slaves working the granite quarries and several likely spots were selected, but all that was found were bones and pieces of pottery.<sup>3</sup>

The wells were located at dykes and faults in the granite, where the water from the infrequent rain collected and ponded behind the dykes in the wadi floor at a level

of about sixty feet. The full project was to build a 100-ton reservoir at [Mons Claudianus](#) and from there pipe the water about 20 miles down to [Wadi Bula](#), where another 100-ton break-pressure reservoir was to be built and connected to the main [Qena- Safaga](#) line.

One sub-section (Sergeant [Foley](#) <sup>4</sup>) of No. 3 Section began work at [Mons Claudianus](#) and another (Lieutenant R. A. Nicol) at [Wadi Bula](#), in addition to supervising the laying out of pipes and material along a line to be dug between the wadi and [Mons Claudianus](#). Native gangs began on the pipeline trench as soon as the material was delivered by a Palestinian transport company. Nearly 12 miles of laying and coupling had been completed by 4 October when the sappers, returning to camp at the end of the day, noticed the back-country clouding over. Rain, the first for two years, began to fall when the men were at mess. They had scarcely left the messroom when there was a roar as a three-foot-high wall of water thundered down their tributary of the [Wadi Bula](#), and the last man from the messroom had barely time to scramble up the wadi bank before the onrushing water wiped the tented camp away like a cloth rubs a drawing from a blackboard.

Within an hour the water had all gone, leaving behind 20 miles of twisted, buckled railway in the [Wadi Bula](#). Four miles of pipeline already laid and filled in on the route to [Mons Claudianus](#) was damaged beyond repair. Somewhere in the silt of the wadi were buried the cookhouse, the mess, all the tents and the corrugated iron canteen containing £20 in cash and several dozen bottles of beer.

The Chief Engineer, [Middle East](#), visited the site, complimented the sappers on their work and ordered them to finish it. Within a week the sappers and native labourers had been re-equipped and were back on the job. The storm that had caused so much havoc to the railway and water pipeline also did a fair amount of damage at [Safaga](#).

By the middle of October the Ronaldshay's crew had completed the repairs to the dredge, and after a two-day trial run was making necessary adjustments. On the 21st the first air-raid alarm was sounded at [Safaga](#). A lone enemy plane made a leisurely 'recce' of the harbour, then departed without doing any damage beyond raising forebodings in the breasts of survivors from [Greece](#) and [Crete](#). At mid-afternoon the following day another plane appeared over the bay and launched a

torpedo at the dredge. There was a blinding explosion and the Ronaldshay sank within a matter of minutes, taking with her two of the English officers and fifty-six of the crew.

No. 4 Section (Captain Malt), the first to arrive at [Safaga](#), was the first to depart, for having completed the laying of their section of crane beams, they moved out on 19 October to Adabiya to work in conjunction with 21 Mechanical Equipment Company.

We left No. 2 Section, 21 Mechanical Equipment Company, at [Kilo 40](#) near [Alexandria](#), battling with untold myriads of flies while they made camp and waited word to commence building harbours for Liberator bombers. Captain Tustin could find nobody who wanted harbours built; in fact he couldn't find anybody who wanted anything built, so, as in all similar cases, the men were given leave to [Alexandria](#).

While the section waited for something to happen it listened to the news bulletins and slowly realised that the Western Desert Railway that it had helped to build was disappearing behind the enemy line. Somebody remembered the orphan section eventually and it was split into several detachments; some went to the Nagb to deliver trucks, some went to [Darb el Hagg](#) on the [Cairo- Suez](#) road to build a camp site and the rest went to [Ataqa](#). But not for long. The section was recalled and, by the middle of July, had been assembled at [Wadi Natrun](#) under command of the [CRE 10 Indian Division](#) and equipped with five back-actors and three ditchers with which it started excavating, under the supervision of artillery officers, gunpits, observation posts and trenches. When each excavation was completed East African native troops trimmed the edges and parapets. The sappers worked two shifts daily and were well aware that they were preparing the next line of defence should the present one held by the Kiwis, Aussies, British and South Africans go west. By the middle of August 400 gun sites and 30 miles of communication trenches had been excavated; in addition a party of ten sappers under Captain Tustin hived off and assisted in preparing the approaches to and the building of two pontoon bridges across the [Nile](#). The reader will connect this bridge building with the other 'flap' activities already noted in the previous chapter.

As the position at [Alamein](#) became more stable the tempo of work at [Wadi Natrun](#) slowed down. A friendly canteen opened its doors to an eager clientele, for

beer could be procured in plenty and was in equal demand. One morning while a sapper, who had more than quenched his thirst the night before, was operating a trench digger, he looked around at the result of his work and distinctly saw a lion following him. He turned away smartly and dismissed the matter for he had seen elephants and other animals in unusual environments before. He carried on trench-digging until he was disturbed by strange shouting noises and looked cautiously over his shoulder. This time there were two negroes chasing the lion. He returned to camp while he was still in command of the situation and asked casually if anybody had ever heard that there were lions in Egypt. It was with very great relief indeed that he learnt that an East African unit had been inquiring if anybody had seen their tame lion mascot that had gone astray. Sapper, satisfied with his equilibrium, returned to work.

The section returned to Adabiya on 18 August.

Repairs Section (Lieutenant [Bray](#)<sup>5</sup>) received word to move from the Nagb to the [Adabiya Bay](#) area by 15 June and resume there its function of maintaining the mechanical equipment being operated in the locality. Gear was packed, trucks were borrowed, and in due course the section found itself at [El Shatt](#). The first job was the assembly of docks machinery which was spread out all over the wharf and its approaches.

No. 3 Section (Captain C. E. Barnes), with only the dredging of the lighter basin at [Aqaba](#) to complete after the last pile of the basin and wharf had been driven on 1 August, sent its surplus sappers back in sections to [Adabiya Bay](#) until eventually only eighteen sappers remained attached to the local CRE. To complete the [Aqaba](#) story, this last detail left with the project completed its work on 20 December and rejoined the company, which was at that time concentrated at [Ataqa](#).

August 1942 therefore saw 21 Mechanical Equipment Company, with the exception of the [Aqaba](#) detail and Repairs Section at [El Shatt](#), working together for the first time since it landed in Egypt.

No. 2 Section took over the operation of all earthworks on the harbour site, which permitted No. 1 Section to concentrate on the main wharf. Here they were driving wooden piles three abreast on each side of the fill to form a staging from

which to drive concrete piles, which in turn constituted the support for the rail tracks from which cranes were to operate.

[Adabiya Bay](#) was not now recognisable as the desert No. 1 Section knew on its arrival eight months earlier. The rough terrain had been levelled and three transit sheds were in the course of erection; the main wharf was 450 feet out to sea, the caissons were completed and there were several hundreds of feet of driven piles waiting the 'fill'. The lighter wharf was finished, filled, and being surfaced and the 'Z' craft jetty was nearing completion. But the nomad No. 2 Section was on the move once more. On 10 October it left to do a reclamation job at [Fanara](#), where a large ordnance depot was to be built. As previously mentioned, No. 4 Section of 19 Army Troops Company arrived from [Safaga](#) to take its place.

The locations of the New Zealand Railway Operating Group as at 1 July were:

Colonel Sage had established his headquarters at [Amiriya](#), roughly halfway between [Alexandria](#) and [Alamein](#) station.

Seventeenth Company, now commanded by Major R. O. Pearse in place of Major Poole, boarded for health reasons, had arrived at [Burg el Arab](#) on 24 June, made camp and stood by in case the Egyptian train crews departed and left the retreating Eighth Army without trains. Between then and the end of the month the Company managed to give itself a party to celebrate the second anniversary of its formation (25 June 1940), clear all rolling stock from the [Alamein- Burg el Arab](#) section, and load its own gear in anticipation of further moves eastwards. On 1 July the Egyptian railwaymen had been withdrawn by a paternal Government or had departed under their own steam; Major Pearse had shifted his headquarters to [Amiriya](#) and all stations from [Abd el Qadir](#), just west of [Alexandria](#), to [Burg el Arab](#) were staffed by 17 NZ Railway Operating Company.

Sixteenth Company, which had reached [Alexandria](#) on 29 June, stabled its train at Nouzha, about a mile from the centre of the city. When the situation cleared and the fighting was stabilised at [Alamein](#) the [Egyptian State Railways](#) billed the Company for demurrage for holding the train. The demand was rejected on the ground that Rommel would be using the wagons free of charge had they been left behind. The matter was not raised again, but from past experience it would be fairly

safe to assume that the British taxpayer footed the bill.

It was an open question whether the line at [Alamein](#) would hold. Our forward area now included [Alexandria](#) with its immense dumps of stores, its rail network and rolling stock; without more ado the Company moved in and put shadow crews in the yards, loco sheds and signal boxes at [Gabbary](#), the goods locomotive depot for the area.

There was also a railway workshop at [Gabbary](#) where a dozen locos and some hundreds of wagons and carriages were being constructed or repaired; plans for demolitions were therefore on a grand scale, but that was the sphere of South African engineers. Sixteenth Company's job was to move as much rolling stock out of [Alexandria](#) as possible if the necessity arose. To this end the over-all plan was: Lieutenants [Brebner](#)<sup>6</sup> and Chapman, working twelve-hour shifts, maintained liaison between Movement Control and the [Egyptian State Railways](#); Lieutenants Morgan and [Couchman](#)<sup>7</sup> with detachments of experienced locomotive, shunting and operating other ranks stood by to put the evacuation plan into operation; Lieutenant [Barr](#)<sup>8</sup> and his mechanics worked on the Company's large locomotives—most had been damaged to some extent in the withdrawal. RSM Hoskin<sup>9</sup> and CQMS [Melrose](#)<sup>10</sup> were called upon for continuous feats of organisation; Captain Hayman practised the rest of the Company on the range with rifle and machine gun. Major Aickin attended a daily conference at which plans were checked in the light of reports from the battle area.

[Amiriya](#) became the Army base and many thousands of tons of supplies arrived in a steady flow from [Suez](#); incidentally the reader will now see the necessity for the additional harbour facilities the Kiwi engineers were working on at the 'safe' end of the [Suez Canal](#). Trains for [Amiriya](#) from [Suez](#) did not go through [Alexandria](#) but took a short-cut over a new line which met the [Alexandria- Amiriya](#) line at [Abd el Qadir](#), which was manned by 16th men under command of 17 Company. The trains from the east were manned by Egyptian crews to [Amiriya](#), where 17 Company took over the running to the railhead. At that stage there was not a great deal of bombing, probably because Rommel still hoped to use the line himself at an early date. [Amiriya](#) and [Alexandria](#) of course got their share, but there were no New Zealand casualties and little railway damage.

Corporal Dangerfield writes of this period:

'While the summer heat and sand storms raged our trains were kept busy maintaining the front line with its many necessities for waging war. Occasional hospital trains ran forward to [Gharbaniyet](#) to evacuate Casualty Clearing Station there. Jerry respected these trains. How we hated those sand storms—half sand half dust which really penetrated everywhere, repeat everywhere. Visibility zero at times. We at stations dreaded that long trudge out to the distant signal to set detonators to warn engine crews of their whereabouts. Nothing of size grows in this dry land and very few landmarks existed to enable crews to recognise locality. And every blooming native dwelling looks exactly like the last. Not that the train crews could see much in these storms anyway. Egyptian State Railway goods wagons are not fitted with continuous air brakes and a train parting in a sand storm gave us many a headache in getting things moving again.'

On 1 July the Company was in firm control of the situation and was prepared either to send trains forward to the Eighth Army or eastwards to their new destinations. If the Egyptian crews were around all the better; if not the Kiwi sappers would do the job themselves. July the 2nd, the second day of Rommel's attempt to break the [Alamein](#) line by encircling the South Africans in the [Alamein Box](#), was a day of tension in the Railway Operating Companies. Everybody stood-to by day and by night expecting hourly the signal to begin the evacuation, but the Springboks were not to be shifted. The crisis passed and everybody relaxed; 16 Company took over the [Amiriya](#) depot from 17 Company, which then worked the section forward to [Burg el Arab](#) and occasionally to Hammam. For the rest of July the Railway sappers ran trains to and from the battle line. The New Zealand Chief Post Office (Major Knapp), between combing its personnel of Grade I men for transfer to other units and replacing them with down-graded men, was able to get the mails forward once again regularly by train. <sup>11</sup>

There was a lull along the front during August, a lull that was not evident at [Amiriya](#) where there was feverish activity, and 17 Company and the Divisional Postal Group were continually chased out of their camps by people wanting to lay mines or put up wire or site gun positions. [Amiriya](#) was to be a defended area if, as was still possible, the enemy broke through, and British gunners and infantry were taking up

positions overlooking the village. Tension began to mount again towards the end of the month and the Railway Group Headquarters and 17 Company were asked to evacuate [Amiriya](#). This would have meant that trains to the front could not have been controlled and operated with the same promptness and efficiency; Colonel Sage therefore demurred and asked that the Company be left where it was to take its chance with the rest of the defending troops. His request was granted, a track along the line was left through the minefields, but special orders were issued to ensure safe evacuation for the railway units if necessary.

When Rommel's drive for [Cairo](#) had been turned back in September, [Alexandria](#) was no longer menaced by land and 16 Company was really able to relax. For a month it managed a little cricket, tennis, swimming and golf at the various sporting clubs which opened their facilities to them by way of honorary membership.

'We had sent our Company orchestra into a corner of the camp by itself, and told it not to come back into circulation until it could play well. In a short time their services were in demand at the Fleet Club which was the Navymen's rendezvous and for dances at a soldiers' club founded and supervised by the [Mustapha Barracks](#) officers.... We managed to stage two dances of our own, one of which marked the second anniversary of our arrival in Egypt.'<sup>12</sup>

Mention has been made in

Chapter 6 of the standard gauge railway from Egypt terminating at [Haifa](#) and of the narrow gauge line connecting [Haifa](#) and [Damascus](#) by one branch and [Amman](#) by the other. A little more [Levant](#) railway geography is now necessary. The seaward end of the standard gauge Turkish-Syrian rail network was at [Tripoli](#), about 140 miles to the north of [Haifa](#), but there was no direct connection between the two systems.

The need for one was obvious, but it was not until the defeat of the Vichy French forces in July 1941 that possible routes could be examined and one along the coast through [Beirut](#) to [Tripoli](#) decided upon.

Work commenced in December 1941, with South African construction units taking charge of the [Haifa- Beirut](#) section and Australian units the [Beirut- Tripoli](#) section, 86 route miles and 57 route miles respectively.

It was a very different job from the Western Desert Extension; in many places the mountains came down to the water's edge, there were headlands to sidle around, tunnels to be built, and in some places cuttings sixty feet deep and embankments eighty feet high were needed to keep the grade within reasonable limits.

Tenth Railway Construction Company spent its first week at [Adloun](#), about seven miles north of [Tyre](#) in south-west [Lebanon](#), swimming, eating oranges and grapes, savouring the juice thereof and generally getting the desert out of its system. Major Young and his officers spent the time in taking over from the departing South Africans.

The section on which they were to work ran from [Az Zib](#), a small village three miles south of the Lebanese frontier, to the ancient seaport of [Sidon](#), a length of about 40 miles.

The state of the job in June 1942 was that formation and track laying had been completed, bridges were built, tunnels were through but not lined, and a construction train operated as far as [Sidon](#). The main work was ballasting, and quarries had to be found and opened to supplement the sand ballast. Some 800 cubic yards of metal per mile was considered necessary to retain the sand and save it from wind erosion.

The work was allocated as follows:

No. 1 Section was responsible for lining tunnels and maintenance between [Az Zib](#) and [Ras Naqura](#). Naqura tunnel was a very difficult job and a special company of Rand miners had been recruited for the work.

No. 2 Section took over train control, ballasting and maintenance from Naqura to [Tyre](#). [Tyre](#) had seen a lot of trouble in its day. Originally an island, it withstood a seige by Nebuchadnezzar for thirteen years, but later Alexander the Great, after a seven-months' siege, got fed up, threw a mole across in 332 BC and sacked the city. The mole is now silted up and the island joined to the mainland. [Tyre](#) is merely a village. The line in that locality went through a cutting and a number of Roman sarcophagi were recovered. The best went to the [Beirut](#) museum, and the Australians working farther north, it is said, converted others into ice chests.

No. 3 Section's duties were ballasting and maintenance between [Tyre](#) and [Sidon](#). [Sidon](#) is a bigger place than [Tyre](#) but not a hive of industry. Boat-building according to the technique of biblical times is still followed on the beach.

No. 4 Section was responsible for completing structures and platelaying in [Az Zib](#) station yard.

As soon as the South Africans left (21 June) the Company, less No. 3 Section, moved into a tented camp under olive trees at [Az Zib](#). The sappers found the work and the situation very much to their liking, so much so that a cricket match arranged with the Palestine Police for the afternoon of Sunday the 28th had to be cancelled as the entire Company was confined to barracks to expiate the military sin of a collective late return to camp.

Two days earlier Headquarters NZ Construction and Maintenance Group had settled in at [Az Zib](#), taken over from the South Africans and commenced routine administration.

Thirteenth Railway Construction Company arrived at [Khalde](#), six miles south of [Beirut](#), on 2 July. It found its camp situated in an olive grove, reputedly the largest in the world, only a quarter of a mile from the sea. The tents had concreted floors while the messes, workshops and offices were in cultivated land. After their long

sojourn in the desert the sappers could not believe their good fortune. [Beirut](#), with three-quarters of a million inhabitants, was another [Alexandria](#) from a leave point of view and its amenities did not suffer by comparison.

The company job was the completion of construction work on the [Sidon- Beirut](#) section, and involved the laying out of the [Beirut](#) marshalling yards. Track was laid from [Sidon](#) almost to [Beirut](#), although several miles at the [Beirut](#) end were laid to narrow gauge for construction work. There was much ballasting and lifting to be done, as well as gauge widening and maintenance.

Ninth Railway Survey Company received its orders on 30 June to leave Egypt and report to Group Headquarters at [Az Zib](#). Detachments were concentrated and by 7 July the Company, for the second time in its history, was almost together again. For the first time in its history it came directly under Group Headquarters for operations.

The Company's commander at that date was Major Halley, who allocated duties as follows:

HQ Section: Compilation of plans.

No. 1 Section (Captain [Fisher](#) <sup>13</sup>): Re-survey of [Haifa- Beirut- Tripoli](#) railway.

No. 2 Section (Captain Clark): Reinstatement and deviation proposals, [Az Zib](#) to [Beirut](#).

No. 3 Section (Captain Nevins), less a detachment of five other ranks under Sergeant [McElhinney](#), <sup>14</sup> was still at [Safaga](#) for jobs as required.

It was not long before Lieutenant Macky and nine other ranks left for the [Sudan](#) and Captain Nevins and five other ranks departed for [Transjordan](#) on a job of pegging curves and inspecting bridges and culverts on the Hejaz railway. No engineer had been on that line for about two years, for the reason that Palestine Railways could not supply a Britisher and [Transjordan](#) would not have a Jew. Nevins has vivid memories of a meal he was invited to by the Mudir of Maan.

'The main dish was a sheep, stuffed and roasted whole. The Mudir drew back his gallabeah, baring his arm to the shoulder and cut the sheep open down the belly

exposing the stuffing of rice, nuts, raisins and grease. He then plunged his arm inside and worked it about for a time (I have a vivid memory of the way the fat and the stuffing splashed up into his armpit and back into the carcass). Finally he pulled out a goose. Inside the goose was a fowl, inside the fowl a sand grouse, inside the grouse a quail and inside the quail a hen's egg. To drink we had whiskey, gin and arraq. Glasses were kept full but not always with the same thing, so that soon we all had a nauseous mixture of all three. Water was strictly rationed, being mainly reserved for the hyper-religious. There was only one other European, a Cypriot water engineer.'

Work went smoothly ahead, although the native labour employed was not comparable to the Indian pioneer units in the [Western Desert](#). On 12 August a conference held at [Haifa](#) decided to open a service of military passenger trains from [Haifa](#) to [Beirut](#), commencing on 24 August. Trains would leave [Haifa](#) on Mondays, Wednesdays and Fridays and return from [Beirut](#) on Tuesdays, Thursdays and Saturdays. To implement the decision a South African operating section took over traffic control of the line on 14 August. Routine maintenance and ballasting of the new track, weekly sightseeing tours and cricket describes the Group's work until October, when the cooler weather turned thoughts to winter dress and football. To quote 13 Company's war diary for October:

'Sport has been prominent this month. In the beginning, the Group cricket matches against outside teams were continued. In addition to "Tests" there were some practice games in which our Coy personnel played with Aust Ry C & M men.

'Actually cricket overlapped rugby football, for which conditions are about right now. With the approach of winter, personnel became most enthusiastic over the prospect of rugby football which has not been played by us (through lack of opportunity) since we left NZ. Early in the month a set of togs and 2 balls were received from Patriotic Fund Commissioner. Because of the extreme keenness, it was resolved to reserve this set for Coy games and purchase a set of togs for each section from Reg Funds.'

Towards the end of October 9 Survey Company, less No. 3 Section, was ordered to stand by to join Paiforce. Nobody knew what Paiforce was or where it was located, but the Company had lost the capacity for being surprised and waited

calmly for movement orders.

## *Forestry Group*

The site for the new mill to be erected in Herefordshire was fixed at Tram Inn station, at a level crossing on the Truxton-Much Dewchurch road, while the men were billeted in Much Dewchurch village about two miles distant. Timber in the neighbourhood was calculated to provide about a year's work for the mill as well as pit-prop work for Italian prisoners of war. Eleventh Forestry Company, which had just got a band mill, its third unit, into production at [Cirencester](#), was given the job of erecting and running its fourth mill at Tram Inn.

There must have been some fairly outspoken comments in letters written home about this period, some of which appeared to have found publication. Methods of milling in England are very different from those followed in New Zealand and not necessarily inferior, taking into account the controlled felling practised in cultivated forests where each tree has been planted by hand and tended throughout its life. The English method of felling to within a few inches of the ground took a lot of getting used to, for the Kiwi bushman always left a waist-high stump—until the appalling wastage was pointed out so often that low cutting became the custom. Another English practice was to trim the log boles of protusions instead of leaving it to the breaker-down men in the mills, but that was a policy of perfection that the New Zealand bushmen never got around to. But whatever factors induced the remarks, they produced a quiet reproof administered by the Deputy Assistant of Military Administration (Forestry) in a letter to Colonel Elliott, part of which read:

'The Country Gentlemen's Association's Magazine for July 1942 contains a lengthy extract from reports made by officers of your Group with regard to sawmilling in this country, the report being compiled from publications in the New Zealand press. I am letting you know this unofficially as the article has caused a certain amount of comment in this office, and you may like to have an opportunity of considering the general question of the views of serving officers being published in the press, in relation to ACI's <sup>15</sup> on the subject, in case the matter should be brought up officially.'

No doubt the nicely worded warning was passed on—not so nicely worded.

Time was lost during this period of summer by lack of water for the saws and boilers. This was an unusual situation, but up to 240 man-hours a month were generally lost through machinery breakdowns. Several of the mills taken over as going concerns were temporary, with decrepit and out-of-date plant. Securing parts for these was a constant source of trouble and delay.

A change in establishment about this time added more drivers to the strength of each company. They were needed, for it was the duty of the Group to deliver all sawn timber to the railhead, sometimes necessitating hauls of up to one hundred miles. In the early stages pole wagons drawn by rubber-tyred Fordson tractors were provided for such transport but proved too light. They were replaced by Leyland Hippo trucks from which the body had been removed and bolsters fitted instead. These, in turn, were replaced early in 1942 by semi-articulated diesel-driven vehicles.

**Woolmer** was the only mill that had no transport, because it was on a railway siding and timber was loaded straight on to railway wagons from the yard. There was no accumulation of slabs for the same reason and even the sawdust was no problem, for Canadians in a nearby camp had sawdust-burning stoves and they were only too happy to provide transport for free fuel.

The Tram Inn mill commenced working on 11 September but only for a few hours daily while adjustments were made and improvisations tried out. Nevertheless comparative figures for July-September 1942 (13 weeks) show that the average output per three-company group per week was:

New Zealand Engineers	33,589 cubic feet
Royal Australian Engineers	31,753 cubic feet
Royal Engineers	27,674 cubic feet
Canadian Forestry Corps	23,371 cubic feet

This result might be considered satisfactory, particularly as more than average time was lost through breakdowns. Mills erected as temporary structures had been running at peak production for more than a year and the strain was beginning to tell. Two mills were shut down for a full week of the above period, while others had major machinery troubles that slowed down production. The New Zealand Forestry Group might have been forgiven its minor trespasses under the stress of constant

reminders from the Ministry of Supply on the necessity for increased output. It had consistently, whenever comparative figures had been published, produced the highest tallies in the [United Kingdom](#), but it was not enough.

Forestry Commission officials, more concerned with silviculture than with timber getting, complained bitterly that the New Zealand sappers left forests untidy, and indicated that effective supervision of felling was lacking.

The answer was that clearing-up was a secondary consideration to timber production and could be done by unskilled labour. It was in fact done whenever possible by Pioneer Companies attached from time to time.

If any further reasons were wanted for leaving unskilled work to unskilled hands they were provided by the October production figures, when in spite of time lost through the usual breakdowns and the running in of the Hereford mill, [Grittleton](#) bettered the previous mill record by 4000 cubic feet, and the grand total of disposals exceeded the previous best output by 14,000 cubic feet.

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<sup>1</sup> See p. 307.

<sup>3</sup> Later a South African Geophysical Unit with its own boring plant found water at other sites in the area.

<sup>4</sup> Sgt W. D. Foley; Christchurch; born Sth Africa, 25 Mar 1908; cabinet-maker and miner; wounded 3 Mar 1943.

<sup>5</sup> Capt A. N. G. Bray; Cooma North, NSW; born Hamilton, 30 Sep 1917; engineer.

<sup>6</sup> Lt R. O. Brebner; Dunedin; born Bluff, 28 Oct 1898; railway officer.

<sup>7</sup> Lt C. C. Couchman; born NZ 27 Sep 1907; driver.

<sup>8</sup> Lt J. A. Barr, m.i.d.; born Wellington, 15 Jan 1902; fitter; died 12 Oct 1957.

<sup>9</sup> WO I H. T. Hoskin; Queensland; born Kaiapoi, 10 Dec 1902; clerk, NZR.

<sup>10</sup> S-Sgt R. F. Melrose, m.i.d.; Wellington; born NZ 21 Dec 1910; clerk, NZR.

<sup>11</sup> At this period NZ Chief Post Office had a strength of 5 officers and 120 other ranks, plus attachments; NZ Divisional Postal Unit (Lt W. H. McClure) 1 officer and 24 other ranks.

<sup>12</sup> Aickin, op cit, p. 261.

<sup>13</sup> Capt W. M. Fisher; Lower Hutt; born Reefton, 29 Nov 1903; civil engineer.

<sup>14</sup> Sgt J. H. V. McElhinney; Greymouth; born Edendale, 6 Oct 1916; civil engineer.



# NEW ZEALAND ENGINEERS, MIDDLE EAST

## [SECTION]

(June to October 1942)

On 27 June, while the field companies were minelaying at [Minqar Qaim](#), No. 2 Detachment, 18 Army Troops Company, maintaining the [Western Desert](#) water supply from [Fuka](#) to [Charing Cross](#), the aqueducts in [Baggush](#) and the wells in [Fuka](#), was getting ready to move out of [Burbeita](#) Oasis. Everybody else had already left, some in rather a hurry. The section diarist, whose unconventional remarks are a bright patch in a monochrome of near panic in the back areas, put on record:

'2400 hours. Last party with the exception of ourselves, in [Burbeita](#) moved out. This was War Correspondents. They had been a pain in the neck for 3 days, having tapped our telephone line and monopolised the phone continuously without even taking the courtesy of asking us first. Put up a very poor show on evacuation with every appearance of flight; abandoned stores, tentage etc., as they stood.'

The sappers waited all day for firm orders and at 9 p.m., again to quote the section diary, 'No news or appearance of enemy so people began to look for somewhere to sleep for night.' [A verbal order to evacuate was eventually received and the convoy moved off an hour later.] 'Meanwhile, five minutes after our departure [Burbeita](#) workshops etc., went up and a heavy pall of smoke indicated success of our incendiary efforts. Passed road block at East end of [Baggush](#) Box. Touch of amusement added to situation by white faced MP appearing at window of truck to ask if we were being chased.'

The rest of the detachment was picked up at [Fuka](#), and after failing to locate anybody who wanted to make use of them at [Alamein](#) or [Burg el Arab](#), No. 2 Detachment reported to Company Headquarters at Alex on 30 June.

No. 1 Detachment left [Daba](#) two days after the evacuation of [Burbeita](#), during which period 2 NZ Division was sorting itself out at [Alamein](#) following the breakout from [Minqar Qaim](#). These Line-of-Communication sappers were thus, for a brief time, many miles nearer the enemy than the New Zealand fighting troops.

Extracts from the section diary are more eloquent on the events that led up to their withdrawal than any secondhand description:

2205 hours 11 June—Air raid. First on local dromes East and West Daba dozens and dozens of flares (Parachute and ground) and HE bombs. Later new planes attacked [Daba](#) with flares, HE bombs and incendiaries. Considerable casualties in Daba CCS—Padre busy.

0745 hours 15 June—Weekly parade and rifle inspection. 21 members of section volunteered for blood transfusion after heavy air raid.

0600 hours 22 June—German invasion warning received.

1300 hours 27 June—Continuous air raids all night. Everything he had.

2230 hours 29 June—Terrific bombardment started up just west of [El Daba](#). Very lights, 25 pounders, machine guns etc., and tanks and armoured cars hurried into [Daba](#).

2235 hours ... RE Captain dashed up to advise Jerry broken through and we must clear out as best we could. No time for demolitions.

2357 hours ... DCRE arrived and ordered demolitions to be carried out and advised dump would be blown in 25 minutes. Demolitions carried out—in one instance in presence of enemy tank—and section departed, standing less on the order of its going than on the speed of their departure.

0900 hours 30 June ... arrived in [Alexandria](#) and proceeded to [Sidi Bishr](#) where we sorted ourselves out.

No. 4 Section carried on with the erection of Braithwaite tank towers for the railway at [Alamein](#) until 30 June, when it also was ordered back to [Sidi Bishr](#).

No. 3 Section pumped water forward and filled water drums as fast as they could be obtained.

Headquarters 18 Army Troops Company was driven nearly crazy with orders and counter-orders. One asked for a detailed list of essential parts taken from pumps

before evacuation, notwithstanding that most of the demolitions were undertaken by REs; another demanded the whereabouts of the parts the Company did not even know had been removed; yet another was to pack all non-essential gear forthwith and draw seven days' reserve rations. Water-barge crews stood by for orders; none came.

The forward sections had scarcely settled in at [Sidi Bishr](#) when they also began to try to obey orders and counter-orders. One party took over the operation of water points at [Burg el Arab](#), while another opened up the pipeline and marked it for demolition; the pumphouse staff at Hammam was withdrawn, with the exception of the actual pump operators and an emergency repair gang; three RE officers arrived, each apparently without knowledge of the other, with demolition schemes.

On 4 July the Company, less No. 4 Section which was to fill every available water drum and stand by for a large issue, was ordered to take its electric welding set to [Burg el Arab](#). Nothing happened. This was in connection with the first attack by 5 Brigade on [El Mreir](#) and the possible strike for [Daba](#). We know what happened to that.

Eighteenth Army Troops Company war diary for 7 July reads: 'Fairly quiet day. Just waiting to evacuate or to go forward and repair damage (to water pipes and pump stations).'

The Company went back again to [Sidi Bishr](#) but left enough sappers to reinstate the pumphouses from [Alamein](#) to [Daba](#). Planning for the attack on [Ruweisat Ridge](#) was the probable reason for this move—and also we know what happened there.

On 22 July all 18 Army Troops Company men not actively engaged on pipeline or pumping duty were back once more at [Burg el Arab](#), but as has been related, the big effort at [El Mreir](#) did not get past Phase 1. <sup>1</sup>

During August, while the Divisional Engineers surrounded the [New Zealand Box](#) with belts of mines and helped with the defences on [Alam Halfa](#) ridge, 18 Army Troops Company stayed at [Burg el Arab](#) maintaining plant, operating water points, carrying out internal reliefs, practising with small arms, taking a little leave and doing some swimming. They were still there when 6 Field Company arrived on 9 September, with Rommel back again behind his own minefields and explaining that

his late foray towards [Alam Halfa](#) ridge was only a reconnaissance in force. In the meantime there was surplus labour in the pipeline Army Troops Company. When it was realised that many of the Company were doing only odd jobs in the [Abd el Qadir- Alamein](#) area, the Director of Works, [Middle East](#), instructed that work be found for them and that it was to be in a decent locality while the opportunity offered of giving the sappers a change after their long spell in the desert.

The new locality turned out to be on the [Suez Canal](#) and was concerned with the changeover from coal to oil by the [Egyptian State Railways](#). A Section, located at [Ismailia](#), was to undertake the installation of a 10-inch pipeline to carry fuel oil from tankers in the Canal to storage reservoirs at Nifisha. It entailed the construction of a timber jetty approximately 1800 feet long to carry the pipeline from Chevalier Island across [Lake Timsah](#) to a navigable depth of water, and the laying of the remainder of the pipeline underground from Chevalier Island through [Ismailia](#) and [Moascar](#) to Nifisha.

Lieutenant Mawson was given command of a group which became No. 2 Detachment, irrespective of which section the sappers belonged to. He spent a few very busy days getting indents through and looking over the route. The advance party arrived on 6 October and the main body the following day. It was an interesting job and a pleasant change from the desert.

Meanwhile the shape of things to come was taking form. On 14 October Major Learmonth was informed most secretly that when the Army moved forward (note, not if the Army moved forward) the repair of pumps and piping in pumphouses would be carried out by 18 Army Troops Company. If extensive damage had been done to the pumphouses and adjacent reservoirs additional personnel would be allotted as required.

Mid-June was a momentous period for the sapper gangs of 19 Army Troops Company at [Safaga](#). The caissons for the anchor wall were well advanced; there were disquieting reports that things were not going well in the [Western Desert](#); the New Zealand Base Band was coming down the coast to pay a weekend visit. Up to this weekend (18 - 19 June) the only Kiwis the Company had seen in months had been a few sappers from [9 NZ Railway Survey Company](#) who had spent a few weeks in April and May making a metric gauge connection between [Safaga](#) and the [Nile](#)

railway at [Qena](#). The news of the visit was acclaimed with enthusiasm, and when the band did arrive it was received almost with full military honours.

The concerts drew big audiences from the surrounding British units, as well as from the South African native pioneer troops and other natives in the vicinity. In fact the only people who didn't enjoy the music in the oven heat of [Safaga](#) were the bandsmen themselves, although the obvious pleasure with which their efforts were received was probably some compensation for the discomfort they endured.

The news leaked through that [Tobruk](#) had fallen and that the New Zealand Division had been rushed from [Syria](#) to stop Rommel's push through the [Western Desert](#). The sappers began to talk of the good old days in [Greece](#) and [Crete](#) when a man wore a rifle instead of a bloody screw wrench; most of them hopefully regarded the prospect of leaving the heat and monotony of [Safaga](#) and rejoining the Division. But the rumours were without foundation.

As the battle line drew closer to [Cairo](#) the Director of Works was in almost hourly communication with the Commanders RE at [Safaga](#). Work must, repeat must, be stepped up. Jobs that would normally take weeks must be ready in days; if tie rods and such-like items did not come down from Base RE Stores they must be improvised—somehow; there was more than a possibility that [Safaga](#) would be used as an evacuation point; the men must, repeat must, be pushed to the very last ounce of endurance.

One large party of refugees from the Delta did arrive at [Qena](#), but as there were no shipping or embarkation facilities at [Safaga](#) they were sent on to the [Sudan](#). Plans were then made for the use of Cookson's wharf for the evacuation of the women running the New Zealand Forces Club and for any other British women and children still in the Delta; lighters to ferry the refugees from the wharf to the ships would be sent down to the Bay.

Work along the foreshore went on feverishly, for the men needed no pressing in that blistering spot of sandy super-heated desert on the edge of the [Red Sea](#); Bren guns were mounted, everybody sweltered in battle order and a 400-strong Indian Dock Operating Company arrived to work the non-existent docks. These Indians, however, did a great deal of good work unloading stores from lighters. The position

on 4 July was that three-quarters of the piles had been driven along the foreshore and thirty reinforced crane beams had been completed; and reclamation work in connection with the deep-water berth, the main consideration at [Safaga](#), had recovered from a major setback.

This job had been completed to the point when pile driving with land frames was in the initial stages when, without warning, thousands of yards of new reclamation disappeared under water. Visiting engineers of high and low degree were consulted but nobody had an answer. Another set of soundings was taken and it was discovered that under the steep shelf of sand rested a coral reef that was breaking with the extra weight. There was no simple short-cut, and the sappers had to carry on dumping spoil until all the weak parts had collapsed and the coral formation had been packed down into a solid mass on the rock base.

Another obstacle to speedy work was the necessity to mount guard over the plant at night. The enemy propaganda machine was working to good effect and Arab saboteurs did a lot of damage by putting sand or salt water in the sumps of concrete mixers, tractors and water pumps. No matter what trap was devised, the wily Wog evaded detection and increased the already long working day of the sappers. The wave of sabotage died down with the stabilising of the line at [Alamein](#), but another curse took its place. Instructions, sheets and sheets of instructions, came down from GHQ Middle East Forces regarding the possibility of paratroop landings and how to deal with them. To men who had already dealt with them on [Crete](#), the elaborate precautions and carefully detailed injunctions suggested that those responsible for the square yards of memoranda knew more of the theoretical than the practical side of the question. But roads had to be picketed and patrols kept watch.

The progress of the project was accelerated by increasing the size of the Egyptian working population by several more hundred, which in turn put such a strain on the water supply that strict rationing was again enforced. The two water distillation plants installed by 19 Army Troops Company produced 20 tons of water for one ton of coal in twenty-four hours, which was now barely sufficient for drinking purposes alone. Water was shipped down from [Suez](#) in tankers at the rate of about 2000 tons per fortnight. There was a scheme for bringing water from the [Nile](#) at [Qena](#), about 100 miles away, to [Safaga](#) but not much work had yet been done on it.

By the middle of July the deep-water berth scheme had advanced to a stage where it could be of some use as an evacuation point, and the driving of the last of the 446 piles under the supervision of the Army Troops sappers marked the successful ending of one of the most difficult phases of the work.

When Major Marchbanks assumed command of 19 Army Troops Company from Major Langbein, the new OC of the New Zealand Engineer Training Depot, on 24 July the other assignment, the construction of crane beams, was 63 per cent complete.

Lesser projects finished about the same time were wiring the wards and installing generators at the recently built hospital, and the installation of a 10-ton methyl-chloride refrigerating plant. As the sappers also had to maintain the plant, it came in handy for the cooling of the Army Troops Company beer ration.

One job for which the Company could claim no qualification whatever was successfully carried through. The railway between [Qena](#) and [Safaga](#) was all but completed when the Indian Railway Construction Company was hurriedly withdrawn for work in the Delta. There remained the construction and laying down of marshalling yards and shunting lines to the waterfront. Nineteenth Army Troops Company was by no stretch of imagination a railway unit, but it received an urgent request to consider itself one and complete the port railway facilities. The instruction stressed that the work was to be of a temporary nature in case the necessity arose of using [Safaga](#) as an evacuation port. Sappers who had had any experience in railroad work were formed into a detachment; they started on the job and had got a line of sorts to the waterfront when a South African Railway Construction Company arrived and took over the project.

August will long be remembered by the Kiwis at [Safaga](#) for a severe tobacco shortage. Large stocks were known to be held in the British DID but the staff steadfastly refused to release any to the Kiwi canteen. A 'cigarette patrol' made cautious entry by night and had soon located a stack of 'V's' and other equally vile brands when a sentry's voice in broken English came out of the darkness—'Not those Kiwi. See here, plenty Ardath.' The Indians and the Kiwis had always got on well together. In due course a horde of Redcaps descended on the New Zealand camp and searched tents and probed all the loose sand in the area, which was plenty. The theft was attributed to Arab labourers and the good name of New Zealand remained

undefiled. Eventually the well trodden main path leading from the men's mess to the tents was dug up and the loot disinterred.

Nos. 1 and 3 Sections had practically completed their work on crane beams in early August, and with work on the deep-water berth held up pending the arrival of tie rods, No. 1 Section was transferred to a proposed oil berth while No. 3 Section supervised and worked on the project for the [Kima Saddle](#) – Bula – [Mons Claudianus](#) – [Safaga](#) water pipeline and the construction of three reservoirs, two at [Mons Claudianus](#) and one at Bula Wadi. It is interesting that granite for the masonry work involved at [Mons Claudianus](#) was secured by 'barring' off slabs in a quarry that had last been worked by Egyptian slaves of Roman masters over two thousand years earlier.

Nos. 2 and 4 Sections had by the end of August also done all the work that could be done on the caissons in the absence of the tie rods and were put to construction of transit sheds and general cleaning up.

The last day of August was notable for the arrival at [Safaga](#) of the *Ronaldshay*, a modern suction dredge which had been sent from [India](#) to dredge a berth in front of the main wharf. The *Ronaldshay* had been designed for work in canals and so had little freeboard and no bulkheads. It was a fine feat of seamanship getting her to Egypt. Her suction and delivery pipes had been shipped separately but failed to arrive, and the Chief Engineer, an elderly Scot, performed miracles of improvisation before the Indian crew could start work.

Rommel's repulse at [Alam Halfa](#) ushered in a less strenuous time at [Safaga](#). The weather was cooler, there was time for cricket and, towards the end of September, with the major work on the deep-water berth completed, the first batch of ten sappers went to Palestine for a long-overdue leave.

To return to [Mons Claudianus](#), where two wells had been cleaned out in July.<sup>2</sup> It was thought that the Romans would have needed more than one well to supply the slaves working the granite quarries and several likely spots were selected, but all that was found were bones and pieces of pottery.<sup>3</sup>

The wells were located at dykes and faults in the granite, where the water from the infrequent rain collected and ponded behind the dykes in the wadi floor at a level

of about sixty feet. The full project was to build a 100-ton reservoir at [Mons Claudianus](#) and from there pipe the water about 20 miles down to [Wadi Bula](#), where another 100-ton break-pressure reservoir was to be built and connected to the main [Qena- Safaga](#) line.

One sub-section (Sergeant [Foley](#) <sup>4</sup>) of No. 3 Section began work at [Mons Claudianus](#) and another (Lieutenant R. A. Nicol) at [Wadi Bula](#), in addition to supervising the laying out of pipes and material along a line to be dug between the wadi and [Mons Claudianus](#). Native gangs began on the pipeline trench as soon as the material was delivered by a Palestinian transport company. Nearly 12 miles of laying and coupling had been completed by 4 October when the sappers, returning to camp at the end of the day, noticed the back-country clouding over. Rain, the first for two years, began to fall when the men were at mess. They had scarcely left the messroom when there was a roar as a three-foot-high wall of water thundered down their tributary of the [Wadi Bula](#), and the last man from the messroom had barely time to scramble up the wadi bank before the onrushing water wiped the tented camp away like a cloth rubs a drawing from a blackboard.

Within an hour the water had all gone, leaving behind 20 miles of twisted, buckled railway in the [Wadi Bula](#). Four miles of pipeline already laid and filled in on the route to [Mons Claudianus](#) was damaged beyond repair. Somewhere in the silt of the wadi were buried the cookhouse, the mess, all the tents and the corrugated iron canteen containing £20 in cash and several dozen bottles of beer.

The Chief Engineer, [Middle East](#), visited the site, complimented the sappers on their work and ordered them to finish it. Within a week the sappers and native labourers had been re-equipped and were back on the job. The storm that had caused so much havoc to the railway and water pipeline also did a fair amount of damage at [Safaga](#).

By the middle of October the Ronaldshay's crew had completed the repairs to the dredge, and after a two-day trial run was making necessary adjustments. On the 21st the first air-raid alarm was sounded at [Safaga](#). A lone enemy plane made a leisurely 'recce' of the harbour, then departed without doing any damage beyond raising forebodings in the breasts of survivors from [Greece](#) and [Crete](#). At mid-afternoon the following day another plane appeared over the bay and launched a

torpedo at the dredge. There was a blinding explosion and the Ronaldshay sank within a matter of minutes, taking with her two of the English officers and fifty-six of the crew.

No. 4 Section (Captain Malt), the first to arrive at [Safaga](#), was the first to depart, for having completed the laying of their section of crane beams, they moved out on 19 October to Adabiya to work in conjunction with 21 Mechanical Equipment Company.

We left No. 2 Section, 21 Mechanical Equipment Company, at [Kilo 40](#) near [Alexandria](#), battling with untold myriads of flies while they made camp and waited word to commence building harbours for Liberator bombers. Captain Tustin could find nobody who wanted harbours built; in fact he couldn't find anybody who wanted anything built, so, as in all similar cases, the men were given leave to [Alexandria](#).

While the section waited for something to happen it listened to the news bulletins and slowly realised that the Western Desert Railway that it had helped to build was disappearing behind the enemy line. Somebody remembered the orphan section eventually and it was split into several detachments; some went to the Nagb to deliver trucks, some went to [Darb el Hagg](#) on the [Cairo- Suez](#) road to build a camp site and the rest went to [Ataqa](#). But not for long. The section was recalled and, by the middle of July, had been assembled at [Wadi Natrun](#) under command of the [CRE 10 Indian Division](#) and equipped with five back-actors and three ditchers with which it started excavating, under the supervision of artillery officers, gunpits, observation posts and trenches. When each excavation was completed East African native troops trimmed the edges and parapets. The sappers worked two shifts daily and were well aware that they were preparing the next line of defence should the present one held by the Kiwis, Aussies, British and South Africans go west. By the middle of August 400 gun sites and 30 miles of communication trenches had been excavated; in addition a party of ten sappers under Captain Tustin hived off and assisted in preparing the approaches to and the building of two pontoon bridges across the [Nile](#). The reader will connect this bridge building with the other 'flap' activities already noted in the previous chapter.

As the position at [Alamein](#) became more stable the tempo of work at [Wadi Natrun](#) slowed down. A friendly canteen opened its doors to an eager clientele, for

beer could be procured in plenty and was in equal demand. One morning while a sapper, who had more than quenched his thirst the night before, was operating a trench digger, he looked around at the result of his work and distinctly saw a lion following him. He turned away smartly and dismissed the matter for he had seen elephants and other animals in unusual environments before. He carried on trench-digging until he was disturbed by strange shouting noises and looked cautiously over his shoulder. This time there were two negroes chasing the lion. He returned to camp while he was still in command of the situation and asked casually if anybody had ever heard that there were lions in Egypt. It was with very great relief indeed that he learnt that an East African unit had been inquiring if anybody had seen their tame lion mascot that had gone astray. Sapper, satisfied with his equilibrium, returned to work.

The section returned to Adabiya on 18 August.

Repairs Section (Lieutenant [Bray](#)<sup>5</sup>) received word to move from the Nagb to the [Adabiya Bay](#) area by 15 June and resume there its function of maintaining the mechanical equipment being operated in the locality. Gear was packed, trucks were borrowed, and in due course the section found itself at [El Shatt](#). The first job was the assembly of docks machinery which was spread out all over the wharf and its approaches.

No. 3 Section (Captain C. E. Barnes), with only the dredging of the lighter basin at [Aqaba](#) to complete after the last pile of the basin and wharf had been driven on 1 August, sent its surplus sappers back in sections to [Adabiya Bay](#) until eventually only eighteen sappers remained attached to the local CRE. To complete the [Aqaba](#) story, this last detail left with the project completed its work on 20 December and rejoined the company, which was at that time concentrated at [Ataqa](#).

August 1942 therefore saw 21 Mechanical Equipment Company, with the exception of the [Aqaba](#) detail and Repairs Section at [El Shatt](#), working together for the first time since it landed in Egypt.

No. 2 Section took over the operation of all earthworks on the harbour site, which permitted No. 1 Section to concentrate on the main wharf. Here they were driving wooden piles three abreast on each side of the fill to form a staging from

which to drive concrete piles, which in turn constituted the support for the rail tracks from which cranes were to operate.

[Adabiya Bay](#) was not now recognisable as the desert No. 1 Section knew on its arrival eight months earlier. The rough terrain had been levelled and three transit sheds were in the course of erection; the main wharf was 450 feet out to sea, the caissons were completed and there were several hundreds of feet of driven piles waiting the 'fill'. The lighter wharf was finished, filled, and being surfaced and the 'Z' craft jetty was nearing completion. But the nomad No. 2 Section was on the move once more. On 10 October it left to do a reclamation job at [Fanara](#), where a large ordnance depot was to be built. As previously mentioned, No. 4 Section of 19 Army Troops Company arrived from [Safaga](#) to take its place.

The locations of the New Zealand Railway Operating Group as at 1 July were:

Colonel Sage had established his headquarters at [Amiriya](#), roughly halfway between [Alexandria](#) and [Alamein](#) station.

Seventeenth Company, now commanded by Major R. O. Pearse in place of Major Poole, boarded for health reasons, had arrived at [Burg el Arab](#) on 24 June, made camp and stood by in case the Egyptian train crews departed and left the retreating Eighth Army without trains. Between then and the end of the month the Company managed to give itself a party to celebrate the second anniversary of its formation (25 June 1940), clear all rolling stock from the [Alamein- Burg el Arab](#) section, and load its own gear in anticipation of further moves eastwards. On 1 July the Egyptian railwaymen had been withdrawn by a paternal Government or had departed under their own steam; Major Pearse had shifted his headquarters to [Amiriya](#) and all stations from [Abd el Qadir](#), just west of [Alexandria](#), to [Burg el Arab](#) were staffed by 17 NZ Railway Operating Company.

Sixteenth Company, which had reached [Alexandria](#) on 29 June, stabled its train at Nouzha, about a mile from the centre of the city. When the situation cleared and the fighting was stabilised at [Alamein](#) the [Egyptian State Railways](#) billed the Company for demurrage for holding the train. The demand was rejected on the ground that Rommel would be using the wagons free of charge had they been left behind. The matter was not raised again, but from past experience it would be fairly

safe to assume that the British taxpayer footed the bill.

It was an open question whether the line at [Alamein](#) would hold. Our forward area now included [Alexandria](#) with its immense dumps of stores, its rail network and rolling stock; without more ado the Company moved in and put shadow crews in the yards, loco sheds and signal boxes at [Gabbary](#), the goods locomotive depot for the area.

There was also a railway workshop at [Gabbary](#) where a dozen locos and some hundreds of wagons and carriages were being constructed or repaired; plans for demolitions were therefore on a grand scale, but that was the sphere of South African engineers. Sixteenth Company's job was to move as much rolling stock out of [Alexandria](#) as possible if the necessity arose. To this end the over-all plan was: Lieutenants [Brebner](#)<sup>6</sup> and Chapman, working twelve-hour shifts, maintained liaison between Movement Control and the [Egyptian State Railways](#); Lieutenants Morgan and [Couchman](#)<sup>7</sup> with detachments of experienced locomotive, shunting and operating other ranks stood by to put the evacuation plan into operation; Lieutenant [Barr](#)<sup>8</sup> and his mechanics worked on the Company's large locomotives—most had been damaged to some extent in the withdrawal. RSM Hoskin<sup>9</sup> and CQMS [Melrose](#)<sup>10</sup> were called upon for continuous feats of organisation; Captain Hayman practised the rest of the Company on the range with rifle and machine gun. Major Aickin attended a daily conference at which plans were checked in the light of reports from the battle area.

[Amiriya](#) became the Army base and many thousands of tons of supplies arrived in a steady flow from [Suez](#); incidentally the reader will now see the necessity for the additional harbour facilities the Kiwi engineers were working on at the 'safe' end of the [Suez Canal](#). Trains for [Amiriya](#) from [Suez](#) did not go through [Alexandria](#) but took a short-cut over a new line which met the [Alexandria- Amiriya](#) line at [Abd el Qadir](#), which was manned by 16th men under command of 17 Company. The trains from the east were manned by Egyptian crews to [Amiriya](#), where 17 Company took over the running to the railhead. At that stage there was not a great deal of bombing, probably because Rommel still hoped to use the line himself at an early date. [Amiriya](#) and [Alexandria](#) of course got their share, but there were no New Zealand casualties and little railway damage.

Corporal Dangerfield writes of this period:

'While the summer heat and sand storms raged our trains were kept busy maintaining the front line with its many necessities for waging war. Occasional hospital trains ran forward to [Gharbaniyet](#) to evacuate Casualty Clearing Station there. Jerry respected these trains. How we hated those sand storms—half sand half dust which really penetrated everywhere, repeat everywhere. Visibility zero at times. We at stations dreaded that long trudge out to the distant signal to set detonators to warn engine crews of their whereabouts. Nothing of size grows in this dry land and very few landmarks existed to enable crews to recognise locality. And every blooming native dwelling looks exactly like the last. Not that the train crews could see much in these storms anyway. Egyptian State Railway goods wagons are not fitted with continuous air brakes and a train parting in a sand storm gave us many a headache in getting things moving again.'

On 1 July the Company was in firm control of the situation and was prepared either to send trains forward to the Eighth Army or eastwards to their new destinations. If the Egyptian crews were around all the better; if not the Kiwi sappers would do the job themselves. July the 2nd, the second day of Rommel's attempt to break the [Alamein](#) line by encircling the South Africans in the [Alamein Box](#), was a day of tension in the Railway Operating Companies. Everybody stood-to by day and by night expecting hourly the signal to begin the evacuation, but the Springboks were not to be shifted. The crisis passed and everybody relaxed; 16 Company took over the [Amiriya](#) depot from 17 Company, which then worked the section forward to [Burg el Arab](#) and occasionally to Hammam. For the rest of July the Railway sappers ran trains to and from the battle line. The New Zealand Chief Post Office (Major Knapp), between combing its personnel of Grade I men for transfer to other units and replacing them with down-graded men, was able to get the mails forward once again regularly by train. <sup>11</sup>

There was a lull along the front during August, a lull that was not evident at [Amiriya](#) where there was feverish activity, and 17 Company and the Divisional Postal Group were continually chased out of their camps by people wanting to lay mines or put up wire or site gun positions. [Amiriya](#) was to be a defended area if, as was still possible, the enemy broke through, and British gunners and infantry were taking up

positions overlooking the village. Tension began to mount again towards the end of the month and the Railway Group Headquarters and 17 Company were asked to evacuate [Amiriya](#). This would have meant that trains to the front could not have been controlled and operated with the same promptness and efficiency; Colonel Sage therefore demurred and asked that the Company be left where it was to take its chance with the rest of the defending troops. His request was granted, a track along the line was left through the minefields, but special orders were issued to ensure safe evacuation for the railway units if necessary.

When Rommel's drive for [Cairo](#) had been turned back in September, [Alexandria](#) was no longer menaced by land and 16 Company was really able to relax. For a month it managed a little cricket, tennis, swimming and golf at the various sporting clubs which opened their facilities to them by way of honorary membership.

'We had sent our Company orchestra into a corner of the camp by itself, and told it not to come back into circulation until it could play well. In a short time their services were in demand at the Fleet Club which was the Navymen's rendezvous and for dances at a soldiers' club founded and supervised by the [Mustapha Barracks](#) officers.... We managed to stage two dances of our own, one of which marked the second anniversary of our arrival in Egypt.'<sup>12</sup>

Mention has been made in

Chapter 6 of the standard gauge railway from Egypt terminating at [Haifa](#) and of the narrow gauge line connecting [Haifa](#) and [Damascus](#) by one branch and [Amman](#) by the other. A little more [Levant](#) railway geography is now necessary. The seaward end of the standard gauge Turkish-Syrian rail network was at [Tripoli](#), about 140 miles to the north of [Haifa](#), but there was no direct connection between the two systems.

The need for one was obvious, but it was not until the defeat of the Vichy French forces in July 1941 that possible routes could be examined and one along the coast through [Beirut](#) to [Tripoli](#) decided upon.

Work commenced in December 1941, with South African construction units taking charge of the [Haifa- Beirut](#) section and Australian units the [Beirut- Tripoli](#) section, 86 route miles and 57 route miles respectively.

It was a very different job from the Western Desert Extension; in many places the mountains came down to the water's edge, there were headlands to sidle around, tunnels to be built, and in some places cuttings sixty feet deep and embankments eighty feet high were needed to keep the grade within reasonable limits.

Tenth Railway Construction Company spent its first week at [Adloun](#), about seven miles north of [Tyre](#) in south-west [Lebanon](#), swimming, eating oranges and grapes, savouring the juice thereof and generally getting the desert out of its system. Major Young and his officers spent the time in taking over from the departing South Africans.

The section on which they were to work ran from [Az Zib](#), a small village three miles south of the Lebanese frontier, to the ancient seaport of [Sidon](#), a length of about 40 miles.

The state of the job in June 1942 was that formation and track laying had been completed, bridges were built, tunnels were through but not lined, and a construction train operated as far as [Sidon](#). The main work was ballasting, and quarries had to be found and opened to supplement the sand ballast. Some 800 cubic yards of metal per mile was considered necessary to retain the sand and save it from wind erosion.

The work was allocated as follows:

No. 1 Section was responsible for lining tunnels and maintenance between [Az Zib](#) and [Ras Naqura](#). Naqura tunnel was a very difficult job and a special company of Rand miners had been recruited for the work.

No. 2 Section took over train control, ballasting and maintenance from Naqura to [Tyre](#). [Tyre](#) had seen a lot of trouble in its day. Originally an island, it withstood a seige by Nebuchadnezzar for thirteen years, but later Alexander the Great, after a seven-months' siege, got fed up, threw a mole across in 332 BC and sacked the city. The mole is now silted up and the island joined to the mainland. [Tyre](#) is merely a village. The line in that locality went through a cutting and a number of Roman sarcophagi were recovered. The best went to the [Beirut](#) museum, and the Australians working farther north, it is said, converted others into ice chests.

No. 3 Section's duties were ballasting and maintenance between [Tyre](#) and [Sidon](#). [Sidon](#) is a bigger place than [Tyre](#) but not a hive of industry. Boat-building according to the technique of biblical times is still followed on the beach.

No. 4 Section was responsible for completing structures and platelaying in [Az Zib](#) station yard.

As soon as the South Africans left (21 June) the Company, less No. 3 Section, moved into a tented camp under olive trees at [Az Zib](#). The sappers found the work and the situation very much to their liking, so much so that a cricket match arranged with the Palestine Police for the afternoon of Sunday the 28th had to be cancelled as the entire Company was confined to barracks to expiate the military sin of a collective late return to camp.

Two days earlier Headquarters NZ Construction and Maintenance Group had settled in at [Az Zib](#), taken over from the South Africans and commenced routine administration.

Thirteenth Railway Construction Company arrived at [Khalde](#), six miles south of [Beirut](#), on 2 July. It found its camp situated in an olive grove, reputedly the largest in the world, only a quarter of a mile from the sea. The tents had concreted floors while the messes, workshops and offices were in cultivated land. After their long

sojourn in the desert the sappers could not believe their good fortune. [Beirut](#), with three-quarters of a million inhabitants, was another [Alexandria](#) from a leave point of view and its amenities did not suffer by comparison.

The company job was the completion of construction work on the [Sidon- Beirut](#) section, and involved the laying out of the [Beirut](#) marshalling yards. Track was laid from [Sidon](#) almost to [Beirut](#), although several miles at the [Beirut](#) end were laid to narrow gauge for construction work. There was much ballasting and lifting to be done, as well as gauge widening and maintenance.

Ninth Railway Survey Company received its orders on 30 June to leave Egypt and report to Group Headquarters at [Az Zib](#). Detachments were concentrated and by 7 July the Company, for the second time in its history, was almost together again. For the first time in its history it came directly under Group Headquarters for operations.

The Company's commander at that date was Major Halley, who allocated duties as follows:

HQ Section: Compilation of plans.

No. 1 Section (Captain [Fisher](#)<sup>13</sup>): Re-survey of [Haifa- Beirut- Tripoli](#) railway.

No. 2 Section (Captain Clark): Reinstatement and deviation proposals, [Az Zib](#) to [Beirut](#).

No. 3 Section (Captain Nevins), less a detachment of five other ranks under Sergeant [McElhinney](#),<sup>14</sup> was still at [Safaga](#) for jobs as required.

It was not long before Lieutenant Macky and nine other ranks left for the [Sudan](#) and Captain Nevins and five other ranks departed for [Transjordan](#) on a job of pegging curves and inspecting bridges and culverts on the Hejaz railway. No engineer had been on that line for about two years, for the reason that Palestine Railways could not supply a Britisher and [Transjordan](#) would not have a Jew. Nevins has vivid memories of a meal he was invited to by the Mudir of Maan.

'The main dish was a sheep, stuffed and roasted whole. The Mudir drew back his gallabeah, baring his arm to the shoulder and cut the sheep open down the belly

exposing the stuffing of rice, nuts, raisins and grease. He then plunged his arm inside and worked it about for a time (I have a vivid memory of the way the fat and the stuffing splashed up into his armpit and back into the carcass). Finally he pulled out a goose. Inside the goose was a fowl, inside the fowl a sand grouse, inside the grouse a quail and inside the quail a hen's egg. To drink we had whiskey, gin and arraq. Glasses were kept full but not always with the same thing, so that soon we all had a nauseous mixture of all three. Water was strictly rationed, being mainly reserved for the hyper-religious. There was only one other European, a Cypriot water engineer.'

Work went smoothly ahead, although the native labour employed was not comparable to the Indian pioneer units in the [Western Desert](#). On 12 August a conference held at [Haifa](#) decided to open a service of military passenger trains from [Haifa](#) to [Beirut](#), commencing on 24 August. Trains would leave [Haifa](#) on Mondays, Wednesdays and Fridays and return from [Beirut](#) on Tuesdays, Thursdays and Saturdays. To implement the decision a South African operating section took over traffic control of the line on 14 August. Routine maintenance and ballasting of the new track, weekly sightseeing tours and cricket describes the Group's work until October, when the cooler weather turned thoughts to winter dress and football. To quote 13 Company's war diary for October:

'Sport has been prominent this month. In the beginning, the Group cricket matches against outside teams were continued. In addition to "Tests" there were some practice games in which our Coy personnel played with Aust Ry C & M men.

'Actually cricket overlapped rugby football, for which conditions are about right now. With the approach of winter, personnel became most enthusiastic over the prospect of rugby football which has not been played by us (through lack of opportunity) since we left NZ. Early in the month a set of togs and 2 balls were received from Patriotic Fund Commissioner. Because of the extreme keenness, it was resolved to reserve this set for Coy games and purchase a set of togs for each section from Reg Funds.'

Towards the end of October 9 Survey Company, less No. 3 Section, was ordered to stand by to join Paiforce. Nobody knew what Paiforce was or where it was located, but the Company had lost the capacity for being surprised and waited

calmly for movement orders.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## FORESTRY GROUP

### *Forestry Group*

The site for the new mill to be erected in Herefordshire was fixed at Tram Inn station, at a level crossing on the Truxton-Much Dewchurch road, while the men were billeted in Much Dewchurch village about two miles distant. Timber in the neighbourhood was calculated to provide about a year's work for the mill as well as pit-prop work for Italian prisoners of war. Eleventh Forestry Company, which had just got a band mill, its third unit, into production at Cirencester, was given the job of erecting and running its fourth mill at Tram Inn.

There must have been some fairly outspoken comments in letters written home about this period, some of which appeared to have found publication. Methods of milling in England are very different from those followed in New Zealand and not necessarily inferior, taking into account the controlled felling practised in cultivated forests where each tree has been planted by hand and tended throughout its life. The English method of felling to within a few inches of the ground took a lot of getting used to, for the Kiwi bushman always left a waist-high stump—until the appalling wastage was pointed out so often that low cutting became the custom. Another English practice was to trim the log boles of protusions instead of leaving it to the breaker-down men in the mills, but that was a policy of perfection that the New Zealand bushmen never got around to. But whatever factors induced the remarks, they produced a quiet reproof administered by the Deputy Assistant of Military Administration (Forestry) in a letter to Colonel Elliott, part of which read:

'The Country Gentlemen's Association's Magazine for July 1942 contains a lengthy extract from reports made by officers of your Group with regard to sawmilling in this country, the report being compiled from publications in the New Zealand press. I am letting you know this unofficially as the article has caused a certain amount of comment in this office, and you may like to have an opportunity of considering the general question of the views of serving officers being published in the press, in relation to ACI's <sup>15</sup> on the subject, in case the matter should be brought up officially.'

No doubt the nicely worded warning was passed on—not so nicely worded.

Time was lost during this period of summer by lack of water for the saws and boilers. This was an unusual situation, but up to 240 man-hours a month were generally lost through machinery breakdowns. Several of the mills taken over as going concerns were temporary, with decrepit and out-of-date plant. Securing parts for these was a constant source of trouble and delay.

A change in establishment about this time added more drivers to the strength of each company. They were needed, for it was the duty of the Group to deliver all sawn timber to the railhead, sometimes necessitating hauls of up to one hundred miles. In the early stages pole wagons drawn by rubber-tyred Fordson tractors were provided for such transport but proved too light. They were replaced by Leyland Hippo trucks from which the body had been removed and bolsters fitted instead. These, in turn, were replaced early in 1942 by semi-articulated diesel-driven vehicles.

**Woolmer** was the only mill that had no transport, because it was on a railway siding and timber was loaded straight on to railway wagons from the yard. There was no accumulation of slabs for the same reason and even the sawdust was no problem, for Canadians in a nearby camp had sawdust-burning stoves and they were only too happy to provide transport for free fuel.

The Tram Inn mill commenced working on 11 September but only for a few hours daily while adjustments were made and improvisations tried out. Nevertheless comparative figures for July-September 1942 (13 weeks) show that the average output per three-company group per week was:

New Zealand Engineers	33,589 cubic feet
Royal Australian Engineers	31,753 cubic feet
Royal Engineers	27,674 cubic feet
Canadian Forestry Corps	23,371 cubic feet

This result might be considered satisfactory, particularly as more than average time was lost through breakdowns. Mills erected as temporary structures had been running at peak production for more than a year and the strain was beginning to tell. Two mills were shut down for a full week of the above period, while others had

major machinery troubles that slowed down production. The New Zealand Forestry Group might have been forgiven its minor trespasses under the stress of constant reminders from the Ministry of Supply on the necessity for increased output. It had consistently, whenever comparative figures had been published, produced the highest tallies in the [United Kingdom](#), but it was not enough.

Forestry Commission officials, more concerned with silviculture than with timber getting, complained bitterly that the New Zealand sappers left forests untidy, and indicated that effective supervision of felling was lacking.

The answer was that clearing-up was a secondary consideration to timber production and could be done by unskilled labour. It was in fact done whenever possible by Pioneer Companies attached from time to time.

If any further reasons were wanted for leaving unskilled work to unskilled hands they were provided by the October production figures, when in spite of time lost through the usual breakdowns and the running in of the Hereford mill, [Grittleton](#) bettered the previous mill record by 4000 cubic feet, and the grand total of disposals exceeded the previous best output by 14,000 cubic feet.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## CHAPTER 12 – THE TURN OF THE TIDE

## CHAPTER 12

### *The Turn of the Tide*

Mention has been made of the plan to breach the enemy line—in essence, an assault by infantry behind a barrage. Through the gap thus to be created, armour would advance and decide the issue. To this end, while Rommel had been held along the [Alamein](#) line, hundreds of the latest American Sherman tanks, thousands of reinforcements for the depleted divisions, untold numbers of vehicles and enormous stocks of supplies had been pouring into Egypt.

But before the tanks could enter the battle, tracks must be cleared through mined areas, known or later discovered. A minefield, as the reader will remember, is an area in which an unknown number of anti-tank mines have been buried in unknown patterns but in sufficient quantity to prevent the passage of vehicles. Up to that date it was reasonably safe for men to walk through a mined belt, for the anti-tank mines were designed with a firing device that would withstand the weight of a man walking on them but would actuate under a vehicle crossing the pressure plate.

The engineers were to ensure that lanes were made at the places and by the times laid down in operation orders, the synopsis of a coming battle. So it was that the Field Companies which had for months been putting obstacles in front of the enemy armour must now train in lifting mines in both our own and the enemy's minefields for the passage of our own tanks.

They had the example of the German engineers who had proved, both in the 'Cauldron' battles earlier in the year and during the attempt to outflank the [Alamein](#) position, that it was feasible to make gaps quickly through mined belts in moonlight and under fire.

But before mines could be lifted they had to be located and there were three methods of doing this. The first and most logical was to look for them; it is difficult to disguise work done by night over a large area and, providing it was not too dark, sappers could read the signs indicating their presence. Sometimes the wind would help by exposing part of a mine, sometimes shelling would dislodge tell-tale evidence. By these and other methods mentioned in a previous chapter an unmarked field could generally be found.



had several methods of firing, including nearly invisible trip-wires. Before being lifted, mines were made safe by defusing or relocking the safety devices—a risky business even if the lifter was an expert.

Much thought had been given to the problem of making quick gaps across danger studded country and the Eighth Army School of Minefield Clearance, with Major Currie as Commandant and Chief Instructor, had been set up in a quiet piece of desert at [Burg el Arab](#) to teach a drill that had been evolved for the purpose. Every CRE in the Eighth Army had put forward suggestions from which a standard drill was prepared, but it was left to each commander to make such variations as he thought necessary.

The standard drill envisaged a gapping detachment of 1 officer and 44 other ranks comprising:

Recce Party	1 officer, 1 NCO and 3 ORs
No. 1 Party	1 NCO and 9 ORs tape laying
Nos. 2 and 3 Parties	1 NCO and 9 ORs detecting
No. 4 Party	1 NCO and 9 ORs stores and reserves

Headquarters Divisional Engineers' drill used a team of thirty-five men to clear a gap eight yards wide, which was considered sufficient for wheeled vehicles. A 16-yard gap was thought to be the minimum width that tanks could pass through at night. Signal cables were laid on the right-hand side of the initial lane and all widening was done to the left. Every sapper was trained in all duties for it was seldom that a lifting job under fire did not entail casualties.

Upon completion of the first lane each side was fenced with iron pickets and barbed wire and lighted with lamps shaded so that they could be seen only from the rear. These lamps were the flat, dry-cell battery, bicycle type and hung in pairs; they showed a green light for the safe side and amber for the dangerous or uncleared side. They were highly regarded by the infantry, who thieved them at every opportunity. By day the markers were pickets with a crosspiece painted white and red. Red lights were not used because they could be confused with vehicle and tank tail lights.

This was known as the 'quiet routine', but when concealment was not important

or when the mines were more than usually dangerous to handle, i.e., when they were booby-trapped or were our own shifted from other fields, they were often blown in situ or several were sent up together with a line of primer cord and an exploder.

Trials were also being made with prototype devices for finding and exploding mines by remote control. They are described by Lieutenant-Colonel Murray Reid, who, as a company commander, came to know both them and their faults intimately:

'It [a Pilot vehicle] consisted of an old truck with no cab, on which had been built a sandbagged box to protect the driver and his mate. The truck was driven backwards by remote controls from the protection of this box, and pushed three big spike-studded concrete rollers, which were held in place by arms projecting from the rear of the truck. The spikes projected about six inches from the rollers and pressed into the sand to explode any mines touched. The machines were designed to find mine-fields and not to clear tracks through them, so, to prevent our trucks from being damaged on unmarked fields, the Pilot Vehicles were to lead the way.'<sup>1</sup>

Once the danger area had been located there was a Scorpion that provided its own lane. Again quoting Colonel Reid:

'Experimental tanks in the area had been fitted with ingenious flail devices attached to the front of the tanks. As each tank advanced this device was revolved at high speed and caused wire ropes and chains shackled on to a roller to beat the ground with sufficient force to explode any mines encountered, the mines exploding harmlessly in front of the tank. The roller was held about six feet in front of the tank and three feet above the ground, with the wire ropes attached to the roller in such a way that the whole of the area in front of the tank was beaten by the flails. The separate motor installed on the tank to revolve the roller proved unsatisfactory, as it overheated badly, and the machine could not work continuously for more than 500 yards. With improvements it was hoped to develop a similar machine which would prove satisfactory under all conditions. This idea had great possibilities, especially from the sappers' point of view, as if we could get tanks to clear gaps through minefields we could anticipate a much longer life.'

The Scorpion was to be for use in an emergency, such as when an unexpected minefield was encountered and no sappers were available, or where enemy fire prevented men working in the open. Their primary role was to act like minesweepers to warships and clear the way for tanks that might need a track through a field in the course of an engagement. In actual use, however, they performed indifferently, for the flails did not beat tracks wide enough unless several Scorpions were used in echelon and in the dust and smoke of battle this was quite impossible. Perhaps the most unsatisfactory feature of the Scorpion was that the engine operating the flails was too light. This auxiliary motor, a V8 Ford in a small armour-plated housing attached to the right side of the tank, had space for the motor and operator but not enough for the circulation of cooling air for the radiator. The result was often that a motor overheated or clogged with dust and was rendered unserviceable. The 'Scorps' had British crews but the Field Companies to which they were from time to time attached supplied the operator for the auxiliary equipment. It was not exactly a safe job but there was never a lack of volunteers.

The enemy contribution to the complexity of the modern battlefield was the 'S' (anti-personnel) mine which was scattered among the anti-tank mines. It could be operated by pressure or pull igniters and from the technical point of view was a beautiful piece of precision engineering. The S-mine was really a small mortar five inches in height and four inches in diameter which fired a double-walled container holding about 350 steel balls and a bursting charge. A delay device exploded this container, according to the nature of the ground, from three to five feet in the air. The range of the shrapnel and case fragments was up to 200 yards and they were lethal up to 100 yards—a very deadly weapon.

We too, of course, possessed anti-personnel mines, but they had been seldom used in the desert and were never the equal of the S-mine. It was not until the doctors reported the presence of pellets in new wounds that the enemy's use of shrapnel mines became widely known.

The sappers spent the better part of the first week at the training area in covering, with painstaking accuracy, some hundreds of acres of desert with dummy minefields, gun emplacements and infantry positions. Only very senior officers in the Division knew that the practice battlefield was a replica of the German defences in

front of [Miteiriya Ridge](#). The Australians already held [Tell el Eisa](#) ridge and the Eighth Army plan was to make a break-through between that feature and the nearby [Miteiriya Ridge](#). The infantry brigades, with appropriate supporting arms under command, deployed in the moonlight of a September night and took part in a full dress-rehearsal of the real thing.

The engineers, using Bangalore torpedoes on their previously erected wire obstacles, cleared passages for the infantry, and after the troops had passed through they cleared and marked lanes in the minefields beyond for the passage of supporting arms. Finally they laid protective minefields for the infantry digging in on their objectives. At lectures and conferences the lessons of the mock battle were digested and solutions to problems worked out.

A large and detailed model of the proposed battlefield had been built for [General Freyberg's](#) use by Headquarters Divisional Engineers, and as the weeks went by the officers who studied it were more and more junior. Each sapper section had laid extensive dummy minefields near its lines and concentrated on the drill for clearing along a given bearing 40 ft lanes through two of these in succession. They practised by day and by night until each sapper was thoroughly conversant with every job in the team and until every sapper was thoroughly browned off with mines and their attributes.

The intention was to create two corridors between [Tell el Eisa](#) and [Miteiriya](#) ridges for the passage of two armoured divisions. The [Royal Navy](#) and the [RAF](#) had virtually denied enemy replenishment by sea and the [RAF](#) had obtained air supremacy; on land there were to be diversionary attacks from [Ruweisat Ridge](#) of evil memory down to the [Qattara Depression](#).

The New Zealand attack on [Miteiriya Ridge](#) was to be carried out by the two infantry brigades; the flanking divisions were 51 Highland Division, right, and [1 South African Division](#), left, while north of the Highlanders was 9 Australian Division—four divisions from four countries. The job was to break through a position defended with minefields three to five miles deep, covered very adequately with artillery and mortars and held by a tenacious and inventive enemy.

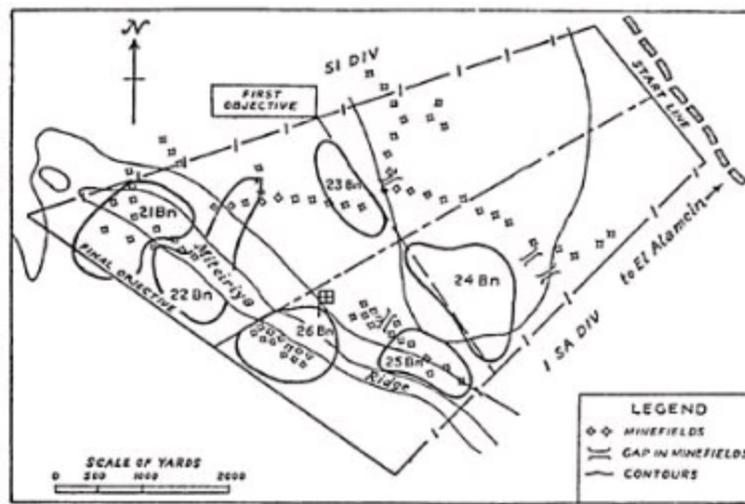
To exploit success to the south and for the protection of the infantry which could

expect armoured counter-attacks, [9 Armoured Brigade](#) was placed under command of 2 NZ Division thus ensuring that there would be no more [Sidi Rezegh](#), [Ruweisat Ridge](#) or [El Mreir](#) disasters, or as [General Freyberg](#) put it in a report to the [New Zealand Government](#), '... and days of infantry being overrun by enemy armour as on 1 December 1941 and 22 July 1942 which brought long lists of prisoners are, I hope, past.'

The necessary lanes for the passage of [9 Armoured Brigade](#), two in each brigade area, were the responsibility of the CRE. A separate lane for 10 Armoured Division that was also passing through the New Zealand sector was to be cleared by that Division's own minefield task force.

In the New Zealand sector one battalion in each brigade was to capture the first objective, which was just beyond the first enemy minefield; in the second phase two battalions in each brigade were to advance to the far side of [Miteiriya Ridge](#).

Colonel Hanson's intention was that the first and probably the largest enemy minefield would be cleared by one sapper party and any others by a second party, which meant using eight of the nine sections in the three Field Companies. The allocation was: 7 Field Company (Major C. F. Skinner), with No. 3 Section (Second-Lieutenant St. George <sup>2</sup>) of 6 Field Company under command, to clear the lanes in 5 Brigade sector; 8 Field Company (Major H. M. Reid), with No. 2 Section (Lieutenant Claridge) of 6 Field Company under command, to clear lanes in 6 Brigade sector. Company Headquarters, 6 Field Company (Major Woolcott) and No. 1 Section (Lieutenant Morgan) were to remain with the Divisional Reserve Group.



MITEIRIYA RIDGE—DAWN POSITIONS, 24 OCTOBER 1942

**miteiriya ridge—dawn positions, 24 october 1942**

Fifth Field Park Company (Major Anderson) had also trained in mine detecting and lifting as well as carrying out its normal supply functions—functions that to this date had largely been laid aside in favour of Field Company work. Workshop Section was particularly busy making mine markers and lane markers and also helping the LAD to fit up trucks for Divisional Signals; Stores Section had its hands full distributing and taking back tapes, lamps, sandbags, explosives, picks and shovels from the Field Companies and infantry brigades according to the training that was going on.

On 12 October twenty sappers (Lieutenant Somerville) were sent on a job near the [Alamein](#) railway station building shelters for [Divisional Headquarters](#) and burying cable leading there- from to prevent damage from enemy shells and from our own tanks. The next day twenty sappers (Lieutenant Pickmere) joined the Divisional Reserve Group on a very hush-hush mission. The word Scorpion had scarcely been breathed at that time and the new 'minefield busters' were kept hidden from view behind walls of scrim. They did not inspire much confidence in the mechanically minded sappers for the radiator and flail engine faced backwards, which gave the engine a very short running time before it overheated; all the extra fitments were only clamped or welded for it had been forbidden to drill holes in the obsolete tanks; and it was not possible to see from the interior of the Scorpion because the flails churned up so much dust that visibility was restricted. It was only after a night at the [NAAFI](#) that there were dreams of winking out machine-gun nests, with the flails flat out and mines exploding all over the place.

Another detachment, five sappers commanded by Sergeant J. F. [Smith](#),<sup>3</sup> was detached to the Divisional Cavalry for dealing with mines encountered on patrols, also for hasty demolitions of tanks and guns.

The rest of 5 Field Park Company (Lieutenant Jones) became the LOB group and with the other units' surplus transport took part in exercises calculated to deceive the enemy into thinking that an outflanking move was being initiated. They careered over the desert creating clouds of dust while drivers and their passengers muttered about being messed about as usual.

On 21 October the Division began the move from the Swordfish training area to the [Alam el Onsol](#) assembly area, about 12 miles behind the start line. From there units of Royal Engineers had formed and marked six tracks leading to the forming-up places, and of these tracks the New Zealanders were allotted the use of four, known by the signs placed at frequent intervals as the Star, Bottle, Boat and Moon tracks. At night these tracks were defined by lamps placed under empty petrol tins, out of the near side of which had been punched the outlines of the object which gave the track its name. For many miles around the desert had been dotted with dummy vehicles for the benefit of enemy 'recce' planes, whose pilots no doubt diagnosed them for what they were—but it was hoped that they did not realise that nightly the dummies were changed to real vehicles or became the camouflage for dumps of ammunition.

The next afternoon all ranks gathered around their Company Headquarters while General Montgomery's pre-battle message was read to them; the pending operation was explained in general and the part they were to play was described in very great detail. From the start line to the infantry objective on the far side of [Miteiriya Ridge](#) was about three and a half miles; there would be 104 guns supporting the Divisional attack, some on known, likely or supposed defensive posts and some by way of a creeping barrage. This would be the first time a barrage, a number of guns covering the front and lifting their range at predetermined times, had been used on such a scale in North Africa. Barrages large or small did not concern the sappers, but what was of interest was the information that a troop of Scorpions had been placed under the command of each brigade to be used only if the engineers could not get the enemy belts gapped in time.

That night the sappers moved, with their brigades, from the Onsol area to lying-up areas just in rear of the infantry start line. In 5 Brigade two lanes were to be cleared 500 yards apart for the unit supporting arms and the tanks of [9 Armoured Brigade](#). Tenth Armoured Division, which was to break out after the infantry had captured the ridge, was responsible for its own lanes. No. 3 Section, 6 Field Company (Lieutenant St. George), right lane, and 2 Section, 7 Field Company (Lieutenant Page), left lane, were to clear as far as the west side of the first enemy field, whereupon 3 Section (Lieutenant Standish) right and 1 Section (Lieutenant Foster) left were to pass through and carry on to the infantry objective. A small party of sappers would accompany 23 Battalion as far as the minefield and place there at an agreed spot a shaded light for the guidance of the clearing parties. In order to get the vehicles off to a flying start, gaps were made through our own minefield and the greatest care taken to leave no traces for prying enemy patrols.

After lying up throughout the hours of daylight on 23 October, the crucial test was at hand. At about 9 p.m. 23 Battalion, which was to take the first objective some two miles forward, passed the waiting sappers; soon afterwards there followed the two companies of Maoris who were to mop up on each brigade sector. Bright moonlight bathed the silent desert, while out to the west the silhouette of Miteiriya barely broke the flatness of the skyline. 'Yet still war seems on either side to sleep.'

At 9.40 p.m. from the sea to [Ruweisat Ridge](#) and from Ruweisat to the [Qattara Depression](#) belching gun barrels turned the moonlight red; an avalanche of missiles screamed westwards; magically, lights appeared in the cleared gaps when the need for concealment had passed.

The Maoris left the start line at 10.23 p.m., following 23 Battalion with the sappers close behind. Missed strongposts were to be eliminated as quickly as possible to give the working engineers a clear field; there were no interruptions from this cause for Maoris are very proficient at such jobs.

Lieutenant St. George, on the right-flank lane, writes:

'At 1800 hours on 23 October we moved up to the start line which was taped and waited for zero hour. I went up and inspected the gaps on our own minefield and also checked slit trenches, which could put our trucks out of action if not

marked. While on this check, I met Major Skinner and we were discussing how much time was left, when the first 25 pounder shot practically parted our hair, or so it seemed. With the sky lit up from horizon to horizon with flickering gun flashes as the great barrage really got cracking, it was a sight Major Skinner or I will never forget.

'As we were third off the mark after the attacking infantry and the mopping up Maoris, I walked back and gave the order to start up. We sent out small recce party, of I think 3 sappers and Sgt Hill, <sup>4</sup> with the mopping up Maoris and they had a blue light to plant at any minefield they could find to keep the section on line.

"Battle Order" was 1 officer and 37 O.R.s spread out in two ranks in extended order with myself in centre of front rank and Sgt. Johnny Brown <sup>5</sup> in centre of rear rank. Then a three ton truck with our explosives and gear. If our recce party missed a minefield which of course did not show in the desert, we hoped to find it by someone in the extended ranks stumbling on a mine and thus giving us a clue.

'The whole scene was rather unreal to me and I kept getting an impression of a cinema scene with the large moon shining, the flat plain, the terrific noise of the barrage and the red coloured blobs, which were German shells landing but which of course were noiseless in the general din.'

A salvo of these unheard shells landed among the section, wounding St. George and his batman, and Sergeant Brown took charge. His truck became mixed with carriers and unit transport which had lost direction and were milling around. He got clear and caught up with the section before they began clearing the first enemy field. Sergeant Brown was awarded a DCM for his resource and leadership in getting the lane through and ready for traffic at a cost of five more wounded.

Owing to the fact that the New Zealand sector widened as the ridge was approached, the sappers had to change direction during the advance. Lieutenant Standish, whose section passed through Brown's men, put on record:

'I had to change direction in no man's land which was a tricky operation I remember, due to poor visibility and steering points, much smoke and dust, mortar bursts etc., and carry on in the north lane which had been successfully opened through the first minefield. Anyway we proceeded fairly smoothly opening up and continuing the north lane, clearing gaps through two more belts of mines and we

finished up immediately behind the FDL's ... which was just below the ridge.'

Lieutenant Page, a quarter of a mile to the south, sketches a background:

'... the comparative silence while waiting on the start line, followed by the terrific din of the barrage the like of which had never been heard before [in North Africa]. The word to move and the first sight of the approach march as we moved over the brow of the hill, splashes of artillery fire and the tell-tale tracer of small arms. The difficulty of concentrating on keeping accurate line and direction, counting paces etc., in the general racket and amidst the smoke and dust of shell fire. The feeling of relief on sighting a small green light indicating that our small recce party had found the first indication of mines.... The appearance on the job of OC Jerry Skinner and the encouragement he gave to all concerned at a vital stage. The realisation that the hours of training we had done were paying dividends.... The gradual easing of the fire and finally the moment when the job was done, the gap opened, tested and the first support weapons rumbling through.'

The support weapons were rumbling through at a cost of five sappers wounded. Sappers [Dolheguy](#) <sup>6</sup> and [Taylor](#) <sup>7</sup> were awarded Military Medals for courageous work with mine detectors. Both refused relief from a job that did not permit shelter from bullets or shell splinters.

With Page's gap through, Foster's sappers moved forward and started on their job when the second field was located. The compass bearing they were following took them diagonally through the field and it became apparent that they would not get clear before daybreak. Scorpions were waiting in reserve at the first gap and Lieutenant Foster went back for them. He found there were only two out of the original three that had started out that night. The second one got off centre a bit and blew off a track but the third one made up for everything:

'With the Scorpion attachment working there was absolutely no visibility forwards—just a column of thick dust and stones. I got into the open hatch of the tank and navigated by sighting backwards. Our detector gang worked in widening the gap and the marking crew followed on. In spite of frequent stops, the auxiliary motor finally seized up just short of the objective— [Miteiriya Ridge](#), but the tanks and supporting weapons were through before daylight.'

The Company, less No. 3 Section dug in behind 21 Battalion, was concentrated behind the southern gap in the first minefield.

In 8 Field Company, covering the 6 Brigade sector, Major Reid's plan was for No. 2 Section (Lieutenant Miller) to open up the north lane as far as the first infantry objective, where 24 Battalion would halt and where 26 Battalion would follow through on the right half of the brigade front and capture the ridge. No. 3 Section (Lieutenant Andrew) would continue the lane behind 26 Battalion.

The south lane was to be pushed through to the first objective by No. 2 Section, 6 Field Company (Lieutenant Claridge), and then No. 1 Section (Lieutenant Hanger) would leapfrog through behind 25 Battalion, which was to complete the occupation of the brigade sector.

The field was not marked on our side and Miller and Claridge went forward with the first infantry wave to place a beacon light at the approximate boundary as a guide for the sappers. On the way back to their sections Lieutenant Miller was mortally wounded and Sergeant Allen<sup>8</sup> took charge of No. 2 Section.

Company Headquarters followed behind the north lane clearing party, accompanied by a detachment of Divisional Signals who were running a line forward and who also had a wireless set rigged up in a Bren carrier in case of mishaps. In front of the sappers a pilot machine was searching for mines, but in the event it was the OC who found the first one with his jeep. He was out of it at the time and, although the vehicle was wrecked, the driver escaped with a shaking.

Sergeant Allen's section made such good time through the first enemy minefield that Major Reid altered his plan and told him to carry on while No. 3 Section widened the lane to the required forty yards. The section disappeared into the smoke and dust and were nearly on the final objective when there was an explosion so loud that it momentarily drowned the barrage. A trip-wire had exploded a 500-pound bomb—one of our own used by the enemy—killing Sergeant Allen and three others and wounding twelve more, nearly half the section at one blow. Other booby-trapped bombs were found later spread over the minefield with wires radiating from them like the web of an evil spider. The remnants of the section were sent back to the first gap and Lieutenant Andrew's party brought forward. Andrew, trying to fight off a

severe attack of jaundice, then led his section to where a second minefield had been located at the foot of Miteiriya. It was in this belt that Andrew found the first S-mines that the sappers had knowingly encountered; the forward field had probably been left clear of them so that patrols could move about freely. The sapper officer went ahead of the minesweepers and disarmed the new menaces. It was a very tricky operation at any time and in the dusty moonlight extremely hazardous, for there were only three little wire prongs to be seen and some were connected to nearly invisible trip wires. He was awarded an MC for his coolness and leadership.

The lane was opened by 5 a.m., No. 2 Section widening it while the others searched for safe vehicle dispersal areas. There was another belt of mines on the forward slope of the ridge in the 26 Battalion area and the sappers were preparing to move over the crest and tackle it in daylight when they were stopped by the Brigade Commander. Nobody would have lived long above ground on that bare slope in daylight.

Claridge's south lane was not quite ready when Lieutenant Hanger arrived so the section lent a hand to get the waiting tanks and unit vehicles through. Hanger writes:

'We eventually went forward a bit behind time but caught up a bit until we found mines, then mines and more mines!! Were getting a bit of hurry up from bypassed MG points at this time (from the South African area where the advance was not going well). Somewhere about here Major Murray Reid and Lt Ralph Pickmere turned up with some flail tanks which proceeded to get stuck in our Gap. Much cursing and telling God all about it as we then had to set to and clear a new gap to get around the damned things.... We battled on until first light but as [25 Bn](#) had not reached their final objective (they had dug in half a mile short of the crest of the ridge) we had to stay put. Had a fair bit of curry at first light from Jerry anti-tank overs which were just clipping the ridge above us and then carrying on to make the job of eating breakfast a little uncomfortable.'

Successful mine clearing under fire at night in the smoke and dust of a desert battle requires intensive training, very careful planning and stout-hearted sappers inspired with the doctrine that while one sapper lived mine clearing would go on. All through that hectic night the CRE, his headquarters officers and a South African

liaison officer moved around the battlefield noting the progress of the mine clearing and getting messages back to Divisional Headquarters. Colonel Hanson relates this story:

'I don't think my Orderly Room corporal will mind my telling you of a little incident on the night 23rd October. He had never previously been right up at the front end in the minefields in a battle and he asked if he could act as my bodyguard as he said, as I went round the mine clearing platoons. He was a stout fellow and I said he could come. Some time in the middle of the night when he and I were moving across country from [7 Fd Coy](#) front to 8 Fd Company we seemed to get ahead of the Sappers and the mopping up Maoris and ran almost on to an enemy machine gun. We were quite close. I told the Orderly Room Corporal to wait until the enemy opened fire again and then let him have it with his Tommy gun. It was then that we found that he had come without any ammo. It took him a long time to live this down. As usual I had my pockets full of grenades. It took only one grenade from each of us to make two Huns surrender. We moved back and handed them over to the Maoris.'

The situation at daybreak was that the Australians were partially on their objective, the Highlanders partly on theirs, the New Zealanders not quite all on theirs and the South Africans held half their part of the ridge.

Behind the fighting troops the New Zealand sappers were the only ones with their lanes cleared right up to their infantry. Tenth Armoured Division, owing to changed orders, did not clear its lane through the New Zealand sector that night but used the Divisional lanes instead.

The attached 5 Field Park sappers moved out with the leading Divisional Cavalry squadron which was to exploit to the south-east. It was not long before a belt of mines was encountered, but the area was so covered with fire that the sappers were not called on and the cavalry returned to the shelter of [Miteiriya Ridge](#).

Tanks of [9 Armoured Brigade](#) tried to cross the minefield but some were blown up and the rest returned. The net result was that neither armoured division of [10 Corps](#), on which high hopes had rested, was able to break out.

Meanwhile Divisional Reserve Group, comprising among others Lieutenant

Pickmere's party and 6 Field Company less two sections, moved up during the night and dispersed behind the first enemy minefield on the left of 5 Brigade sector. Seventh Field Company, less No. 3 Section dug in behind 21 Battalion, was dispersed east of the south gap in the first minefield near Brigade Headquarters; 8 Field Company was dispersed near Lieutenant Hanger's section east of the second field.

Ninth Armoured Brigade and some tanks of 10 Armoured Division were deployed hull down along the ridge, which no doubt accounts for the absence of counter-attacks—an invariable concomitant of former battles.

Another plan for tank exploitation after dark did not involve the engineers except that a lane had to be opened through the field on the forward slope that 8 Field Company had been ordered not to attempt in daylight.

The instructions were for 6 Brigade to mark the route as far as the edge of the field, where the sappers would take over. An artillery programme to deaden the sound of tank movement was to open at 10 p.m. and the lane had to be cleared, lighted and marked by half past nine, that is half an hour before the guns opened. No. 1 Section, 6 Field Company (Lieutenant Morgan), was to do the work. The Company, less No. 3 Section which reported back the next day (No. 2 had already returned), was dispersed near a British tank regiment, or rather the tanks had moved in on the sappers to the latter's intense discomfort, for enemy gunners had the range very accurately indeed.

Late in the afternoon No. 1 Section was ordered to report to Company Headquarters immediately, an order they were happy to obey with alacrity. It was not, however, possible to let Lieutenant Morgan, who was somewhere ahead in one of the tanks, know about the change in dispositions.

Shortly before dusk the section, commanded by Major Woolcott in Morgan's absence, set out to locate 26 Battalion Headquarters in whose area the gap was to be made. It was some time before the infantry battalion headquarters was located; consequently the sappers started on their job much later than had been intended. Major Woolcott left Sergeant Johnnie [Lawrence](#)<sup>9</sup> to get the work started while he went ahead with the 'recce' party, but he had not gone many yards when he was mortally wounded by a booby trap or S-mine.

Sergeant Lawrence wrote:

'A party of the boys carried Major Woolcott back to the infantry lines and once more we attempted to get cracking on the gap. Unfortunately the explosion of the booby trap awakened a Jerry machine gunner somewhere out ahead of us and he kept us pinned to the ground by sporadic bursts of fire in the direction from which he had seen the flash. We did make a little progress in spite of this bloke but it was not until the Bn. machine gunners opened up at him and silenced him that we were at all happy about things particularly as 2200 hrs was fast approaching.

'We had just seen the leading tanks through our gap in the minefield and, incidentally breathed a heartfelt sigh of relief that we had not missed any mines, when the Jerries started a bombing raid. One of their first bombs started a fire among the trucks and tanks and from then on things got pretty hot. We had finished our job and there was no sense in hanging around in such unhealthy surroundings so we set off for our transport.

'I cannot remember much about the actual clearing of the gap except that we were still not through when our own artillery started their barrage. We had many anxious moments before the last marker lamp was placed in position but, fortunately, no casualties due to our own guns.

'There is one thing that stands out most vividly in my mind and that is the splendid manner in which the men rallied round and pressed on with the job in spite of all the mishaps we encountered. Had they faltered at all we would not have made it.'

Four casualties suffered by the section brought the company list of killed, wounded and died of wounds to fourteen all ranks.

Part of Lawrence's DCM citation reads:

'After his field company commander had been fatally wounded, Sgt Lawrence immediately assumed control, rallied the men and pushed on with the work. When the artillery fire came down on the minefield in preparation for the advance of the armour, the gap was still incomplete. Under the barrage and the enemy fire Sgt Lawrence encouraged and directed his men and completed the gap just in time to

pass the advancing tanks through. It was in considerable measure due to his vigorous leadership and gallant example that the gap was completed and lighted to allow Div Cav and [9 Armd Bde](#) to move through without delay or hindrance.'

In the event the armour again failed to breach the enemy defences and the exploitation was abandoned. But further limited gains by the Australians had increased the danger to the enemy of being pinned between them and the sea.

The sapper command was reorganised. Major Anderson went to 6 Field Company and was joined by Lieutenant Goodsir (promoted captain) from 7 Field Company as second-in-command, and by Lieutenant [Hermans](#)<sup>10</sup> from Divisional Headquarters.

Captain Rix-Trott (promoted temporary major), who had been attached to 5 Field Park Company, took command of that company but lost Lieutenant H. M. Scott (promoted captain) to 7 Field Company and Lieutenant Pickmere to 8 Field Company. Lieutenant Andrew was evacuated sick and the sadly depleted No. 2 Section, 8 Field Company, was temporarily divided between the other two sections. The Engineer command was then:

Headquarters 2 Divisional Engineers

[Lt-Col F. M. H. Hanson](#)

[Capt R. C. Pemberton](#)

[Lt T. W. Bowes](#)

[Lt M. H. Kemp](#)

5 Field Park Company

[Maj K. Rix-Trott](#)

[Lt K. F. Jones](#)

[Lt E. R. Somerville](#)

[Capt H. F. Hamilton, LAD attached](#)

## 6 Field Company

Maj J. N. Anderson

Capt J. A. Goodsir

Lt P. W. de B. Morgan

Lt C. Claridge

Lt R. E. Hermans

## 7 Field Company

Maj C. F. Skinner

Capt H. M. Scott

Lt R. M. Page

Lt F. E. Foster

Lt J. W. Standish

## 8 Field Company

Maj H. M. Reid

Lt P. B. Wildey

Lt T. Hanger

Lt A. R. Pickmere

For the sappers 25 October was another day of clearing up the area. Sergeant Smith's Divisional Cavalry detachment of 5 Field Park Company worked by night clearing the way for tank transporters to remove some twenty-odd disabled tanks. Two sappers and Sergeant Smith were wounded but the sergeant, after receiving treatment, was able to carry on.

It was also a period of dust-storms obliterating the area, of captured Italians marching through the lines and of an onfall by voracious flies.

The sappers found hanging around on the edge of the battlefield something of an ordeal and would rather have been either right in or right out, preferably the latter. They were surrounded by artillery which fired by day and by night, making sleep impossible and also inviting retaliation both from the [Luftwaffe](#) and from the enemy gunners. Luckily both appeared to be too busy in other areas.

Sixth Brigade and the South Africans were to straighten the line by getting on to their original objectives during the night 26 - 27 October and 8 Field Company was ordered to be ready to assist by clearing a minefield behind and putting down another in front of the new FDLs. No. 3 Section (Lieutenant Pickmere) was to work with 26 Battalion on the right of the brigade and No. 1 Section (Lieutenant Hanger) with 25 Battalion on the other flank. Both section commanders, each with three sappers, were to accompany the infantry and reconnoitre out ahead of the final objectives to see if there were any mine belts that might serve to protect our men, or whether a thin line of mines would have to be put out before first light. The barrage would open at 8 p.m., and Major Reid would have the two sections waiting with the other unit transport near a gap made by 5 Field Park Company on the top of the ridge. As soon as the success signal went up they would pass through the gap and get to the new positions at the double.

Lieutenant Pickmere found his tour of duty with an assaulting infantry battalion very full of incident:

'We left the shelter of our slitties and were soon strung out in a well dispersed line along the ridge and advancing at walking pace in three waves—about 50 yards between each. Crossed a trip wire and were in a minefield where I picked my way fairly carefully but the infanteers walked on regardless.... Then all of a sudden things began to happen—tracers flying in all directions, explosive bullets cracking around us and ricochets zipping about off the flinty desert. The infantry loosed off a few rounds from their bren guns but kept on advancing. We crouched down to see what was going to happen and then got cautiously up again, Bill [Webb](#) <sup>11</sup> leading the way. He was used to this sort of thing having transferred to us from the infantry and didn't turn a hair. (A Coy was forced to ground by flanking machine guns, lost heavily and

were eventually withdrawn.) Meanwhile Bill Webb had crawled over to me and we swapped views on the situation—I think for two pins he would have stormed the machine gun nests on his own, but we finally decided it was no business of ours—we were there to do a job after the infantry had done theirs and silencing enemy infantry was definitely not one of our roles.'

After narrowly escaping being taken prisoner, Lieutenant Pickmere reported to Battalion Headquarters and was told that there was little chance of being able to make a forward reconnaissance that night. His whole party had escaped casualties and he led them along the ridge, where he met Major Reid who was out looking for them.

Lieutenant Hanger had much the same experience with 25 Battalion. The section remained with the rest of the transport below the crest of the ridge while he and Sergeant Derrick [Campbell](#)<sup>12</sup> went forward with the infantry, who occupied their objective but were only able just to hang on. 'We had to take cover in some Eyetie sangers. Incidentally these were full of yabbering Latin gentlemen whom we took prisoners. After some time Major Reid came forward and ordered us back as it was getting too near first light.'

Meanwhile Reid had got a tank to come forward and silence the fire covering the minefield gap and the support arms field through. Colonel [Bonifant](#),<sup>13</sup> commanding 25 Battalion, who had returned from the forward area about this time, 'considered it was madness to try and take our mine trucks forward as they were loaded with gelignite mines. Needless to say, we did not try to make him change his mind. The Colonel's main worry was how to get his anti-tank guns and mortars forward as soon as possible in order to have them dug in before daybreak. The minefield on his line of advance had not yet been breached, so we walked forward and inspected the field with the idea of towing the guns through between the mines. I picked up a few mines which were plainly visible, as we marked the route with a tracing tape. The anti-tank guns were unloaded from the portees and tied behind jeeps; then, with the Colonel and myself leading, the carriers and jeeps followed us through the field quite successfully.'<sup>14</sup>

Eighth Field Company returned to its lines and the next morning handed over to a South African company and rejoined other units in Brigade A Echelon area, some

16 miles in the rear.

The hostile gun lines, minefields and armour still prevented a breakout and it was decided to leave the too tough Miteiriya area and, by an assault with the last of the fresh infantry brigades, capture a bridgehead south of where the Australians had created—for the enemy—an uncomfortable bulge which threatened to pin him against the coast.

The two brigades, 151 and 152 British, supported by 23 Armoured Brigade, all under command of the New Zealand Division, were to advance two and a half miles; then [9 Armoured Brigade](#) was to carry on and break up the final enemy gun line on the high ground at [Tell el Aqqaqir](#).

Topographically [Tell el Aqqaqir](#) was of little account, but in that area of almost flat desert it was of profound military importance. On [Tell el Aqqaqir](#) was the final enemy defensive line, and from [Tell el Aqqaqir](#) 1 Armoured Division was to deliver the coup de grâce.

All Engineer company commanders and seconds-in-command met Colonel Hanson in a tent where a plaster model of the area was housed and studied the task. It was not an inviting prospect: the ground was unfamiliar, there was no time for reconnaissance and there was no clear information about the position and depth of minefields. It was, however, made abundantly clear that this was it—if there was no break-through this time it would be stalemate at [Alamein](#) again. At higher level it was decreed that the assault was to proceed at any, repeat any, cost. Ninth Armoured Brigade was to pass through the infantry on their final objectives and fight its way to [Tell el Aqqaqir](#). It was to stop for nothing once it was through the mines, and it was over to the Engineers to get them through. [General Freyberg's](#) dictum, 'The operation fails if we fail to get the armour through. Whole success depends on that', meant that it was the job of the sappers to see that the operation did not fail.

The whole strength of the Field Companies was thrown into the effort and in the early darkness of 30 October they left in convoy for the new assembly area west of [El Alamein](#) railway station on the south side of the Australian bulge. It was the kind of night that shortened drivers' lives—unfamiliar ground along a broken-up track and through dust clouds that blackened the night so that visibility was a matter of inches,

with each truck hard on the tail of its leader to avoid getting lost.

The sappers rested that day (1 November) while the commanders attended conferences. As the whole area had been well behind the enemy lines a few days earlier, there was not the same Intelligence about minefields that had been available for the first attack. It was thought likely that at least two belts of mines existed in front of the enemy gun line at [Tell el Aqqaqir](#). Royal Engineers would clear the way to the infantry start line, where the Kiwis would take over and gap and light five lanes, two in each brigade sector and one along the inter-brigade boundary.

The infantry commanders were ordered to bypass any strong-points that the barrage, three times heavier than the first one, might miss; it was made plain to the tank commanders that if the engineers failed them, they must charge the minefields and take the consequences—some armour must be in a given area by a given time.

The sapper commanders held their conferences then told the men what was expected of them and the cost of failure. Briefly, the Divisional plan was for 151 Brigade, right, and 152 Brigade, left, to make the assault, each on a two-battalion front of about a mile. Twenty-eighth (Maori) Battalion was to clear a suspected enemy position on the right and so protect the flank of the advance, while a British unit was to do likewise on the left. Scorpions and Pilots were being provided and lanes up to the present forward defended localities were being cleared, lighted and maintained by 51 (Highland) Division.

Colonel Hanson's engineer plan was for 7 Field Company to clear and mark the two northern lanes, 6 Field Company the central route, and 8 Field Company the southern lanes. At 0.55 a.m. on 2 November, after guns had been firing most of the night, the barrage began to roll and the infantry began to advance. The five sapper parties followed close behind.

Lieutenant Standish, responsible for the northernmost lane, found employment 600 yards from the start line and No. 3 Section went into action:

'We cleared a lane—not many mines—the distance required, with tanks following immediately behind us. When I thought we were through all the mines and had gone the distance ordered, I told the leading tanks, and all the tanks, about 30 of them, carried on past us to support the infantry who were having a pretty rough

time.... I was getting hectic messages back from the infantry to hurry the tanks up as much as possible. This was altogether a pretty sticky show and we had some casualties, I forget how many.... Visibility was so bad in this show I remember, due to smoke and dust etc., that we left continuous white tape along the ground behind us as we went forward so that the tanks could see to follow us. There was supposed to be tracer to steer us, but we could never see it and had to go by compass.'

No. 2 Section (Lieutenant Page) were in trouble right from the start; they were under fire before they reached the start line and their trucks were soon burning.

Page writes:

'Things got a bit disorganised for a time and meanwhile the support vehicles started to bank up behind us. Eventually on foot and with what blokes and gear we could muster we set forth with the pack hard on our heels. Fortunately we did not, initially, encounter any mines but were in trouble almost immediately with pockets of [enemy] machine gunners in burnt out vehicles and gun pits. These fellows had been left behind by the advancing infantry. When a hold up of this nature occurred the support vehicles would come to a halt a few yards behind us. The drill was then evolved to bring one forward to shoot out the obstruction, move on to the next and repeat the process. The prisoners that accrued in the meantime we faced in the general direction of our lines and sent on their way.

'We were making fairly heavy weather of it in this fashion when we discovered, I don't remember how, that John Standish was ahead of us with his lane on the right. He was going ahead according to plan, his line of advance was taped, and there didn't appear to be anybody using it at this stage of the proceedings. The obvious thing to do seemed to change direction right with our column and lead them on to the taped line. This was done but not if I remember rightly, without argument about lines of approach, etc. From this point on things went reasonably well. To my mind this was John Standish's night, he did a great job.'

Lieutenant Page was awarded an MC for his inspiring leadership and initiative during the battle. Casualties for the night were two killed, thirteen wounded, three missing. Major Skinner's car went up on a mine but he escaped with bruises and scratches.

Major Anderson detailed No. 3 Section to do the gapping for 6 Field Company. Lieutenant St. George had not been replaced and Sergeant Brown still commanded, but in view of the importance of the assignment the company second-in-command (Captain Goodsir) took over the conduct of the operation.

The section took its place behind the advancing infantry, who were soon lost in the dust and smoke of the barrage. There was no delay at the first minefield, which after a quick examination appeared to be a dummy; how the second field was discovered is explained by Captain Goodsir:

'Some hundreds of yards further on we ran into mortar fire and then heavy anti-tank and machine gun fire at very close range without having visually detected any suggestion of a minefield. While we were pinned down Sgt Brown came up from the rear and reported that the two right hand trucks had gone up on mines.'

Brown was told to return to the trucks and look out for the section, which would be sent back in small parties to avoid further casualties beyond the several already sustained. Captain Goodsir saw the last sapper moving back and made another quick search for his reconnaissance party before he followed them. Instead of a gapping team organised and working he found Major Anderson and a few sappers clearing the lane by themselves. The explanation was that Sergeant Brown had been wounded and evacuated, while the men, with nobody to command them, had dispersed and taken what shelter they could find. It was fortunate that Major Anderson and Lieutenant Hermans had arrived in the former's jeep. Hermans was sent forward to try to find Captain Goodsir, who at that moment was himself looking for his 'recce' party before returning. Major Anderson found that:

'Things were not so good. Sgt Alan [Freeborn](#) <sup>15</sup> (our Orderly Room Clerk) was with me and we had to take over the platoon. We taped the line, made a hasty recce for mines, lifted about a dozen and it was then that we used the Scorpion. It blew only one mine in passing the gap.' As a matter of fact it also nearly 'blew' Captain Goodsir, who had been missed by Lieutenant Hermans and was returning after his fruitless search.

The leading tanks, waiting impatiently for a cleared lane, were asked to subdue the enemy fire while the reserve section was brought up and the scattered No. 3

Section collected again. The sight of Sergeant Lawrence calmly getting his gapping team working so restored the confidence of the rather shaken men that they joined in the visual search for mines. Captain Goodsir took command of the augmented reserve section while Lieutenant Morgan stood by with the transport and spare men. In the morning they found that they were sharing the same piece of desert with about a hundred Italians who had decided early in the night that silence was golden.

By this time the gap had been proved, the enemy fire silenced, Lieutenant Hermans had returned from his quest for Captain Goodsir, and the advance resumed. Time was running short but the ground appeared more open and the sappers cracked on the pace. Smouldering hessian camouflage and two upturned anti-tank guns explained the lack of opposition after the pandemonium of a short time earlier. Major Anderson and Lieutenant Hermans went on ahead in the scout car to get the lie of the land. Lieutenant Hermans wrote:

'We pressed on with our scout car in the lead and "Andy" getting a bit concerned because we were a bit behind schedule and time was running out. I was scanning ahead with my binoculars and remarked to Andy that there seemed to be some peculiar troop movement ahead with people moving out of our way and going out to our flanks. I couldn't make out what the "infantry" were doing.... we came upon a derelict vehicle a hundred yards or so to our left and there seemed to be somebody taking cover behind it. We paused to take stock of the position and lo and behold! a platoon of infantry came up from our rear, deployed, and advanced on the derelict.... the picture was beginning to unfold. Instead of being ahead of us the infantry was behind us and the troop movement I had observed was the enemy forward troops getting out of the way when they saw or heard the column of tanks rumbling along behind us. We were just a bit lucky the tanks had caught up with us when they did or things would have been very sticky.'

Regarding the tanks, Major Anderson says:

'We were in contact with the tanks all the way. In fact they were treading on our heels and the Brigadier used to give me Hell whenever there was a brief hold up. We marked the route with green lamps every tenth of a mile—by speedo—and the first tank to pass always knocked the lamp over. I had several "Where the b—— h—— are your lamps" from the Brig.'

With the armour out in the open and the sky starting to lighten, the section returned to the trucks and began to dig in. Something white attracted attention and Lieutenant Hermans went to investigate. He returned with three very nice Biretta pistols and four very shaken Italians from a dug-in tank that was flying a white flag.

The reason for the extraordinarily heavy fire the company had encountered was made clear at daylight. They had missed a 50-foot-wide gap through the enemy minefield by yards and the gap had been covered by the tank, several anti-tank guns and supporting machine guns, all of which our tanks had put out of action. The minefield was put down with our own Hawkins mines hastily but effectively concealed beneath clumps of desert scrub. When the scattered No. 1 Section had been collected in the daylight it contained the lost 'recce' party. They had not seen the mines but had run into one of the anti-tank guns, which they captured and held the crew prisoner. They were then captured themselves by other Italians until the fire of our tanks presented the opportunity of parting from their captors. The cost to 6 Field Company of the night's operation was five wounded and one died of wounds, all from No. 3 Section.

On the left of the attack 8 Field Company had a complicated route to follow before it could form up behind 152 Brigade and in front of the tanks, anti-tank guns, carriers and assorted vehicles that carry the supporting arms of an assaulting force.

Lieutenant Pickmere (3 Section), right, and Lieutenant Hanger (1 Section), left, advanced with their sappers in two lines fifty yards apart and with their sandbagged trucks following in line abreast. There was no information as to where mines might be found and the idea was that if the sappers prodding in front with their fixed bayonets missed the mines the trucks would connect and, by the resulting explosion, disclose the field. The keenest eyes could see no signs of disturbed sand, but the ground was hard and stony and the half-moon obscured by cloud made the going slow.

The terrific din of the barrage drowned the noise of incoming missiles and five men went down—two killed—when something exploded between the two lines. The sappers carried on until it seemed that they would be up with the forward infantry without finding anything. There were no explosions in the line of transport following so nothing had been missed. At last there was a Dingo car that had obviously hit a

mine, and when Pickmere went to investigate he saw half buried some lengths of what appeared to be steel rail. On closer inspection it turned out to be a new type of mine—an Italian V3 anti-personnel as well as anti-tank mine, and the first encountered.

While the sappers were getting ready to give the new nuisances the primer cord treatment because nobody knew anything of their mechanism or characteristics, Lieutenant Pickmere explored the belt and found that it was only about one hundred yards wide and that beyond it the track-marks of German tanks were clearly visible. Major Reid came up at this time and the two walked perhaps a quarter of a mile farther west until they were quite convinced that it was now clear country.

'When we came back the lane clearing was going well and it was not long before the sappers had the 8 or 9 mines and suspicious objects which had been located in the first 8 yd strip all set to blow up—a charge of gelignite on each and the whole connected with primer cord. We made the mistake of placing our small blistering charges of gelly on the centre of these long mines instead of over one end where the mechanism was; with the result that 2 or 3 did not go off when we detonated the line and we had to have several attempts at them. All this was wasting valuable time while the tanks were impatiently waiting to get through. Major Reid finally came up, lifted the remaining ones holus bolus and threw them clear of the lane.'

Lieutenant Hanger had some unexpected assistance on this occasion:

'Had more luck this time as we caught the Hun laying the minefield and I was able to make them pick up a few and we were able to clear our gap pretty smartly.... My main trouble was a dug in tank firing 88 AP straight up our lane. A little disconcerting to have a white hot AP shell whizzing past your nose periodically through the night. One of my other troubles was a Tommy Col. who wanted to halt his tanks in the gap while he talked to his Brig. on the blower. However, after using a bit of good Kiwi language not usually used on a senior officer we got him moving.'

Ninth Armoured Brigade, which 6 Field Company had seen safely through the minefield and which was to use the infantry objective as its start line and then, with the aid of a barrage, advance a further mile before first light and smother the enemy

gun line, did not fully succeed in its mission. It did not reach its final objective although it knocked out at least seven 88-millimetre and thirty other guns, plus a dozen tanks, after an all-day fight. The Brigade Commander had been ordered to accept if necessary 100 per cent casualties to make good his objective, and that is very nearly what happened. The brigade left the assembly area with 133 tanks, many of which were patched up battle casualties with strange crews; some dropped out during the 25-mile approach march and it was not known exactly how many went into battle that morning, but when they were reorganised into one regiment only 35, which included some that had got up during the morning, could be mustered.

The brigade report on operations has a good word for the New Zealand sappers in spite of the trouble with the lamps:

'In the centre R Wilts had been seriously held up by a field of Hawkins mines irregularly laid by our own troops, <sup>16</sup> in the clearing of which 6 NZ Fd Coy NZE, whose work throughout this operation had been of superlative quality, lost many casualties in personnel and vehicles.... The work of the sappers in lifting minefields in the dark and under enemy fire was beyond all praise, and without them the armour would never have been able to advance.'

The battle went on all day and after dark (2 - 3 November) No. 2 Section, 8 Field Company (Lieutenant Wildey), and No. 1 Section, 7 Field Company (Lieutenant Foster), laid a protective minefield in front of the Maoris. There was no enemy interference for the reason, unknown at the time, that Rommel was too busy packing up and organising a fighting withdrawal. His first step was to put a holding force on the [Fuka](#) escarpment. The Desert Air Force was not making his problem any easier and armoured-car elements were beginning to worry at his communications. If a break-through occurred on a large scale the Italian divisions, having no transport, would have to be left as souvenirs of the battle. The large-scale break-through did occur and the Italians were left to contemplate an eventual safe return to sunny [Italy](#).

The sappers passed the third day of the month widening lanes and destroying derelict tanks and captured guns. A gap had been forced through the enemy defences at last and [General Freyberg](#) was told to get his division concentrated as

soon as possible after first light (4 November) and block the retreat through the [Fuka](#) position. For this assignment he was given 4 Light Armoured Brigade in addition to [9 Armoured Brigade](#), reduced now to a composite regiment.

The Field Companies reverted to the command of the brigades: 7 Field Company to 5 Brigade, 8 Field Company to 6 Brigade, 6 Field Company to [9 Armoured Brigade](#); 5 Field Park Company was divided into a water and demolitions party (Corporal [Purvis](#) <sup>17</sup>) attached to Engineer Headquarters, a battle group to move with Divisional Supply Column and a rear party with Divisional Reserve Group.

Fourth Light Armoured Brigade, whose mission was to cover the Division during the advance, passed through the narrow gap soon after daybreak; [9 Armoured Brigade](#) had collected its components under nearly impossible conditions. They were spread all over the battlefield, where columns were crossing each other's lines of advance in the darkness and each moving object created its own smoke screen of dust. Sixth Field Com- pany eventually found its place and the column began to move south-west in a wide sweep south to avoid the battle 1 Armoured Division was still waging to the north.

Main Divisional Headquarters, which included Divisional Engineer Headquarters and part of 5 Field Park Company, went next, followed by 5 Brigade with 7 Field Company during the afternoon, and finally about dusk 6 Brigade (with 8 Field Company) got clear of the forward defended localities.

By this time 6 Field Company was about 30 miles to the west and roughly south of [Fuka](#) searching for mines in the brigade area. Before daylight (5 November) and after sundry clashes with columns of escaping enemy the Division was concentrated and deployed for an advance on [Fuka](#).

It was not a quick advance, for 4 Light Armoured Brigade in the lead had several skirmishes with withdrawing hostile columns. About eight miles south of [Fuka](#) it ran into a really solid rearguard and had to call up artillery support before it could be chased away. [Brigadier Kippenberger](#) was told to get 5 Brigade across the road if it could, but not to get involved in heavy fighting. By the time the brigade was deployed touch had been lost with the armour and it was too near last light to risk a move in the dark without support. Seventh Field Company took its place in the

brigade perimeter and in the morning the Division was directed on the escarpment south of [Baggush](#). Sixth Field Company followed [9 Armoured Brigade](#) towards [Sidi Haneish](#), but by the time the high ground above the well-known railway station was reached it began to rain. The sappers 'recced' a route down the escarpment for the tanks and artillery, some of which went off looking for enemy. The rain developed into heavy showers and some of the vehicles got stuck. The Divisional vehicles were also slowed down by the spreading rain and [Baggush](#) was not reached before darkness stopped the movement. The rain reached cloudburst intensity during the night and by first light nearly every vehicle was immobilised in bog.

The continuing threat of being outflanked was completely removed from the many cares besetting the retreating enemy, who of course could move at will along the tarsealed coastal road. Perhaps not exactly at will for the position in [Greece](#) was reversed; it was Panzerarmee that was streaming along the only road and the [RAF](#) which, almost without hindrance, was harrying it ceaselessly but with little effect.

Much of [10 Corps](#), of which 2 NZ Division was a part, was immobilised for thirty-six hours while Panzerarmee delivered itself from the threat of being cut off.

Conditions were almost normal again by the afternoon of the 8th and the Division concentrated between [Matruh](#) and the escarpment of [Minqar Qaim](#), where it had been surrounded and had broken out in June. Only five months had passed since that wild charge through an exulting enemy and the long drive back to the shelter of the [Kaponga](#) Box. Now it was Jerry's turn to do a [Gazala](#) gallop. Sapper experts on the conduct of war declared that Rommel would not stop, really stop, until he was back behind his old position at [El Agheila](#). Others said what about [Tobruk](#)? We needed that harbour for stores and he might stop there. Remember [Sidi Rezegh](#)? Some of them remembered [Sidi Rezegh](#) all right and so the verbal battle waxed and waned.

The immediate objective was [Matruh](#) but 1 Armoured Division, having moved swiftly along the coastal road, saved the Kiwis the trouble of taking it and 6 Brigade was told off to garrison the place until relieved. Meanwhile 5 Brigade would get on with the war.

Major Reid sent No. 3 Section with 24 Battalion, which was the brigade advance

party. They left on the morning of the 9th to look for and disarm booby traps, wondering the while if isolated pockets of resistance were still holding out. They found, however, not without satisfaction, that they were not the first troops into [Matruh](#) and that a naval detachment was already operating the waterfront. The section split into four and scoured the place without finding any booby traps and then camped around the old [YMCA](#) buildings.

The sappers had news for the rest of the company when it arrived with 6 Brigade the next day. There were dumps of rations that the enemy had tried to destroy with burning petrol. The tins in the centre of each heap had escaped damage, and with hordes of hungry infantry around the place some fast work was indicated. Enough stuff was collected to supplement the ordinary rations for weeks—delicious green peas, cabbage, potatoes and stewed meats. War, contrary to the American dictum, was not all hell.

The town had been left in a disgraceful state with masses of flies hovering over houses that had been used as toilets. Working parties from the local prisoner-of-war cage were requisitioned to clean up, whereupon the plague of flies abated.

For some days the sappers were employed in locating, lifting or marking minefields on the [Siwa- Matruh](#) road, the same belts that they had helped to put down before the [Minqar Qaim](#) action. It was found that a lot of mines had been lifted for re-use by the advancing enemy, but the number of derelict vehicles still there indicated that the mining had not been ineffective.

In the event 5 Brigade did not have to worry about [Sidi Barrani](#) and after a lot of trouble elbowed its way on to the debris-strewn coast road and pushed on for the border.

Sixth Field Company ceased to be under command of [9 Armoured Brigade](#) and after two days' searching caught up with the Division at the bottom of [Halfaya](#) Pass. In the offensive of the previous November the Kiwis had outflanked the solidly-held escarpment of which this pass was a part, and 5 Brigade had settled in behind the defences from [Halfaya](#) Pass to [Bardia](#) while the rest of the Division went on to [Sidi Rezegh](#) and [Belhamed](#) of evil import.

An armoured division was again coming in behind this forbidding border

escarpment from the south, but in the meantime vehicles were stacking up hourly on the plain at the foot of the obstacle. Twenty-first Battalion opened up the pass during the night 11 - 12 November, when 7 Field Company got to work on the mines. Apart from the winding length of the pass which yielded twenty Tellers, three 40-foot gaps were made through a field at the top. The mines were buried deeply, difficult to detect and booby-trapped with cunning variations; some were laid double with a thin layer of earth separating them so that the simple sapper taking up the top one would think he had removed the menace to the first vehicle that came along. Another variation was one deeply buried mine with a second a few feet away not so deeply down, but connected to the first one so that a pilot vehicle passing safely over No. 1 and exploding No. 2 would then receive the explosion of No. 1. One Pilot was caught in this manner. In this trial of wits, where a mistake meant a probable trip to hospital and a possible memorial service, the sappers gave their German opposite numbers full marks.

Fifth Field Park was at this period cleaning out wells contaminated with oil at [Buq Buq](#), and it then pushed on to lend a hand with its compressors on the [Sollum](#) road that winds up the escarpment above the jetty, where during the Wavell offensive two years earlier 19 Army Troops Company suffered its first casualties while unloading water drums. Sixth Field Company sappers were filling in a 5000 cubic yard crater there, assisted by a section from 7 Field Company and a company of Maoris. They also knew the place well for they had 'recced' down the road from their positions on top of the escarpment during the previous campaign. The job took three days and two nights and would have taken longer if two more prepared demolitions had not failed to explode.

The vehicle supply line could not maintain more than a limited number of formations beyond the Egyptian border until the damaged desert railway could be restored, and the New Zealand Division was to drop, temporarily, out of the chase. It was therefore dispersed between [Sidi Azeiz](#) and [Menastir](#), localities that need no further description. The troops stayed there for three weeks.

Water was the only necessity that was available in the area, for the retreating enemy had not been able to destroy the sources of supply. Major Currie, back with Engineer Headquarters after his encounter with an uncharted mine in July and his

term as Commander and Chief Instructor of the Eighth Army School of Minefield Clearance, reconnoitred the [Capuzzo](#), [Bardia](#) and [Gambut](#) areas and reported that the demolitions of the Eighth Army in June and of the enemy in November had in the main been directed at pumping and storage facilities. The pumphouses and all valves had been removed; nevertheless 5 Field Park Company, which had been assigned to the job, was producing water with its own pumps within four hours of getting on to the site at [Bardia](#). In this it had some local knowledge, for pumping water up the 1000-foot escarpment at [Bardia](#) had been one of its first operational tasks in the Wavell offensive.

The task of 6 and 7 Field Companies was to provide a good two-way road through a very rough and rocky wadi that originally had been crossed by a multi-span concrete bridge. Eighth Army had prepared it for demolition but, possibly hoping to return soon, had not blown it. The enemy had repaired the omission and the bridge was a total wreck. After completing this they mended roads, cleared mines away and produced football grounds where needed. The last were needed all over the desert for every unit screamed for a football ground guaranteed free from mines. Eighth Field Company arrived with 6 Brigade on 22 November and shared in the work.

Field Marshal Rommel, meanwhile, was making a fighting withdrawal and was being seen off at [Tobruk](#), [Derna](#) and [Benghazi](#) en route for his hide-out at [El Agheila](#), across the bulge of [Cyrenaica](#) some 400 miles to the west.

Such was the position of the Division at the end of November, but short mention must be made here of non-divisional units which are treated more fully in

## Chapter 14.

Eighteenth Army Troops Company was flat out recommissioning the water pipelines and had two water barges transferring water from ship to shore at [Matruh](#).

A 90-strong detail of 19 Army Troops Company was on the way to [Benghazi](#); a 100-strong detachment of 21 Mechanical Equipment Company had arrived at [Tobruk](#) on the 24th.

Sixteenth and 17th Railway Operating Companies, with the help of an Indian and an RE operating company, were again working the 400 miles of track between [Alexandria](#) and [Tobruk](#), where the enemy had obligingly added a few more miles of line into the port.

When the honours and awards for the Battle of [Alamein](#) were announced, included therein was a bar to Major Murray Reid's Military Cross and an MC to Major Skinner and to Lieutenant R. M. Page.<sup>18</sup>

Casualties for the period 23 October to 4 November were:

5 Field Park Company	5 wounded
6 Field Company	4 killed, 19 wounded
7 Field Company	2 killed, 22 wounded
8 Field Company	10 killed, 16 wounded

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<sup>1</sup> The Turning Point, pp. 176-7.

<sup>2</sup> 2 Lt A. G. St. George; [Hamilton](#); born Te Kopuru, [Dargaville](#), 30 Jul 1908; engineer's assistant, PWD; wounded 23 Oct 1942.

<sup>3</sup> [Sgt J. F. Smith](#); [Masterton](#); born NZ 15 Nov 1917; boilermaker; wounded 25 Oct 1942; p.w. 20 Dec 1944.

<sup>4</sup> [Sgt L. W. Hill](#), m.i.d.; [Auckland](#); born [Auckland](#), 8 Jan 1918; carpenter; twice wounded.

<sup>5</sup> 2 Lt J. Brown, DCM, m.i.d.; Waitakere; born England, 13 Jun 1905; engineer; wounded 2 Nov 1942.

<sup>6</sup> Cpl L. Dolheguy, MM; Christchurch; born Dunedin, 20 Jan 1918; metal polisher; wounded 28 Jul 1942.

<sup>7</sup> Spr L. Taylor, MM; Wellington; born Aust., 8 Jun 1918; labourer.

<sup>8</sup> Sgt E. A. Allen; born England, 10 Dec 1899; construction foreman; killed in action 23 Oct 1942.

<sup>9</sup> Sgt J. K. Lawrence, DCM; Christchurch; born England, 14 Aug 1917; draughtsman; wounded 18 Jan 1943.

<sup>10</sup> Lt R. E. Hermans, MC; Mangakino; born Wanganui, 29 Aug 1918; civil engineer; wounded 7 Dec 1943.

<sup>11</sup> Cpl H. W. Webb; Whangarei; born NZ 5 Oct 1911; barman.

<sup>12</sup> L-Sgt D. G. Campbell; born Wellington, 30 Mar 1919; cashier; died of wounds 15 Jan 1943.

<sup>13</sup> Brig I. L. Bonifant, DSO and bar, ED, m.i.d.; Adelaide; born Ashburton, 3 Mar 1912; stock agent; CO 25 Bn Sep 1942-Jan 1943; Div Cav Jan 1943-Apr 1944; comd 6 Bde 3-27 Mar 1944; 5 Bde Jan-May 1945; 6 Bde Jun-Oct 1945.

<sup>14</sup> The Turning Point, pp. 198-9.

<sup>15</sup> Sgt A. Freeborn; Christchurch; born Christchurch, 7 Jan 1916; clerk.

<sup>16</sup> The report is mistaken here. As has been explained, the field had been put down by the enemy with our own Hawkins mines.

<sup>17</sup> L-Sgt W. H. Purvis; Waihi; born Riverton, 8 Jul 1915; dairy farmer.

<sup>18</sup> Other rank decorations not previously mentioned were: Spr F. Fenton, DCM, L-Sgt T. J. Higginson, MM, and Sgt R. B. Smith, MM.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## CHAPTER 13 – HIGH TIDE IN TRIPOLITANIA

## CHAPTER 13

### *High Tide in Tripolitania*

(December 1942 to January 1943)

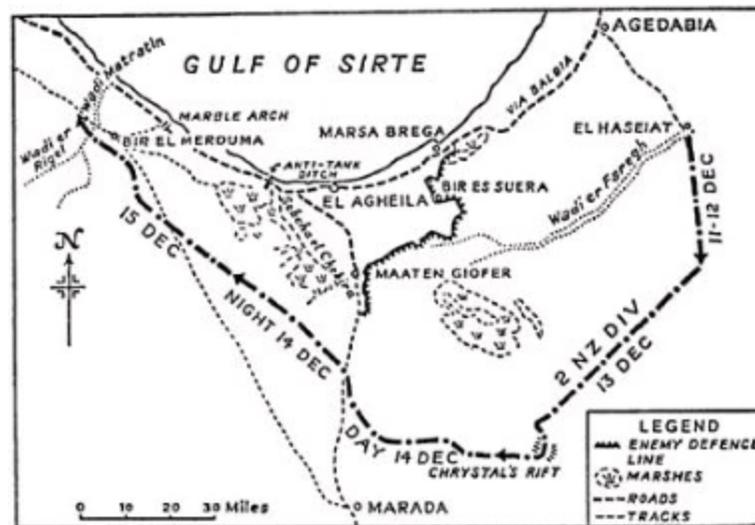
While the Division rested around [Sidi Azeiz](#) armoured elements were overseeing Field Marshal Rommel's retreat behind his position at [El Agheila](#). Twice before he had emerged from the assorted salt marshes, wadis, mined areas and strong-points at the bottom of the Gulf of [Sirte](#) and discomfited his enemy, but even if it had been again possible to replenish from [Italy](#) before Eighth Army had built up supplies, the landing on 8 November of an Anglo-American army under General Eisenhower at [Algiers](#), [Oran](#) and [Casablanca](#) in Northern Tunisia had altered the complexion of the war in North Africa. Certainly the new army was very inexperienced and some hard lessons awaited it, but its arrival in [Africa](#) was a *fait accompli* that could not be disregarded.

It was possible by the first week in December to maintain forward two infantry divisions and 7 Armoured Division. Fifty-first (Highland) Division was moved up and the New Zealanders were to follow, beginning on 6 December. [General Freyberg](#) told his commanders to inform their men that it would be necessary to suspend the football competitions until [Tripoli](#) was captured but to bring their togs with them.

For the move across [Cyrenaica](#) 7 Field Company came under command of 5 Brigade and 8 Field Company under 6 Brigade. Sergeant J. F. Smith and party again reported to Headquarters Divisional Cavalry and remained attached throughout the coming campaign; the rest of 5 Field Park Company handed, over to 36 Water Company, RE, and joined 6 Field Company in a Divisional Group consisting of Divisional Cavalry and gunners of various categories, field ambulances and other oddments. Sixth Infantry Brigade led the way along the [Trigh Capuzzo](#) and across the railway the New Zealand Construction Group had built past [Belhamed](#), that slight rise where so many of 4 Brigade a year before had been killed, wounded or rounded up and marched away to captivity. The insignificant resting place of [Sidi Rezegh](#) stood silent and lonely below the ridge that cost the lives of so many of the men of 6 Brigade, which was, with thoughts reaching back to an earlier December, passing that way again.

The column carried on through the [El Adem](#) area where 5 Brigade and attached troops, including 7 Field Company, had taken their part in breaking the enemy [Gazala](#) line earlier in the year, then travelled almost due west to within 75 miles of [Benghazi](#) before turning south for another 70-odd miles to the Divisional concentration area near [El Haseiat](#).

Along the coastal area there were formed roads, towns and villages but down in the desert south of the high country were only tracks, along which nomad tribes travelled according to their circumstances, the seasons and the state of the water holes. They were like well-worn footpaths. The original plan for turning the enemy out of [El Agheila](#) was to face him with light mobile formations while threatening to turn his inland flank. The bluff did not work for Rommel had been ordered to hold there at all costs, although his right flank was vulnerable and in his rear was a defile so narrow that the much abused term 'bottleneck' was not inappropriate.



LEFT HOOK AT EL AGHEILA  
left hook at el agheila

The upshot was that 51 Division was to lay on a frontal attack while 2 NZ Division made a forced 250-mile 'left-hook' march and struck for the coastal road near [Marble Arch](#), the British name for the ornate edifice [Mussolini](#) had erected on the [Cyrenaica- Libya](#) border.

When the Division did start to march on [Marble Arch](#) there was some 50 miles of softish going, flat and featureless, without a single patch of camel thorn to break the sandy monotony. Major Anderson expressed the feelings of all who crossed that arid

piece of [Africa](#) when he said in his slow and deliberate manner, 'Never in all my life have I seen so much of sweet Fanny Adams.'<sup>1</sup>

Colonel Hanson was charged with the task of selecting a route to [Marble Arch](#) and preparing it for the passage of 3000 vehicles. He had for this assignment the benefit of the local knowledge of an officer from [11 Hussars](#) and one from the [Long Range Desert Group](#), both of whom had prowled over part of the proposed route. On 9 December the [Divisional Provost Company](#) marked the selected track for 70-odd miles to the edge of Chrystal's Rift, where Captain Goodsir was probing for a passage that would take the weight of the Divisional transport.

Chrystal's Rift, named after its discoverer and lying fairly across the path of the Division, was a depression up to ten miles wide in places with rugged and rocky escarpments on each side, a very considerable obstacle indeed. A geologist could have a very happy time in the Rift, for there are rocky mounds like islands in a river of deep dry sand nearly as fine as flour, interspersed with areas of harder country and other areas with a crust thick enough to carry a man, but through which a vehicle would sink.

The task was to avoid the soft patches and to take advantage of the islands, but this involved the making of tracks up their steep sides and called for bulldozer assistance. Major Anderson left for the Rift the following day with 2 and 3 Sections and a bulldozer on a transporter. The transporter got bogged in the soft going but arrived the next day with the 'dozer towing the transporter.

[General Kippenberger](#), who commanded 5 Brigade at the time, wrote appreciatively of 5 Field Park's bulldozer operators:

'Our bulldozers did magnificent work—in fact the move would have been impossible without them. Their drivers always amused me. They wore a curious slouch-hatted rig of their own that could almost be called a uniform, regarded all army ranks with easy contempt, never dreamt of saying "Sir" or taking the drooping cigarette out of their mouths even while having a casual chat with the army commander, affected a cynical and tired expression, and worked superbly.'<sup>2</sup>

Entrance to and exit from the Rift was not good even after the grading and construction work. It was fortunate that the enemy air force was not around and the

sappers breathed a sigh of relief when the last truck was through. The Division was over the Rift and dispersed by the night of 13 - 14 December, by which time 6 Field Company was working on rough patches along the next leg, which had already been selected by Colonel Hanson and which would cut the important [Marada](#) track leading to [El Agheila](#).

An operation order issued on the night of the 13th stated that in the morning a non-stop march would begin for the high ground near [Marble Arch](#). It was to be reached by the 15th, whereupon the Division would prevent the enemy from withdrawing from [El Agheila](#). The march to [Marble Arch](#) was timed at eight miles in the hour for the first day (14th) with minimum stops for replenishment, then all night at four miles in the hour, without lights and in strict wireless silence. The last lap was at ten miles in the hour over rough country striped with wadis and across low ranges where nothing except an odd reconnaissance vehicle had previously roamed, and then without having to keep direction.

That last day got away to a bad start. Some of the tanks of 4 Light Armoured Brigade which was leading the column had not been refuelled by the time they were to move off; this put 6 Brigade two hours behind in its timetable and then enemy were reported to be holding the ground the brigade intended to occupy. There was no point in fighting the enemy on ground of his own choosing so the axis of advance was swung west from [Marble Arch](#) to [Bir el Merduma](#), which area was reached late in the afternoon.

At that stage it was thought that most of the enemy armour deployed on the [El Agheila](#) line was still to the east of the Division and there were great hopes of collecting the lot. There was high good humour at [Divisional Headquarters](#), for this could be another [Minqar Qaim](#), with the same actors but in opposite roles. In the event that example could not have been more exact.

It was dusk when 6 Brigade started for the road about ten miles away to the north; another mile or so farther north was the [Mediterranean](#), last seen at [Bardia](#). As soon as the brigade could deploy across the road the [Africa Corps](#) was in the bag.



Harbour construction at Adabiya

## Harbour construction at Adabiya

New Zealand engineers rebuild the pontoon bridge across the Suez Canal, August 1943



New Zealand engineers rebuild the pontoon bridge across the [Suez Canal](#), August 1943



A panoramic view of the railway yards constructed at Azzib,  
Palestine, by 10 Railway Construction Company

**A panoramic view of the railway yards constructed at Azzib, Palestine, by 10 Railway Construction Company**

21 Mechanical Equipment Company building the road over the  
Nagb Ashtar— see p. 190



**21 Mechanical Equipment Company building the road over the Nagb Ashtar— see p. 190**

A deviation past a bridge blown by the enemy in the Sangro River area



A deviation past a bridge blown by the enemy in the **Sangro River** area



The **TUKI** bridge across the Sangro. On the right is the original assault Bailey bridge

The tiki bridge across the **Sangro**. On the right is the original assault Bailey bridge

Flat country north of the Sangro cut up by vehicles of 2 NZ Division



Flat country north of the **Sangro** cut up by vehicles of 2 NZ Division



Building a corduroy road in the Sangro River area

**Building a corduroy road in the Sangro River area**



Quarrying metal for roads on the Cassino front

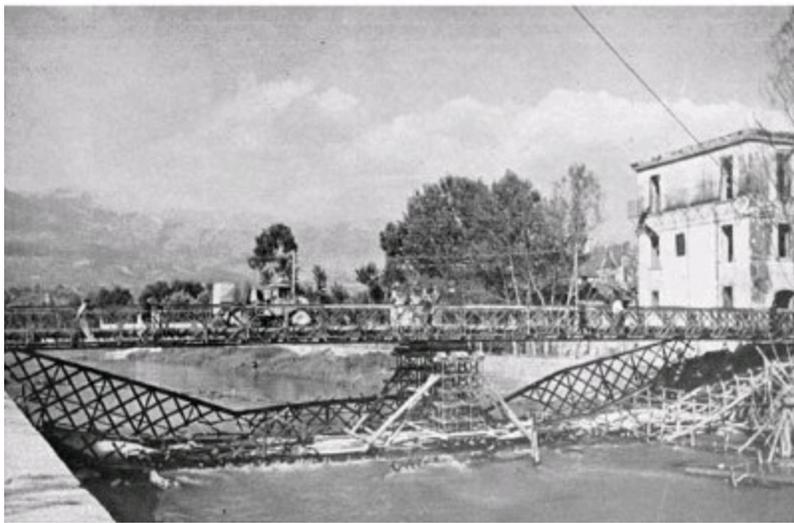
**Quarrying metal for roads on the Cassino front**



A jeep tests a Treadway bridge erected by New Zealand and American engineers in the Cassino area

**A jeep tests a Treadway bridge erected by New Zealand and American engineers in the Cassino area**

A Bailey bridge over the Fibreno River at Sora



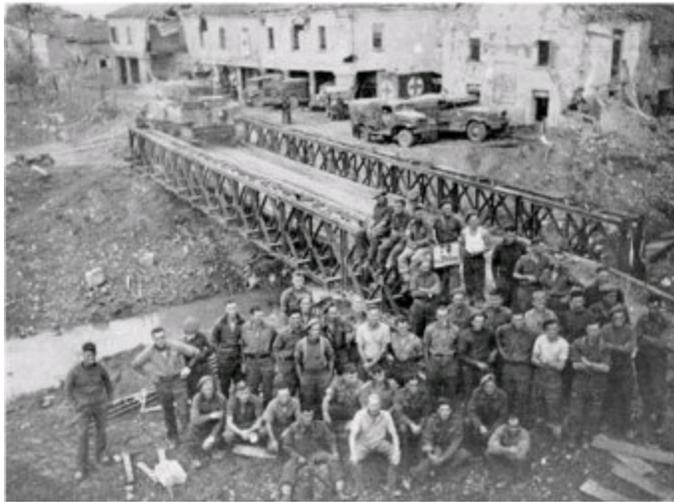
**A Bailey bridge over the Fibreno River at Sora**



Removing a German anti-vehicle mine near Florence

**Removing a German anti-vehicle mine near Florence**

These 6 Field Company sappers erected this Bailey bridge over the Scolo Rigossa, near Gambettola, in one and a half hours



**These 6 Field Company sappers erected this Bailey bridge over the Scolo Rigossa, near Gambettola, in one and a half hours**



Forestry Unit men tree-felling in Southern Italy

**Forestry Unit men tree-felling in Southern Italy**

A New Zealand designed portable sawmill



**A New Zealand designed portable sawmill**



Laying the decking on a Bailey bridge in the Adriatic sector

**Laying the decking on a Bailey bridge in the Adriatic sector**

Road repairs in the forward area near Faenza



**Road repairs in the forward area near Faenza**



Sweeping for mines in Faenza  
**Sweeping for mines in Faenza**

'Road metal'—see p. 668



'Road metal'— see p. 668



Fascine-carrying tank,  
Faenza

**Fascine-carrying tank, Faenza**

A 27 Mechanical Equipment Company angledozer clears a highway in the Faenza sector



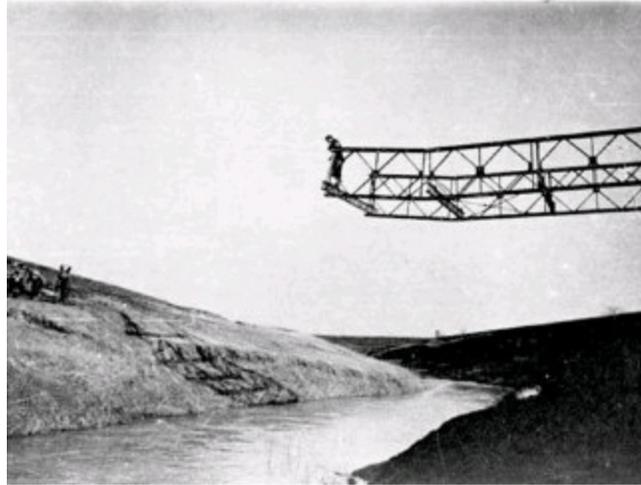
**A 27 Mechanical Equipment Company angledozer clears a highway in the [Faenza](#) sector**



Bridge-building exercises across the Lamone River, February 1945

**Bridge-building exercises across the Lamone River, February 1945**

Above: A 60 ft Bailey bridge being launched on a raft  
Below: A section of the bridge moves slowly into position



**Above: A 60 ft Bailey bridge being launched on a raft**  
**Below: A section of the bridge moves slowly into position**



Approximate positions of bridges built by New Zealand engineers over the Senio River, 9-10 April 1945. The bridges are: 1. Raglan low-level; 2. Raglan high-level; 3. Scissors bridge; 4. Seymour low-level; 5. Woodville low-level; 6. Woodville high-level

Approximate positions of bridges built by New Zealand engineers over the [Senio River](#), 9-10 April 1945. The bridges are: 1. Raglan low-level; 2. Raglan high-level; 3. Scissors bridge; 4. Seymour low-level; 5. Woodville low-level; 6. Woodville high-level



A 28 Assault Squadron Sherman dozer near the Senio River

**A 28 Assault Squadron Sherman dozer near the Senio River**

Track-making near Budrio



Track-making near **Budrio**



A bridge and approaches at the Reno River

**A bridge and approaches at the Reno River**

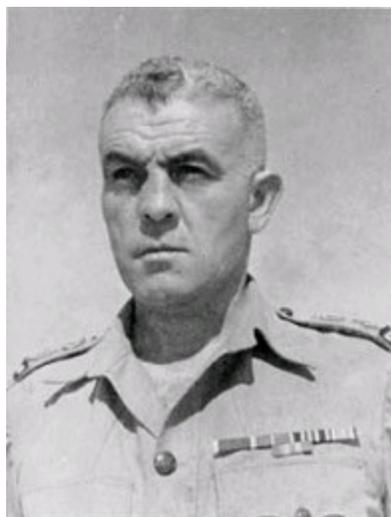
The folding-boat bridge  
over the Po



**The folding-boat bridge over the Po**



Brigadier G. H. Clifton  
**Brigadier G. H. Clifton**



Brigadier F. M. H. Hanson  
**Brigadier F. M. H. Hanson**



Lt-Col J. N. Anderson  
**Lt-Col J. N. Anderson**



Lt-Col R. C. Pemberton  
**Lt-Col R. C. Pemberton**

But 6 Brigade did not cut the road; keeping direction in the dark, with trucks diving blindly into dry watercourses and scrambling over obstructions, is not as easy as driving along a main highway, and when the column halted to take stock, it was not really where it thought it was, nor was the road quite where it was expected to be.

Major Reid went forward on a 'recce' with Brigadier Gentry and others, ran into an enemy flank guard in the dark and was wounded. Captain Wildey assumed temporary command, and after the brigade had taken up an all-round position above the road, but in fact two miles south of it, the sappers laid 900 mines on the perimeter.

When 5 Brigade halted that night it also was not quite where it thought it was. Seventh Field Company dug itself in as part of the brigade defences but for the sappers the night passed quietly. In the early morning [15 Panzer Division](#) escaped through a seven-mile gap between 5 and 6 Brigades. An ambulance with Major Reid and Lieutenant-Colonel [Webb](#)<sup>3</sup> of 24 Battalion, also wounded, was returning at this time, but the driver, not recognising the armoured column as hostile, drove right into it and the ambulance was captured. Major Reid, who subsequently lost an arm from the wound he had taken, was not in a condition to realise that he was a prisoner. Captain Pemberton became OC 8 Field Company.

There were alarms and excursions after first light (16th) but, as at [Minqar Qaim](#), the breakout succeeded. Orders were received for 2 NZ Division to clear the [Bir el Merduma](#) airfield, to which place Major Anderson departed with 1 and 2 Sections, a guide and a detachment of machine and anti-aircraft guns for local protection. On arrival it was found that there were two landing grounds about one and a half miles apart and that the German engineers had done a very thorough job of making them, and the roads to them, unusable.

All approaches likely to be used by vehicles were mined with Teller and S-mines and a blown-up German Mark IV Special tank and an 8-cwt truck were mute evidence as to their effectiveness. According to the inscription on a grave close by, the occupants had been buried that morning.

At one end of the field were several grounded planes. They were left severely alone, for the enemy knew the Kiwi thirst for souvenirs and without doubt a suitable welcome had been arranged for the first enterprising looter to commence operations.

On the landing strip itself were rows of petrol drums dug in as far as the first rung. Many were trapped with a Teller mine and pull igniter. S-mines covered the gaps between the drums, some with a nice variation of the usual theme—an obvious heap of spoil indicating a buried mine, with a Teller planted a couple of feet away and the surface well smoothed over. Another idea new to the sappers was the use of S-mine cases as tyre bursters. The metal cap around each end of the case had been cut with a hacksaw and the four points turned up to make sharp teeth which protruded just above the ground. A special refinement was the placing of blocks of

explosive under a mine case and so connected with a pull igniter that if the case was lifted the charges would explode. Quite the opposite theory, but having the same effect, was the use of pressure igniters under the lid of a mine case so that it would go off if stepped on. A final obstacle, but only a nuisance one, was from dozens of broken bottles strewn over the area.

No. 1 landing ground was the X type with runways 200 yards wide and half a mile long, which were searched by sections in line on a forty-yard front. Drums were removed by first digging them loose, disconnecting any wires, then pulling them away on the end of a fifty-foot rope. Only one with an unnoticed trap exploded out of the two hundred or so removed. Any loose wire was suspect and one such, tied to a stake and buried some distance away, was carefully fastened to the rope and the buried end pulled clear to disclose nothing but an old tin of bully beef. Full marks were given to one Jerry with a sense of humour.

[General Freyberg](#) was advised that it would take three days to clear both fields properly but that No. 1 ground would be ready for restricted use the next afternoon (17th). The RAF requested that the ends of the runways be marked with an L of drums on their sides, ten to each leg, with two placed upright on the corners. When an RE field squadron arrived to take over, all that remained to be done was the corner marking and the tamping of a few soft spots on the runway surface. They were told of all the devices prepared for their embarrassment when they started on the second field. The New Zealand sappers returned to Company Headquarters the next morning (18th).

The Division left the sappers working on the [Bir el Merduma](#) landing ground and carried on to the west during the morning of the 17th, 6 Brigade following 4 Light Armoured Brigade, then 5 Brigade and finally the Administration Group, which still contained 5 Field Park and 6 Field Company. The plan was to outflank [Nofilia](#) near the coast some 30 miles away and again try to cut off some of the enemy rearguard.

Seventh Field Company travelled with 5 Brigade, which passed through the leading formations and, when about ten miles west of [Nofilia](#), advanced north towards the coast road. By nightfall the infantry, after a sharp action, were held up by a strong flank guard covering the road while the last of the enemy slipped through the nearly closed gate.

In the meantime two sub-sections, one each from Nos. 2 and 3 Sections, were told off to make a wide detour towards [Nofilia](#) and mine the road. Twenty-third and 28th Battalions were each to provide a company for local protection and guide the sappers to their destinations. C Company, 23 Battalion, bumped an enemy party but was able to occupy a hill which overlooked the road and 160 mines were laid before the recall signal. D Company, 28 Battalion, had to make an extra-wide detour and dodge three tanks before reaching the road, where a bridge was to be mined. The enemy had probably mined the area themselves before leaving, for two sappers were killed by a booby-trapped 40-gallon drum left in the middle of the road. Mines were laid on the [Nofilia](#) end of the bridge approach before this party also had to stop in order to be clear by daylight.

Meanwhile 6 Brigade had been halted to the south-west of [Nofilia](#) in case the enemy, prevented by 5 Brigade from using the road, tried to break through in that direction. The over-all position at first light was that the enemy rearguard had got away again, and because of the thorough mining of the whole area there was no road connection between the New Zealand Division and the remainder of Eighth Army. Maintenance necessitated another halt until the shallow [Benghazi](#) harbour was working and sufficient stores were accumulated for the next bound to [Tripoli](#). The New Zealand Division, therefore, would stay in the area and the engineers would lift mines eastwards towards [Marble Arch](#), clear landing grounds for the [RAF](#) and prospect for water.

Eighth Field Company was given the task of clearing the road to and then opening up the [Nofilia](#) airfield. Two sections of carriers and a wireless van accompanied them in case there were still enemy around. The road, including several detours around water-scoured wadis, was open by the evening (18th). The airfield was in much the same state as [Bir el Merduma](#) and it was estimated that a fortnight would be needed to clear the runways and dispersal area of about twenty-two acres.

Incidentally, 2 NZ Division might have had need of another GOC and several staff officers if the sappers had not been able to stop three Honey tanks and a couple of cars from running on to the airfield, where [General Freyberg](#) had a rendezvous with the Corps Commander.

Before the return of Major Anderson and the two 6 Field Company sections, Captain Goodsir set out with No. 2 Section to clear the main road from the 20 kilometre peg west of [Nofilia](#) and work east towards the sappers of 7 Armoured Division, who were doing a similar job in the [Marble Arch](#) area. One sub-section was detached and worked with the signallers by clearing tracks for their vehicles along the telephone lines. They were through to [Nofilia](#) the next day (19th).

In the meantime Major Anderson's party had arrived at Company Headquarters and, after a night's rest, No. 2 Section joined 8 Field Company on the [Nofilia](#) airfield while No. 1 Section lifted mines in the village itself as well as on a mile of track to another airfield. The main road through [Nofilia](#) was strewn with mines, particularly in wheel tracks, between buildings, and in places where a vehicle would have to keep to the road. When the road through the village was safe the section joined No. 2 assisting 8 Field Company and worked on until the moon set (20th–21st). No. 3 Section met 21 Field Squadron, RE, of 7 Armoured Division at the 21 kilo peg east of [Nofilia](#), then returned and cleared an area around the village wells until the 24th, when it returned to Company Headquarters and began widening road deviations.

The augmented 8 Field Company, using ten Goldsack detectors and working in shifts by daylight and moonlight, had the [Nofilia](#) landing strips fully cleared by midday on the 23rd at a cost of six 6 Field Company casualties, one fatal. Work then began on the dispersal area and continued until Christmas Eve, by which time 6 Field Company had lost another sapper killed and 8 Field Company had one truck blown up and one sapper wounded. An RAF party equipped with Pilots and Scorpions arrived during the afternoon; the New Zealand sappers were recalled to their headquarters and the war was declared off for Christmas Day.

As soon as it was possible to move into [Nofilia](#) 5 Field Park started to repair and clean out the village wells. There were five altogether, one of which was supposed to be poisoned. The water was not poisoned but it was certainly filthy and the taster—a German prisoner—could not have found it very nice to drink, for among other things it was polluted with dieselene and picric acid. While a compressed air pump was removing the contaminated water a second well full of rubbish, including fourteen mines, was being cleared. In the meantime a well-boring unit arrived and found ample water at 130 feet, whereupon work on the second well was stopped

and the party (Sergeant [Jackson](#)<sup>4</sup>) assisted the well borers in rigging and connecting pipes. These sappers took only enough time off to eat their Christmas dinner with the Company then carried on preparing a water point for issuing on Boxing Day. Three casualties had been sustained up to this time. Other Field Park teams were working with Divisional Cavalry patrols, bulldozing a path past road demolitions, building a PW pen and guarding the handful of inmates. The prisoners were discovered to be exceedingly lousy and were marched to 6 Field Ambulance for treatment, but the Ambulance was not in a disinfecting mood and asked that the patients be removed before they distributed their vermin too widely.

Seventh Field Company had one section helping on the second airstrip at [Nofilia](#) until the 23rd and another on a small landing ground at [Sultan](#), 35 miles farther west. The obstacles were similar to those already described, but as the [RAF](#) was not interested in this area at the moment, the work was stopped on the 24th and a line of drums placed across the runway to prevent an accidental landing. The rest of the Company worked on the road to [Sultan](#), which was the limit of the New Zealand area and the responsibility of 5 Brigade. Sergeant W. E. Dudeck, who seemed to have an instinctive understanding of mine mechanisms, supervised the lifting of over 600 mines, plus many booby-trapped attachments, on this stretch of road without a casualty. His careful organisation and personal example from [Alamein](#) to [Tripoli](#) was recognised by the award of a DCM.

During this period the brigade water supply was augmented when a 'recce' party of 7 Field Company discovered a well at [Bir el Nizem](#) with a capacity of 2000 gallons daily. The Company set up a water point there and supplied each man in 5 Brigade with nearly an extra half gallon above the daily ration.

The sappers did not expect anything spectacular in the way of Christmas dinners. They were over a thousand miles from [Cairo](#), say from North Cape to the Bluff, and every ounce had to be carried at least some distance over desert trails by lorry. But they reckoned without the streak of sentiment in the supply authorities.

On the day, the troops sat down to a dinner of roast pork, turkey, vegetables, plum pudding, fruit salad, a bottle of beer, fifty cigarettes and a Patriotic Fund parcel. It took two tons of petrol to haul two tons of beer, and a last-minute thought of a tot of rum per man was brought in by air. The cooks saved up water to boil the

puddings and were the most popular men in the Division. Other highlights were an issue of fresh white bread supplied by the newly arrived [Field Bakery Unit](#), 60,000 parcels and all the Christmas mail, a combined effort of the Divisional Postal Unit and the NZASC. Christmas Day, 1942, was really something. A good number of sappers recalled two other Christmas Days—one before the real fighting started, one after the disasters at [Sidi Rezegh](#)—and now, with the taste of victory in the air, the next one would be at home for sure.

Eighth Field Company returned to [Nofilia](#) landing ground on Boxing Day and carried on clearing the dispersal area. Major Pemberton was not impressed by the amount of work done by the RE party with its four Scorpions and fifty-odd crew. The 'Scorps' were Mark II models and supposed to be improvements on those used at [Alamein](#), but to Pemberton's jaundiced eye, instead of improvements, more disabilities had been thought up.

In a report to the CRE he said that in one and a half days' work an area 200 by 70 yards had been proved and one mine found; a sapper party with three detectors would be expected to cover the same ground in four to five hours. He reported on the machines very fully and in very correct technical terms, and then, excusing the men for the poor showing, he ended on a more forthright and colloquial note: 'This is very bad for the morale of the operators. (They know the damn things are no bloody good.)'

After Christmas, 6 and 7 Field Companies were employed on the 30-mile stretch of road to [Sultan](#) and on marking with 'safe exit' notices (constructed by 5 Field Park Company out of petrol tins) suitable localities every few miles for the dispersal of transport.

Major Currie had made a reconnaissance along this road and reported that the German engineers had excelled themselves. There were no bridges but plenty of culverts, every one of which had been blown and both crater and debris liberally sown with mines. The road itself was mined at frequent intervals, the fields running a hundred yards or so into the desert on each side. Cuttings and fillings were generally mined, with particular attention being paid to places where vehicles were likely to leave the road to bypass the danger spots. Before the 'recce' was finished the Major's PU went up on an unnoticed Teller mine, fortunately without serious

injury either to himself or his driver. It was lucky they were driving a Dodge PU for the cab was high and away from the wheels. The front wheel and the sandbagged floor took most of the damage. Before that reconnaissance was finished another jeep had gone up on an S-mine and the Major's driver, Sapper Mark Cook,<sup>5</sup> had been wounded. There was no rush of applicants to fill the vacancy.

By this time the enemy had been manoeuvred out of his rearguard position at Sirte, some 30 miles west of Sultan, by an armoured-car threat to his flank and had backstepped another 60-odd miles to Buerat. Administrative difficulties brought the follow-up to a stop in front of Buerat, but when supplies had again been accumulated Eighth Army was not going to stop until it was safely in the city port of Tripoli. It was estimated to be a ten-day job for a self-contained force and petrol, food and the like were still being hauled across the desert from Tobruk. Benghazi port alone would never be able to handle all the material needed, and it was now a case of 'Tripoli or the bush'.

The road was safe as far as the Sultan landing ground on 28 December—at a cost to 7 Field Company of four more sappers killed and seven wounded. Twenty-eight sappers, two of whom were bulldozer drivers, had been killed or wounded clearing roads and landing grounds in the area.

Fifth Field Park Company was now delivering 50,000 gallons of water daily: 11,000 gallons to 7 Armoured Division and the rest to 2 NZ Division—half for daily use and half to build up reserves.

Before the Eighth Army could move on Buerat, where only very light forces were deployed, it was essential, in the absence of reliable maps, to make topographical reconnaissances for landing ground sites, for crossings over several deep and wide wadis, and to survey the best routes for the multitudinous vehicles. The quest for this information was partly the affair of the Air Force, partly that of a Long Range Desert Group patrol who were specialists in finding their way across Godforsaken deserts; but chiefly, as far as 2 NZ Division was concerned, it was the responsibility of Headquarters Divisional Engineers, which contained qualified surveyors who could determine their position by sun shots at the end of the day and plot a route with accuracy.

In the advance to [Tripoli](#) the coast road along which 7 Field Company was working was to be used by the transporters, maintenance convoys and the like, while the fighting formations were to move inland across the desert. Two routes were being selected and marked from [Agheila](#) to [Nofilia](#), where 2 NZ Division would take over. At that point the tracks, known as 'O' (the northern) and 'A' (the southern), were to be increased by two more, so that the four tracks, each about 1000 yards apart were, from north to south, 'O', 'A', 'B' and 'C'. They were to be sited along good going as far as the Army concentration area at [Wadi Bei el Chebir](#), south of [Buerat](#), by 10 January 1943.

The new year found 5 Field Park Company operating water points, the bulldozer crews filling demolitions and all spare men out on road work near [Nofilia](#); 8 Field Company was marking the O and A tracks from [Nofilia](#) to the considerable barrier of [Wadi Tamet](#) between [Sirte](#) and [Buerat](#); 6 Field Company, less No. 1 Section (Lieutenant Hermans), working on a difficult access road into [Wadi Tamet](#), was marking the B and C tracks. The sappers of No. 1 Section had unexpected company on this job, miles away from anybody, for the area was thick with gazelles. A drill was evolved of driving at full speed into a herd before they took fright and on one occasion seventeen were shot, more, it was freely admitted, by good luck than good marksmanship. For the time being the section, which had not tasted fresh meat for nearly three months, dined on gazelle stew, roast gazelle, gazelle steaks, gazelle chops; and when Colonel Hanson dropped in for breakfast he was served gazelle fry and bacon.

During this period 7 Field Company was clearing mines on the road to [Sirte](#). Seventh Armoured Division assumed responsibility for the B and C tracks at [Wadi Tlal](#), due south of [Sirte](#), on 7 January, whereupon 6 Field Company, still less No. 1 Section, made camp and improved rough patches on the tracks and thickened up the petrol tins and stone cairns marking the routes.

The axis of advance forward of [Wadi Tamet](#) reconnoitred by the CRE posed some problems. [General Freyberg](#) wished to pass well to the south towards [Bu Ngem](#), but the desert changed to a rocky surface not unlike the waves of a frozen sea and all progress was finally ended by a vertical sided depression at least fifty feet deep. Two or three days were spent in trying to locate a reasonable route south

of the obstacle but without success. Finally, after returning twice to [Wadi Tamet](#), a route practicable for the Divisional transport, bearing to the north rather than to the south, was discovered and Colonel Hanson, after his breakfast of fresh gazelle already mentioned, returned to Divisional Headquarters. En route he was delayed by a combined rain and sand storm and found on reporting to the GOC that he had been included in a casualty list as 'Missing'.

Eighth Field Company was to carry the tracks on past [Wadi Tamet](#) to the Divisional concentration area at [Wadi Bei el Chebir](#) at the earliest possible moment, but six tracks had first to be marked across the [Wadi Tamet](#) and exits provided.

Bluffs and watercourses set difficult problems in the location of the O and A tracks to Wadi Chebir, and it was not until the night of the 12th that the route was finally decided upon and 6 Field Company moved back into Divisional Reserve. Eighth Field Company marked the route to [Wadi Bei el Chebir](#) and then reported back to 6 Brigade, while 7 Field Company joined 5 Brigade and 5 Field Park Company the Divisional Administrative Group.

Plans for the capture of [Tripoli](#) were drawn up with various alternatives according to the possible reactions of the enemy, and in the final analysis it was the situation that would arise should the bulk of the hostile forces withdraw from [Buerat](#) before a full-scale attack could be mounted that had to be dealt with.

Preparatory to the operation, sub-sections of sappers were detached to various duties: 5 Field Park Company bulldozers (Captain Jones) joined Divisional Engineer Headquarters; Lieu-tenant [Morris](#)<sup>6</sup> and a sub-section from 3 Section, 6 Field Company, were attached to the Greys Armoured Regiment; Lieutenant Standish and two sub-sections from 3 Section, 7 Field Company, reported to Divisional Cavalry Headquarters.

The New Zealand Division and 7 Armoured Division were directed first to the oasis and outpost at [Beni Ulid](#), thence north-west to [Tarhuna](#) and [Tripoli](#), while 51 (Highland) Division would take the coastal route towards the same objective. The inland concentration was to be complete on the night 14 - 15 January, when the two divisions were to move in the moonlight into suitable jumping-off areas, with the armour to the north of the New Zealanders. Zero hour was first light on 15 January.

Sixth Brigade, with a Divisional Cavalry screen out ahead, crept cautiously forward while it listened to the familiar sounds of distant gunfire where 7 Armoured Division was already in action. Lieutenant Hanger with No. 1 Section, less one subsection, of 8 Field Company, travelling at the head of the brigade, went forward to search for mines along a desert track that had to be crossed. The brigade halted while a few mines were lifted. The armour was heavily engaged and the brigade did not move until the late afternoon, when it nosed another mile or so towards an enemy-held ridge from which the sappers came under fire and suffered two casualties, one fatal. The brigade stopped again while the cavalry tried to find a way around the ridge. Scots Greys' tanks under Divisional command were sent to assist and the enemy was ejected. Sixth Brigade laagered for the night while the other formations moved up. The situation was that a gap had been made in the enemy line but 7 Armoured Division was still halted by an anti-tank screen. During the night the troops heard the sound of a barrage as 51 Division attacked 20 miles to the north. In the morning the enemy rearguard had departed. It was the almost invariable tactic of the enemy to hold on if possible until darkness permitted an orderly withdrawal.

Before their departure the Germans had left a minefield in the path of the Division and Major Pemberton took 8 Field Company, less one section, to clear it. The field was found to be mostly dummy, with a few live mines scattered about. This day, the 16th, was a day of no opposition from the enemy, now about 40 miles away in an area broken with wadis. The Divisional Cavalry was having a busy time feeling forward and Lieutenant Pickmere with two working sections was sent to assist with minefields, mostly dummy but entailing delay. The Cavalry encountered strong positions at [Wadi Nfed](#) and waited for the Greys and the guns, and 6 Brigade laagered while the affair was debated. In the morning the way was open as far as the next enemy stand at [Beni Ulid](#). It would be more correct to say the way would be open after the engineers had made it so, for the tangle of wadis was a mass of mines and craters. A single vehicle track was cleared by 8 Field Company around demolitions across [Wadi Nfed](#), but the worst obstacle was the damaged road down the 100-foot-high steep-sided wadi that contained [Sedada](#) village, an outpost of Italian colonisation—some settlers, empty houses, a fort (also empty), a few trees and an area of grass—the last being something the sappers had not seen for a long time. Not that the German engineers had not done their best; the road into the wadi

was so thoroughly blown that deviations had to be made by the attached No. 3 Section for the Divisional Cavalry screen to get forward. It was here that Lance-Corporal [Milligan](#)<sup>7</sup> did some more of the work that resulted in the award of an immediate DCM. Part of his citation reads:

'As a bulldozer operator L/Cpl Milligan has displayed outstanding gallantry and has performed valuable work.... It was, however, at [Sedada](#) on 17 Jan 43 and [Beni Ulid](#) on 19 Jan 43 where his work in operating the bulldozer on heavily mined craters was of such outstanding value. Undismayed by the explosion of several mines and the occurrence of casualties among adjacent personnel he rapidly cleared a track down the defile into [Sedada](#) and as a result both the [7 Armd Div](#) and the [2 NZ Div](#) were able to continue their advance without delay.'

Lieutenant Morris's sub-section, working with the Greys, had a busy time demolishing the aftermath of the previous afternoon's gun fight: three M13 Italian tanks, one 37-mm anti-tank gun, two 50-mm guns, two 70-mm anti-tank guns and one 90-mm anti-tank gun were given gelignite treatment.

Another 40-odd miles were made before nightfall, when the troops laagered 25 miles east of [Beni Ulid](#) while the rest of the Division made a night march to catch up.

[Beni Ulid](#) was reported clear of enemy at midday on the 18th. The Division was now in country where freedom of manoeuvre was restricted by steep-sided wadis and only 20 miles were covered before it cut the road that connected [Beni Ulid](#) through [Bir Dufan](#) with the coast at [Zliten](#). No. 2 Section was despatched to clear mines from this road for the passage of 6 Brigade, which halted nearby for the night. Sixth Field Company had also been detached from Divisional Reserve Group to clear the road from [Sedada](#) to [Beni Ulid](#). By nightfall some distance had been made at a cost of four sappers killed and seven wounded.

The Division found itself in such a topographical nightmare that brows were furrowed at Headquarters because, having started the march on [Tripoli](#) with stores sufficient only for the estimated ten days' operations, the Division was almost at the point of no return. Certainly 7 Armoured Division had cut the tarsealed road to [Tarhuna](#), but unless the engineers could counter their opposite number's obstructions a withdrawal was not impossible.

Even worse than the entry into [Sedada](#) was the road down into [Beni Ulid](#), a 12-mile-long oasis situated in a canyon 150 feet deep. It had once been a Roman outpost and some of the fortifications were still there. Now it was full of villages, palms, olive and fig trees—a complete contrast to the surrounding desolation. There was, however, one slice of good fortune: the pumping station that supplied water to the considerable native population of [Beni Ulid](#) had been all set for demolition, but the German officer who was to fire the charge had inadvertently stood on one of his own S-mines—and the station remained in operation.

The full sapper strength of the Division was deployed from [Sedada](#) into [Beni Ulid](#) and from there along the road towards [Tarhuna](#). Indeed, according to Colonel Hanson, the sappers had received an addition to their strength:

'Owing to the narrow road, the heavy demolitions and mines all over the place the passage of [Beni Ulid](#) and up the steep hill with lots of demolitions towards [Tarhuna](#) was quite a job. Mines were planted in the loose dirt blown out of craters and demolitions. This made it particularly hazardous for the bulldozer operators to fill the craters. We were very fortunate not to have more casualties among dozer drivers than we did. I nearly threw a fit when I came up to one demolition and saw the General himself pushing dirt and loose stones into a crater to help our men. Not long after I had made him keep away from the crater the dozer driver and another sapper were blown up.'

Sixth Field Company worked all that day (19th) on the [Sedada– Beni Ulid](#) road while the detachment with the Greys cleared three miles of the [Misurata](#) track; 7 Field Company, detached from 5 Brigade into Divisional Reserve Group, worked with 5 Field Park Company bulldozers on craters in the canyon and along the [Tarhuna](#) road; 8 Field Company had one section working back to [Beni Ulid](#) and the rest in the opposite direction, with an eye for a possible dispersal area for 6 Brigade. The road was open before dark at a cost of four 8 Field Company sappers wounded. Fifth Field Park Company, less detachments, moved up to Main Divisional Headquarters and stood by for bridge work and water duties in [Beni Ulid](#).

The situation in the morning of 20 January was that the Division had wriggled through [Beni Ulid](#) in single line, keeping to the middle of the road, and was concentrated 24 miles beyond; 8 Field Company, less Company Headquarters, had

joined Headquarters Divisional Cavalry under command of the CRE; 5 Field Park was clearing wells in [Beni Ulid](#); 7 Field Company reverted to the command of 5 Brigade; 6 Field Company worked along the [Tarhuna](#) road with 8 Field Company until 7 Armoured Division was met and 8 Field Company went, as above, to Headquarters Divisional Cavalry, whereupon 6 Field Company rejoined Divisional Reserve Group.

The fighting troops balanced themselves for an assault on [Tarhuna](#), the capture of which position would clear the shortest route to [Tripoli](#), but the wily enemy pulled back into broken country commanding the defiles through which ran the [Tarhuna–Tripoli](#) road. The Divisional Cavalry was therefore put to ferreting around for a route towards the Italian settlement at [Tazzoli](#), to the west of [Tarhuna](#). It was again open desert, but rough and rocky with patches of soft sand that ended at an escarpment, below which was the cultivated coastal country around the city seaport of [Tripoli](#).

Fifth Brigade was now leading the Division with 7 Field Company divided among the battalions, No. 1 Section with 23 Battalion, 2 Section with 28 Battalion, 3 Section (two sub-sections under Lieutenant Yorke) with 21 Battalion. The advance began about midday and the brigade followed the Divisional Cavalry route, a mine-free one for a welcome change, to a position five miles south-east of [Tazzoli](#), where it halted while a route was found through the gebel and down on to the plain.

The Divisional Cavalry ferreted around all the afternoon but could find no way of getting down on to the plains surrounding [Tripoli](#), which meant that until 7 Armoured Division forced the [Tarhuna](#) defiles 2 NZ Division was immobilised unless it went by doubtful tracks 50 miles inland to [Garian](#) and another 50 miles back again. The petrol position was already critical. Consider the situation facing [General Freyberg](#)—the Division had worked through the high broken country to within five miles of the escarpment that bounds, at approximately the height of the Rimutaka hill road from [Wellington](#) into the Wairarapa, the plains that surround the port of [Tripoli](#). The maps showed no roads and little in the way of tracks anywhere between [Tarhuna](#) and [Garian](#).

Colonel Hanson has put on record, at the author's request, the inside story of 2 NZ Division's surprising appearance in front of [Tripoli](#):

'As evening fell Div. Cav. had still no success in finding anything which

approached a track or route through the Jebels.

'The General at his TAC HQs was becoming impatient. He called Steve [Weir](#)<sup>8</sup> and myself into conference and even though darkness was falling he was all for sending me off then and there to find a route through. I was grateful to Steve Weir for persuading the General to leave it till the morning. Steve pointed out that if the Div. Cav. had been unsuccessful in daylight, it would be a forlorn hope for one man, even if he was the CRE, to recce a route in darkness. The General let it go at that for half an hour during which time I had something to eat. At that stage his impatience got the better of him and he called me over and without further ado told me to go and find a route through the Jebels.

'I had, during my working life recced and surveyed many tracks and roads through rough country, over mountains, through bush and across gorges and rivers, but never before had I ever attempted to recce by night a route through completely unknown broken mountainous country, which maps showed to be impassable to all vehicles.'

(Colonel Hanson left in his jeep, contacted the Divisional Cavalry, collected there a wireless truck and a subaltern who had been along the rough [Tarhuna-Garian](#) road, then drove to a point about 15 miles west of [Tazzoli](#), which the sketchy maps suggested was a likely place to start looking for a track down to the plains. By this time there was a moon.)

'I left the wireless truck and jeep at this point. The country to the north towards [Tripoli](#) looked anything but promising. Indeed it looked so broken that I thought I must have made a mistake in my map reference. However there was only one thing to do and that was to try it out. At frequent intervals I climbed to high points to look over the country as best I might. The broken rugged country seemed to be never ending. After travelling a mile or more we were blocked by an impossible bluff. We had to return quite a distance before finding another likely leadoff. This sort of thing went on several times during the night. Off to our right we could hear gun fire, apparently where 7 Arm. Div. were thrusting along the [Tarhuna-Tripoli](#) road.

'We continued to make some sort of progress.... Then on turning a bend in a gully we were now following, I suddenly saw fires burning in [Tripoli](#) or its vicinity.'

(The pair returned to the wireless truck and radioed that a track had been located and to send sappers with compressors and bulldozers. Eighth Field Company was warned to be at the wireless truck as soon after first light as possible.)

'The sappers certainly worked with a will on the route through the Jebels. They neither stopped for meals or rest of any sort. They were bombed by a couple of flights of Stukas during the day, but the work went on right into the night. I think I was fully justified in being very proud of my sappers that day. Perhaps only I know of the magnificent efforts they put up. When the men eventually stopped for a meal and a sleep the route had almost become a road and traffic was moving freely sometimes even in top gear.'

Eighth Field Company rejoined 6 Brigade when it passed through on the afternoon of the 22nd.

Tripoli was now about 30 road-miles away. Fifth Brigade was directed on Azizia, an important road junction, and then on to Tripoli, from which centre the enemy was still busily evacuating. Of course, 2 NZ Division was not the only formation worrying him. There were 7 Armoured Division, an armoured brigade, and 51 (Highland) Division, not to mention the Desert Air Force about which little has been said, this being primarily the chronicle of the sappers' share in the war. There were so few enemy planes in the air that the troops were inclined to forget that our air force was conducting a non-stop blitz on roads, airfields, harbours and other targets.

Fifth Brigade pushed its way across some 17 miles of very soft country on to a tarsealed road that spoke of civilisation. No. 2 Section, with the Maoris leading the brigade column, kept its eyes skinned for mines, but the retiring rearguard must have been too hard-pressed for the road was not infested. The original plan to attack Azizia from a flank was dropped when a signal from Corps stated that an intercepted message had been translated ordering the rearguard to retire at 8 p.m. There appeared no point in rushing things at that stage so two more hours passed before the Maori B Company (Captain Pene<sup>9</sup>), with No. 2 Section, 7 Field Company attached, felt along towards Azizia. Enemy tanks and infantry had either misread their orders or the Corps translator had mixed his times for Azizia held a decidedly belligerent garrison. The Maoris were withdrawn and the rearguard left to conduct its affairs in peace. As usual, it was gone in the morning.

The delay at [Azizia](#) cost the Division the satisfaction of being first into [Tripoli](#), for 51 Division had stolen a march on the New Zealanders. To Major Skinner and his Company Headquarters, travelling with 5 Brigade Headquarters, goes the honour of being the first sappers into the long-sought city, for they made camp that night (23rd) in the grounds of an agricultural experimental farm a couple of miles from the Piazza Italia, eighty days out from [Alamein](#) and 1400 miles west of the unimportant railway halt that gave its name to a line and a battle that will live in history as long as history is read.

The enemy may have guessed that his pursuers were almost out of petrol for he was reluctant to leave the environs of [Tripoli](#). Seventh Armoured Division patrols drew very spiteful fire quite close to [Azizia](#). Nevertheless, 7 Field Company, reassembled at 5 Brigade Headquarters, rested for a couple of days while it spruced up, and in the absence of leave drank large quantities of cool clear water, the taste of which they had almost forgotten.

Light armour prowled around the rear of the departing enemy like wolves waiting to snap up stragglers while the Division concentrated in areas outside the city.

The sappers left the units they had been attached to and were disposed by the CRE in areas where work was waiting for them. German demolition parties had been very active under experts in the art of making a mess of communications. While the officers 'recced' the various projects, the sappers scrounged around for petrol and conducted a vigorous offensive against any poultry the enemy had missed. The Italian settlers had departed practically en masse for the safety of the city.

One man wrote:

'We have a great little spot for a camp. It is right in the middle of an olive grove and there are odd fruit trees interspersed among the olives and they are just bursting into bloom. There is plenty of grass about and the field is a mass of little flowers like Cape Daisies and still more mauve hyacinths. Box thorn hedges mark the boundary of the olive grove and the road running alongside us is lined with an avenue of gums.... the civilian population made themselves pretty scarce for the first few days and left all their vegetable gardens intact. You can quite easily imagine

what happened to the gardens as soon as we arrived. We couldn't have timed it better. The cabbages and caulis were at their best and we managed to find quite a few lettuces, carrots and spring onions. After living on tinned and dried foods for three months we were overjoyed at the thought of green veges and we made the most of it.'

It was not long before the settlers, probably realising that their throats were less likely to be cut by the invaders than by their Arab subjects, returned to their homes and took up the threads of their existence, which appeared to be growing olives and grapes. Some of them produced quantities of the national beverage and found good custom among sappers who had soon tired of the delights of clear cool water.

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<sup>1</sup> An Army euphemism meaning absolutely nothing.

<sup>2</sup> [Infantry Brigadier](#), p. 249.

<sup>3</sup> [Lt-Col R. G. Webb](#), ED, m.i.d.; [Pukehou](#); born [Stratford](#), 5 Aug 1906; schoolmaster; 2 i/c [24 Bn](#) Apr-Nov 1942; CO [24 Bn](#) 22 Nov-16 Dec 1942; wounded and p.w. 16 Dec 1942; headmaster, [Te Aute College](#).

<sup>4</sup> [Sgt J. Jackson](#); [Wellington](#); born [Wellington](#), 28 May 1906; master plumber.

<sup>5</sup> [Spr M. Cook](#); born NZ 1 Oct 1918; welder; wounded Dec 1942.

<sup>6</sup> [Maj R. W. Morris](#), MC, m.i.d.; [Christchurch](#); born [Timaru](#), 15 Aug 1915; civil engineer's assistant; OC [8 Fd Coy](#) May-Aug 1945; wounded 22 Mar 1943.

<sup>7</sup> [Cpl R. E. Milligan](#), DCM; [Whareora](#), [Whangarei](#); born NZ 13 Apr 1916; drover.

<sup>8</sup> [Maj-Gen Sir Stephen Weir](#), KBE, CB, DSO and bar, m.i.d.; [Wellington](#); born NZ 5 Oct 1905; Regular soldier; CO [6 Fd Regt](#) Sep 1939-Dec 1941; CRA [2 NZ Div](#) Dec 1941-Jun 1944; GOC [2 NZ Div](#) 4 Sep-17 Oct 1944; 46 (Brit) Div Nov

1944-Sep 1946; Commander, Southern Military District, 1948-49; QMG, Army HQ, 1951-55; Chief of General Staff 1955-60; Military Adviser to NZ Govt, Sep 1960–

<sup>9</sup> Capt M. R. Pene; Rotorua; born Whakatane, 1 Feb 1912; foreman, Maori Affairs Dept.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## [SECTION]

(October 1942 to February 1943)

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## RAILWAY OPERATING GROUP

### *Railway Operating Group*

In spite of the precautions to ensure that no information leaked out regarding the build-up for the Eighth Army attack in October 1942, the New Zealand Railway Operating Group could not help knowing that something big was afoot. For weeks they had been pushing train loads of stores forward to [Burg el Arab](#) by day and by night and they had watched the entertaining sight of army transport evacuating native families and their assorted livestock; opinions were divided as to whether this was a precaution against espionage or merely to reduce the fly nuisance.

A highlight of the period was an attempt by Italian commandos, who were landed from a submarine near [Burg el Arab](#), to blow up the line near Hawaira. The only result was a broken rail and the loss of a few thousand gallons of [Nile](#) water, for Gurkha troops soon rounded up these rather amateur demolition experts. The [Gurkhas](#) patrolled the area for a week or so but there were no more efforts to dislocate the railway system. The operating sappers manning the stations got along very well with the little smiling men from the mountains of North India. Few could speak much English but the two races met on common ground around a draught-board. The [Gurkhas](#) won nearly every game.

It has been related that, on 5 November, 2 NZ Division was concentrated to the south of [Fuka](#). At a minute past midnight on the same date, new railway operating instructions came into force, placing the responsibility for the running of traffic as follows:

‘OC 16 NZ Rly Op Coy—Stations from amriya to hammam. The 16 NZ Rly Op Coy will be responsible for the signalling and despatch of all trains at amriya station. Shunting duties at amriya station and depot will be carried out by 16 NZ Rly Op Coy. Two diesel shunting engines are located at amriya depot.

‘OC 17 NZ Rly Op Coy—Stations hammam to railhead. The 17 NZ Rly Op Coy will be responsible for the signalling and despatch of all trains at hammam station and

West thereof. Also for shunting railhead depots.'

Railhead for the moment was at [Alamein](#) while Railway Construction Groups worked across the battlefield towards [Daba](#), which became the railhead on the 10th when the first stores train arrived there. The repair gangs had not only to deal with shell and bomb damage but also had to replace sleepers and rails taken from the road bed by both armies for the construction of splinter-proof shelters.

While 2 NZ Division was stacking up at the foot of [Halfaya](#) Pass at the Egyptian border (11 November) the construction train was working west of [Daba](#), to which station Major Pearse had shifted 17 Company Headquarters, and from where the Group was operating some American main-line diesel-electric locomotives. The arrival of these was well timed as steam engines were dependent on water and the damage to the water pipelines and reservoirs had not yet been made good. Major Aickin writes:

'These diesel locos, had been constructed and shipped in such a hurry that there was insufficient time for carrying out the customary service trials. However, although the locomotives were practically nothing more than working blue prints when they reached us, they arrived in the nick of time and served our needs admirably. The NZ engine drivers quickly learned to handle them.'

Railhead was at [Matruh](#) on the 13th, when three trains were despatched from [Daba](#) to that destination; by the 25th, after relief by 193 Railway Operating Company, RE, 17 Company had manned and was operating from its headquarters at [Capuzzo](#) the [Misheifa – Capuzzo – Tobruk](#) Road section. On the same day 16 Company, now relieved by 115 (Indian) Railway Operating Company, had settled into its old 'possie' at [Similla](#) and taken over the [Similla– Misheifa](#) section.

When the Company had evacuated [Similla](#) it had left behind a very old and battered built-in stove, a most prized possession of the sergeants' mess. The shed that housed the derelict was not worth destroying so it was decided to lend the amenity to the Germans as a going concern. A note was left instructing the new tenants to look after both stove and building until the return of the rightful owners in the near future. The premises were clean and tidy when the sappers retook possession, but some nasty-minded Jerry had planted a couple of booby traps that

had to be removed before the cooks could resume business.

While the water reservoirs at [Capuzzo](#), [Misheifa](#) and [Similla](#) were being repaired the whole of the running was performed with diesel engines, but a partial changeover to steam loco operation was made on the 28th and three days later (1 December) the diesel-electric locos were worked over the [Capuzzo- Tobruk](#) sector, leaving the steam locomotives to operate between [Similla](#) and [Capuzzo](#).

The railway system had in fact been recommissioned in accordance with the timing laid down in 'Movement Plan—Eighth Army Maintenance'. Planning a battle is not solely a matter of deploying brigades, regiments and divisions—they have to be fed, watered and munitioned, and in a desert neither food nor water are easily obtained. With the lengthening line of communications it was of supreme importance that, through the efforts of Indian, South African, Australian, British and New Zealand railway sappers, the line connecting [Alexandria](#) with [Tobruk](#) was operating within the times set down in the movement plan.

The arrival of the supply trains at [Tobruk](#) made it possible to maintain sufficient forces for the reduction of the [Agheila](#) position where the enemy was then holding. After 2 NZ Division had made its outflanking march and the enemy had withdrawn beyond [Agheila](#) the running of trains became monotonously normal; so normal that, with the interference from the air a thing of the past, a total of 374 trains ran in December conveying 14,762 wagons and 140 coaches. Apart from passenger traffic some 65,000 tons of stores were off-loaded at [Tobruk](#) in addition to many thousands of tons at other railheads.

[Tripoli](#) was occupied on 23 January 1943 and the opening of the port there took the pressure completely off the Desert Railway; on 21 February, after relief by 115 (Indian) Operating Company, 16 New Zealand Railway Operating Company was back whence it had started in October 1940—at NZ Base Camp, [Maadi](#).

Group Headquarters and 17 Company endured another month of the desert winter with its cold and dust, the nilvisibility running and the usual track washouts. A changeover to diesel-electric locomotives was completed on 8 March when WD Locos 9332 and 9327 hauled the last steam-operated service (Train No. 5) over the [Tobruk Road – Capuzzo – Misheifa](#) section. The steam loco depot at [Capuzzo](#) closed the

same day and coal, oil and wood supplies, together with depot equipment, were despatched to [Misheifa](#). The rail loop at [Tobruk](#) docks was finished on 10 March and on the following day a 17 Company diesel crew and brakesman ran the first train over the new extension that finally linked [Alexandria](#) with [Tobruk](#). In a way it was a pity that it was not Kiwi construction men who put the finishing touches to the Western Desert Extension.

Operational responsibility for its section was relinquished to 195 Railway Operating Company, RE, by 17 Company on 14 March and by 21 March the company was also back in [Maadi](#), to which place Group Headquarters had preceded it by a couple of days.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## RAILWAY CONSTRUCTION AND MAINTENANCE GROUP

### *Railway Construction and Maintenance Group*

The rainy season, which in the [Levant](#) begins at the end of September, posed an unexpected problem in track maintenance. Between [Haifa](#) and [Beirut](#) the line ran for most of its length on a bed of well packed soil supporting a layer of sand and rock, but the fine-grained soil, known locally as cotton soil, had an extraordinary capacity for absorbing moisture. Its stability then broke down and it would support only the lightest distributed load. As the rains set in, the saturated track sank and cant could not be maintained on curves. A flat track had to be laid, for the first train could double or treble the cant.

To make matters worse the construction trains had been withdrawn and army labour units transferred to other projects; native labour was scarce, poor, and busy collecting the olive harvest. 'With no stocks of stone ballast and no construction trains the units passed through a difficult and anxious period, and only by supreme efforts with poor labour did they manage to keep the service running. Construction trains were absent for about a month during which time various expedients were adopted by the Units to meet their immediate problems. Owing to the presence of rock only at long distances apart, the Tenth Coy could do little towards supplying the track with ballast. A Mule Company was obtained to try and carry in some stone, but the nature of the soil soon put an end to that. Where road and railway were close, some delivery by MT was possible. During this period however, having promise of the return of trains, sidings for ballast were laid at matfana (55 Km.) to the sea beach, and at adloun to a limestone quarry which was equipped with numerous crushers.' <sup>1</sup>

On the 13th Company section small contracts were entered into with local natives for the delivery of stone and its knapping by hand. Another expedient was the conversion of a number of small crushers to run on rails. Native women carried stones from the fields to the crushers and the ballast was deposited directly on the track. But it was not until the construction trains were brought back in December that any real progress was made.

Ninth Survey Company had in the meantime, after a period of puzzlement, established that Paiforce was the code-word for [Persia](#) and [Iraq](#) Force, or in other words the Tenth Army, a somewhat nebulous formation with its headquarters in [Baghdad](#).

On 9 November 1942 the Company, less No. 3 Section which remained on railway work, and consisting of 6 officers and 52 other ranks, left [Az Zib](#) to join Paiforce. They went by desert road in their own sixteen trucks from the [Mediterranean](#) coast across [Syria](#) and [Iraq](#) to the Euphrates, about 650 miles. The first day's journey took them to [Mafraq](#), near the crossing of the [Haifa– Kirkuk](#) pipeline and the Hejaz railway, thence to H4 in [Transjordan](#), to [Rutbah](#) in the Wadi Hauran which runs down to the Euphrates, to Wadi Mohamed and finally to [Baghdad](#), where camp was made in 35 Rest and Transit Camp on 13 November.

Captain Clark, who had gone ahead with two sappers as an advance party, had received instructions that one section was to work in [Iraq](#) and the other in [Persia](#). Company Headquarters would remain in [Baghdad](#).

No. 2 Section left [Baghdad](#) on 16 November for [Ahwaz](#), the first considerable town on the railway that runs from Bandar Shahpur at the head of the Persian Gulf to [Teheran](#), the capital of [Persia](#). From [Ahwaz](#) they went on to Ur, camped a night in the desert and finally arrived on the 19th at [Basra](#), the river port of [Iraq](#) and an important link in the supply route to [Russia](#). From there they moved along the river to [Khorramshahr](#), another oil shipping port, made camp and began a topographical survey of the rail facilities, redesigning marshalling yards, surveying new depots and pegging new layouts. These and similar projects were carried on until the end of December, when heavy falls of snow stopped all work.

No. 1 Section left [Baghdad](#) on 17 November for Jessimiyah, some 40 miles to the north on the narrow-gauge line from [Baghdad](#) to the pipeline terminal at [Kirkuk](#). The section's job was the layout of a station and depots for stores and ammunition, while parties went off for inspection and surveys in various parts of the country. The weather, with alternate rain and duststorms, was unpleasantly reminiscent of the [Western Desert](#) where 2 NZ Division was so busily engaged under similar conditions.

Company Headquarters, after some delay, was set up in a house in [Baghdad](#), and it was then possible to complete draughting projects that had been unfinished at [Az Zib](#) as well as to carry out ordinary maintenance.

Meanwhile events were in train that were to result in the recall of 9 Survey Company and its transformation. It was to take over the [Beirut– Tripoli](#) section of the [Haifa– Tripoli](#) railway from the Australian railway engineers who were leaving the [Middle East](#). It was, in other words, to forsake the theodolite and chain of a survey unit and take up the pick and shovel of a construction and maintenance unit. Groups were recalled to their parent sections and the Company was back in [Az Zib](#) by the middle of January 1943.

The completed line from [Beirut](#) to [Tripoli](#) had been opened with some pomp and ceremony by General Alexander on 21 December, and it was now possible, but highly improbable until the war was over, to travel by rail from [Cairo](#) to any continental city.

Group Headquarters moved to [Beirut](#) on 15 January and took over from the Australian Construction and Maintenance Group. The transfer was completed the next day when 13 Company extended its section by eight miles, leaving 9 Survey Company some 46 miles of track to maintain from its headquarters in Byblos on the Syrian coast, now vacated by 2 Australian Railway Construction Company.

The new construction unit found, as with the other two companies, that its greatest preoccupation would be with ballasting the cotton-soil country. Major Halley had inherited 87 gangs of natives, some 2200 all told—too many for the work now available and a different state of affairs from that pertaining in the original New Zealand sector. In his first report Major Halley wrote:

'Steps are being taken to place gangs near their homes, to cut out unnecessary transport ... and also to reduce the number employed. I also think a little more work is going to be got out of those remaining.'

There was a change in the command of the Railway Construction and Maintenance Group at this period. Colonel Anderson relinquished command on account of sickness to Colonel R. T. Smith and Major C. Clark left 9 Survey Company

to take over 13 Construction Company. Colonel Anderson's farewell message was published in routine orders on 24 December. It read:

'To all ranks of the NZ Railway C and M Group.

'My best wishes for a Merrie Christmas and a Happy and Eventful New Year. My grateful thanks for all the willing service so ungrudgingly given in the [Western Desert](#). You will be proud to know that our railway now carries daily eight supply trains right through to [Tobruk](#). In the Xmas'es to come we shall remember with pleasure the comradeship and associations of 1942.

'Good luck to you all, and Good-bye.

(Sgd) J. E. Anderson Lt-Col.'

January was a month of heavy rain and storms along the sea coast. It seemed doubtful if the line could be kept open for there was a succession of 'Extreme Caution' notices, minor derailments, cancelled trains and transshipment of travelling troops. Where the track skirted the coast the sea walls required constant attention. Several walls had not been founded on solid rock, for lack of which large limestone boulders had been rolled over from the cliffs above and embedded in the base of the concrete wall. Heavy seas were scouring away the back fill and 20-ton concrete blocks were hurriedly cast and dropped into the cavities. Others were cast on top of the walls and tipped over into the sea to break up the force of the waves.

February was another month of ballasting, lifting, packing and concreting the sea walls. The weather was better and some football was played. On 13 February 9 Survey Company gave itself a party to celebrate the third anniversary of its formation.

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<sup>1</sup> Lt-Col R. T. Smith, Completion Report on [Haifa- Beirut- Tripoli](#) railway.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 18 ARMY TROOPS COMPANY

### *18 Army Troops Company*

On 23 October the diarist of 18 Army Troops Company noted the opening of the Battle of [Alamein](#) with characteristic brevity in the war diary—'The balloon went up—[8 Army](#) attacked all along the front—night anything but quiet.'

On that day the disposition of the company was:

Headquarters Detachment, Workshop Detachment, water barges and crews at [Alexandria](#).

No. 1 Detachment—Operating and maintaining the pipelines of the [Western Desert](#) water supply from Hammam, inclusive, to [Alamein](#), inclusive.

No. 2 Detachment—Working on the oil facilities at Chevalier Island.

No. 3 Detachment—Operating pumping stations from [Nubariya](#) to Hammam.

No. 4 Detachment—Working on fuel and water storage and reticulation between [Alamein](#) and Hammam.

Major Learmonth had been instructed that the duties of 18 Army Troops Company in the initial restoration of the water supply would be:

1. Instal one Caterpillar-Gould pumping set at [Ghazal](#), two at [Daba](#) and one at [Fuka](#), or recommission the original sets by the replacement of parts removed in June if not otherwise damaged.

2. Instal pipelines and connections within pumphouse compounds and connect up to main pipelines, which would be restored or relaid by South African units. Other formations, among them a sub-section of 21 Mechanical Equipment Company, <sup>2</sup> had been detailed to restore pumphouses and reservoirs.

Captain Wallace was put in charge of the work with authority to draw on Nos. 1

and 3 Sections for the necessary labour, while Lieutenant Mackersey was to be responsible for the operation of existing pumphouses and was also to take over [Ghazal](#) and [Daba](#) when they came into operation. Lieutenant [Tuck](#)<sup>3</sup> was to check all new pumping equipment before it was used.

The unit diarist took the news of the break-through at [Alamein](#) very calmly:

'Suction flex hose of fire booster burst. 588 Coy contacted and flex connection replaced with iron pipe. Awkward day spent endeavouring to contact people with telephone out of gear 95% the time. [Benghazi](#) handicap commences.'

[Daba](#) was reported clear of enemy at 2.30 p.m. on 5 November and within an hour and a half the selected sappers from Nos. 1 and 4 Detachments were on their way. They arrived at [Daba](#) at dusk and worked through the night pumping out the flooded pumphouses. It was possible to survey the damage at dawn. The plant and reservoirs were 'a sorry mess of demolished machinery covered with a thick coat of slime, oil and bone oil. In all four pumphouses the enemy had pushed aside the machinery which we had demolished in June and installed his own small pumping sets instead. All the pipe fittings and some of the engines were captured British ones he had used. He had very effectively demolished all his own installations. Three of the six reservoirs were in the state of demolition as we left them in June. The other three had apparently been repaired by the enemy and used. He had effectively blown them again before leaving. The Railway reservoirs were not demolished but bone oil was liberally spilled about the place. Many pipe junctions and valves were blown in the compound.'

[Ghazal](#), in the centre of the recent [Tell el Eisa– Daba](#) battleground, was found to be in a like state; nevertheless by the time the new Caterpillar-Gould pumping sets arrived, all damaged machinery had been removed. The sets were installed and water was running into the railway reservoirs at noon on 10 November and another detail from No. 1 Section had taken over operation duties at [Ghazal](#) and [Daba](#). Back at [Alexandria](#) water-drum filling went on by day and by night, and the same day as the water reached [Daba](#) two 18 Army Troop barges sailed for [Matruh](#) to transfer water from ships to shore.

At [Fuka](#) the new set was bedded down and working on the 11th. A water point

from local supplies was operating that afternoon and four days later (15th) pipeline water arrived at [Fuka](#). Meanwhile restoration work was being carried out at [Garawla](#), where water arrived on the 19th; the next day water was pumped from [Garawla](#) to [Similla](#). [Charing Cross](#) received pipeline water on the 25th. By the end of the month the Company was patrolling the pipeline from [Alamein](#) to [Garawla](#), repairing leaks and blowouts, replacing damaged pipes and valves in compounds and generally undoing what they and the enemy had done in their successive demolition efforts.

Little mention has been made of Headquarters Detachment and of the long hours worked by the workshops staff in getting pumping sets back into commission. Cracked sumps, broken flywheels and the like were removed and replaced; sets were cannibalised to get others working; where a spare was not obtainable some compromise solution was thought out as a temporary measure.

While Eighth Army was being deployed for the operations against the [Agheila](#) line all possible steps were taken to get water forward to build up reserves. Major Learmonth was instructed that the boosters at [Alamein](#) and [Ghazal](#) must operate full-out and push the last ounce of water forward. To make sure there was no avoidable delay through breakdowns, the two company mobile workshops were released from Base and made responsible for the periodic checking and overhauls of the main Western Desert Caterpillar-Gould pumping plants.

The naval wing of 18 Army Troops Company, water barges Nos. 4 and 5 (No. 3 was out of service with engine trouble), arrived at [Tobruk](#) from [Matruh](#) on 2 January 1943 after seventy-two hours' buffeting by a head sea and gale force wind. Sergeant T. G. Smith, <sup>4</sup> reporting his safe arrival to Major Learmonth, concluded:

'I am kept busy watering ships and we enjoy doing the job. I am pretty sure we will stay here as we are badly needed by the Naval here. All the health is OK and mail is urgently wanted. Please accept all our greetings for the New Year.'

According to an entry in the war diary the quantity of water pumped into the [Western Desert](#) system, and excluding water sent forward in containers, water ships and trains from [Alexandria](#), was 268,352,000 gallons for the year ending 31 December 1942, while 80,000 hours were run by pumping sets during the same period.

As with the Railway Group, the occupation of [Tripoli](#) took the pressure off the [Western Desert](#) pipeline and its guardians. A memorandum dated 4 January 1943 instructed Major Learmonth to submit an estimate for an establishment of civilian labour to take over his tasks in the area for which he was responsible.

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<sup>2</sup> Twenty-five sappers commanded by Lt A. W. Tassell.

<sup>3</sup> [Capt F. E. N. Tuck](#); born [Auckland](#), 27 Jan 1914; mechanical engineer.

<sup>4</sup> Not traced.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 19 ARMY TROOPS COMPANY

### *19 Army Troops Company*

The disposition of 19 Army Troops Company on 1 November 1942 was:

**Safaga**—Headquarters Section (Lieutenant [Loudon](#)<sup>5</sup>). Supervision of contracts on deep-water berth.

E and M Section (Lieutenant Thomas). Mechanical and electrical installation and maintenance.

No. 1 Section (Lieutenant Chapman). Construction and supervision of contracts on oil berth.

No. 2 Section (Lieutenant Dalmer). Standing by under orders to move to **Adabiya Bay**.

No. 3 Section (Lieutenant Nicol). Construction of pipeline and reservoirs for **Mons Claudianus**— **Safaga** water supply.

**Adabiya Bay**—No. 4 Section (Lieutenant Gayford). Supervision of contracts in conjunction with 21 Mechanical Equipment Company.

No. 2 Section arrived at **Adabiya Bay** a couple of days later and joined No. 4 Section and No. 1 Section, 21 Mechanical Equipment Company (Captain Allen). The rest of the Company had moved to other areas and the composite company was under the command of Captain Malt, second-in-command 19 Army Troops Company. Captain Allen's sappers carried on with the excavation and supervision of pile driving by contractors and by directly employed native labour; Lieutenant Gayford's section supervised labour excavating for freshwater reservoirs and contractors placing stone fill, making precast concrete piles, driving steel sheet-piles and sundry other jobs; Lieutenant Dalmer's sappers were chiefly occupied with earthwork construction, quarrying and crushing stone and metalling roads.

A considerable quantity of dredging was involved in the construction of the

deep-water and the lighter berths. They were on each side of an earth-filled, sheet-piled mole, and [Suez Canal](#) Company dredges pumped the spoil from their dredging into the mole. Top filling was done by carry-alls and hand labour with Decauville trucks. There were eight pile drivers on the job and spoil was moved in at the rate of 2000 cubic yards per day.

Work went on steadily at [Safaga](#) until 23 November 1942, when a telephone message sent Major Marchbanks up to [Cairo](#) at the double. There he was instructed as follows:

60 men and 1 officer were to remain at [Safaga](#).

Company Headquarters was to move to [Adabiya Bay](#).

3 officers and 90 sappers were to move to [Benghazi](#) as soon as possible.

Work at [Safaga](#) was to be reduced and a detachment of 540 RE Company would take over from 19 Army Troops Company.

Major Marchbanks was to accompany A.D. Works (Docks), Brigadier Marriott, to [Benghazi](#) forthwith to inspect harbour facilities and the damage thereto.

It is convenient at this point to finish the story of [Safaga](#) where 19 Army Troops Company had been toiling for sixteen months.

Sappers continued to be withdrawn as the RE company became conversant with the various contracts nearing completion and as the operators of bulldozers, carry-alls and other equipment became used to their machines. New Zealand severed its connection with [Safaga](#) on 23 December 1942, after the remaining sappers, commanded by Lieutenant Loudon, gave themselves a farewell party, the ingredients of which were fish caught in the harbour and fried, potatoes stolen from the local DID and chipped, and beer obtained by cajoling the newly-opened [NAAFI](#) to issue the Christmas ration in advance. Several million pounds had been spent on a port that the Army never used, for with the clearance of the enemy from Egypt the [Suez Canal](#) was fully open to shipping and the need for an auxiliary to the ports in the Gulf of [Suez](#) vanished. It was freely rumoured, but the writer cannot confirm it, that the port was offered to the Egyptian Government for a song, but the wily Wog,

thinking that it would fall into his hands for nothing, would not play. Eventually most of the sheetpiling was pulled up and sent to [India](#), the concrete structures were demolished and other works so systematically dismantled that the port of [Safaga](#) became a mass of wrecked reinforced concrete and rusting scrapiron.

To return to 19 Army Troops Company. The [Benghazi](#) party, a composite section of 93 all ranks (Captain Thomas), left [Maadi](#) by truck on 2 December and arrived at [Benghazi](#) five days later. Major Marchbanks was waiting for them. For the sappers with memories of [Greece](#) and [Crete](#) the trip was both interesting and satisfying. They followed the coastal highway with the drivers sticking religiously to the centre of the road, for the shoulders had not yet been cleared of mines, as some of our own blown-up trucks testified. But what was completely satisfying to the one-time front-line engineer-infantry was the succession of burnt-out enemy tanks, trucks, guns and planes. Major Marchbanks' first impressions of chaos at [Benghazi](#) were confirmed by inspection:

'The harbour in [Benghazi](#) was in a terrible mess. Apart from the damage done by our own bombers, the German demolition had been most thorough. He had blown holes in two of the concrete moles, blown up every quay and sunk all lighters, tugs and small craft alongside them. The deep water basin was fouled by sunken ships everywhere. There was room inside for only 6 or 8—3,000 ton ships. Two sections of a German tanker blown in two were still floating and blazing in the harbour. There were half a dozen R.E. Sapper Companies available and all these were hard at work. On 7 December, when my detachment arrived they started repairing the break in the centre mole and two of the R.E. Companies worked on that in the east mole. We also started installation of light and power plants and water supplies. At this time Rommel was standing at [Agedabia](#) and the 8th Army could not attack until it was assured of supplies.'

The repair of the Central Mole was regarded by the naval authorities as of paramount importance, for the inner harbour was not safe until a large hole blown by the enemy was filled again—and could it be done by the end of the month?

Lieutenant Nicol was placed in charge of the job, which posed some problems. A strong sea pounding through the gap had to be restrained with a layer of spawls and the erection of steel shuttering before the estimated 500 tons of concrete could be

poured to close the gap. But probably the biggest job ever tackled by 19 Army Troops Company was the restoration of the [Benghazi](#) electric-power system. The [Benghazi](#) powerhouse had been made utterly useless and it was vitally necessary to provide power for lighting the docks. The E and M sappers included in the composite party proceeded to do so. Under the direction of Lieutenant Thomas they spread into small parties and got to work; an Italian diesel motor was reconditioned and installed in the nearly demolished wireless station to run a nearly demolished generator. In the meantime the docks had been rewired for power and lighting. The underground high-tension cable was fractured in a dozen places and there was no plan of the reticulation network. An impossible amount of digging would have been involved had not Kiwi ingenuity devised a method of ascertaining the route of the underground cable. Sapper Jack [Boyer](#)<sup>6</sup> contrived a home-made search coil on the lines of a mine detector which was joined to an amplifier of a radio set. The end of the cable was then connected to the spark plug of a truck and the resultant signal was received by the search coil. It was then possible to map quickly and accurately the buried network. Eleven breaks were found and repaired, while the poles and lines outside the town area were renewed by another party. Still another subsection, with the assistance of a specialist from the Royal Engineers, salvaged in a brewery a 500 h.p. diesel plant which drove a 100 k.w. generator from which sundry parts were damaged or missing. When again in working order this plant was connected with the high-tension system through a transformer and became the main generating station in the locality.

The main job of the third party (Lieutenant [Faram](#)<sup>7</sup>) was the pumping out of five concrete caissons constructed and sunk by the Italians. They were 18 ft deep by 16 ft 6 in. wide by 39 ft long and were to be filled with concrete and sunk in line to form 460 feet of quay with a depth of 18 feet of water. This breastwork when completed was christened the New Zealand Quay.

The repairs to the mole and urgent electrical work were finished by the end of December. Christmas passed by unnoticed, for the Eighth Army was waiting around [Nofilia](#) for the build-up of supplies before advancing on [Tripoli](#). A considerable proportion of these had to be landed at [Benghazi](#). On 3 January 1943 a storm that was felt as far east as [Alexandria](#) and which put the railway system out of action for some days did terrific damage to [Benghazi](#) harbour. Typhoon force wind and terrific

seas wrought havoc on the harbour Outer Mole, which had already been cratered and otherwise damaged by German demolitions. The greater part of the protecting wall was washed away, exposing the inadequate Inner Mole to mountainous seas. When the storm subsided two days later four ships had foundered and two had been piled up on the foreshore. The entrance to the inner harbour was blocked by the wrecks and the harbour itself had silted up to such an extent as to be almost useless until large-scale dredging had been done. The end effect was that unloading from lighters must take place on the Cathedral Mole in the outer harbour, which was now nothing more than an open roadstead.

Instead of the two thousand tons per day of stores coming through [Benghazi](#), six hundred tons would be the limit after lighters, tugs, cargo handling gear and the people to use them had been provided. It would take months of work with up-to-date equipment to rebuild [Benghazi](#) harbour, and had the enemy been able to fend off the Eighth Army from [Tripoli](#) for just a little while, a third withdrawal into Egypt might have occurred.

No permanent salvage work could be started, while the telegraph lines of the [Royal Signals Corps](#) were running hot with requests from [Cairo](#) for fuller information and demands from [Benghazi](#) for pioneers and salvage gear.

In the meantime the sappers were kept busy enough repairing and extending the electrical supply, digging bollard holes and cementing anchor chains as a precautionary measure against the possibility of further storms before the harbour reconstruction work began.

It was decided to relieve 19 Army Troops Company of all work in the [Suez](#) area as soon as possible. The Company, less No. 4 Section, left by road and rail and arrived at [Benghazi](#) on 28 January and 1 February, by which time five caissons had been placed in position, further major repairs made to electric generators and the reconditioning of the main powerhouse commenced. The Company strength in [Benghazi](#) was now 6 officers and 233 other ranks. Work commenced on a slipway for Z craft, repairs to the Cathedral Mole, installation of an oil pipeline to Torpedo Jetty, salvaging from wrecked ships and reconditioning the pumphouse of the Fuihat water point.

The necessity for equipment to accelerate the salvage work provided the Kiwi sappers with a job that allowed their native ingenuity the fullest scope. A sheerlegs mounted on a timber punt 83 feet long, 32 feet wide and 10 feet deep, had been scuttled by the Italians during the Wavell offensive and was lying in some ten feet of water with the decks awash. It was to be raised and recommissioned and Lieutenant Nicol, with Sergeant W. R. [Smith](#)<sup>8</sup> as chief of staff, set about it. A naval diver assisted by Sapper [Hamilton](#),<sup>9</sup> who contrived his own diving suit out of a tight-fitting gas respirator and a flexible hose connected up to the air drum of the compressor truck, surveyed the wreck and discovered that a hole 14 feet by 6 feet had been blown in the side. As for the sheerlegs, 80 feet long with ball joints at the lower ends sitting in cast-iron sockets in the deck, plus all the bracing and guys, these were lying in a tangle in the water. Finally the ball joint in one of the legs had been blown. It was quite a job to recommission this with no equipment.

'There is no tide in the [Mediterranean](#) but there are sieches during which the sea level may fall and stay down for a few days. We waited for a sieche which uncovered the deck of the punt, temporarily covered the hole in the side with timber and tarpaulin, raised the punt by pumping it out and sealed the hole permanently with concrete. The damaged ball joint, which was beyond repair, presented a problem but S/Sgt [Spence](#)<sup>10</sup> displayed considerable initiative and scrounged a cast steel compressed air bottle with a rounded end from an Italian power house, slipped this up the inside of the leg and welded it in place to form the ball to fit into the socket on the deck. The bracing and ties of the main legs were improvised out of 6" and 8" diameter pipe. Fortunately the boiler and winch were found to be undamaged. The Sheerlegs was christened the "Kiwi" and did a lot of useful work in clearing the harbour.... I received a special signal from the Navy congratulating us on the job.'<sup>11</sup>

No. 4 Section (Lieutenant Gayford) arrived at [Benghazi](#) on 22 February, thus again bringing the Company up to full strength in one locality.

It was about this time that another Kiwi improvisation occurred that was not so well received by the naval authorities in [Benghazi](#). It concerned some assistance rendered by an 18 Army Troops barge that had just arrived from [Tobruk](#). Major Marchbanks tells the story:

'A timber jetty had been partially demolished by the Germans and all the piles were leaning over at an angle to the vertical. To repair it the chaps on the floating pile driver conceived the brilliant idea of getting the crew of an 18th Army Troops water barge to charge the jetty at right angles with the barge to push the piles upright and when they were upright to let the hammer on the pile driver drop. This was quite effective and the work was going well until the King's Harbour Master, a heavily bearded naval officer with a lot of gold braid on his cap came running down the quay and called to the crew of the barge, "If you can't handle your bloody barge better than that I won't let you berth at all".'

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<sup>5</sup> Maj B. J. Loudon, m.i.d.; [Syria](#); born Dunedin, 1 Jun 1896; civil engineer and surveyor; 1 NZEF, 1915-19; twice wounded.

<sup>6</sup> Spr J. P. Boyer; born NZ 28 Jul 1911; labourer.

<sup>7</sup> Maj L. F. Faram, m.i.d.; [Auckland](#); born Tikokino, 19 Nov 1900; consulting civil engineer; OC 27 Mech Equip Coy Jun-Nov 1945.

<sup>8</sup> Sgt W. R. Smith, m.i.d.; [Wellington](#); born [Wellington](#), 11 Nov 1912; rigger and winch driver.

<sup>9</sup> Spr C. D. J. Hamilton, m.i.d.; Mount Maunganui; born NZ. 14 May 1903; cabinetmaker.

<sup>10</sup> S-Sgt W. S. J. Spence, m.i.d.; [Australia](#); born [Scotland](#), 5 Feb 1911; fitter.

<sup>11</sup> Letter, Maj Marchbanks.

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**NEW ZEALAND ENGINEERS, MIDDLE EAST**

**21 MECHANICAL EQUIPMENT COMPANY**

***21 Mechanical Equipment Company***

The Company, with the exceptions mentioned in

Chapter 11, worked as a unit for a couple of months at [Adabiya Bay](#) until No. 2 Section, with another assignment pending, packed up once more. It left on 10 October 1942 for [Fanara](#), some 30 miles up the [Suez Canal](#), and spent a dry and dusty week in the khamseen levelling building sites for tank and vehicle workshops.

The levelling completed, the section travelled the [Ismailia-El Auja](#) road until it reached Kilo 108 in the heart of the [Sinai Desert](#), made camp and prepared to shift encroaching sand dunes off the bitumen roadway. From the 108 peg to the Palestinian border the road was partially blocked by a succession of drifts, some up to twelve feet high, but with a bulldozer and the carry-alls filled to the brim up to 4000 cubic yards were shifted daily. The job took two months, during which time the sappers celebrated the second anniversary of the Company's formation at [Trentham](#) on 15 November 1940. Captain Tustin produced a monster cake recently arrived from home, and some heavy self-control regarding the beer ration ensured a memorable birthday party. It was estimated that 153,300 cubic yards of sand had been shifted before the return to [Adabiya](#) on 22 December.

Four days after the departure of No. 2 Section (14 October 1942) a detachment from No. 1 Section of 25 other ranks (Lieutenant [Tassell](#) <sup>12</sup>) moved to [Ikingi Maryut](#) and relieved 18 Army Troops Company of the responsibility for the operation and maintenance of the pipeline mechanical equipment between [Alexandria](#) and [El Hammam](#). The stockpiling of water-pipes at [El Hammam](#), at the terminus of the water supply and the distribution point for the [Alamein](#) line, was a hint of what was to come. It was at [Ikingi Maryut](#) that they heard at 10 p.m. on the night of 23 October the reverberating thunder of the barrage opening the Battle of [Alamein](#).

They arrived at [Daba](#) hard on the heels of 18 Army Troops Company and were renewing pipe junctions and valves when two staff cars and a truck full of assorted German officers and other ranks drove up and tried to surrender to them. The sappers, busily intent on their work and armed only with spanners and concrete pipes, said in effect, 'Why pick on us?' and indicated that the enemy should go away and find somebody with more time available to surrender to.

The section worked along the pipeline as far as [Charing Cross](#) and on 27 November reported back to the Company, which at that date had its headquarters in [Tobruk](#).

In consequence of the arrival of No. 2 Section, 19 Army Troops Company, at [Adabiya Bay](#) during the first week of November and of a warning order for 21 Mechanical Equipment Company concerning an early move to the [Western Desert](#), Repairs Section started to build a mobile cookhouse. It was painted a violent yellow and mounted on an 8-ton trailer. A 10-ton semi-articulated International truck was also converted into a mobile technical store.

Company Headquarters, Repairs Section and sappers from the other sections, in all 4 officers and 100 other ranks (Major Tiffen), left [Adabiya Bay](#) in convoy on 8 November, did a few small jobs en route and arrived at [Tobruk](#) on the 24th.

Repairs Section immediately started on the construction of a deep-sea wharf, utilising a sunken ship that lay about twenty-five feet off shore in a position eminently suitable for such a wharf. The ship's superstructure was removed and a portion of the hull cut out with oxy-acetylene burners, the gap between ship and shore was bridged and an admirable amenity was ready for use. The field section sappers began metalling and sealing the main harbour road and repairing bomb craters in other roads about the derelict town.

The water supply of [Tobruk](#), once a considerable town of some 70,000 inhabitants, was drawn from underground sources, chiefly at El Auda. A pumping station was situated at [Wadi Sahal](#) about 12 miles to the west, but a South African unit had put it out of action so effectively with bone oil and demolitions that a new system of collecting water was to be constructed.

The specifications called for an aqueduct 500 feet in length, 34 feet deep, of which 14 feet were through solid rock, and 60 feet wide at the top. It was to be excavated across the junction of two wadis, and a system of concrete pipes with a margin of half an inch between joins was to be laid and the whole then filled with crushed metal. The conduit was two feet below water level and the water thus tapped was to seep through the metal and lodge in the aqueduct at the rate of 200 tons per day.

Of the sections in the advance party No. 3 was the most numerous and, under Lieutenant Hazledine-Barber, was detailed to carry out the project.

Preparatory work was commenced on 3 December. There was, of course, no materials or equipment on the site and before it could be collected half a mile of road had to be built. Scrounging expeditions collected material from which was built a portable stone-crusher, a concrete mixer and a steel bending machine; timber shutters for the casting of concrete pipes were built, a quarry was cut from which a Decauville line was laid to the crusher, while sand was brought from the beach by tip-truck. Cement was carted from [Tobruk](#).

These tasks were completed by the middle of December and the casting of the pipes and the excavations for their laying began. The surface soil was removed by bulldozer and carry-all until the rock was encountered, whereupon pneumatic drills and explosives were used and a back-actor removed the rubble.

On 9 January 1943 a convoy containing the balance of the company, 102 all ranks (Captain A. F. Allen) up until then engaged on the various projects in Egypt and [Transjordan](#), arrived at [Tobruk](#). No. 3 Section men went on to [Wadi Sahal](#) while the Company, less No. 3 Section, set out the next morning for [Benghazi](#). Hazledine-Barber's augmented team, split into separate gangs quarrying metal, crushing, mixing, casting pipes and excavating, made such good progress that by the middle of February excavation began for the foundations of the pump-house; by the end of the month the floor had been cast, the reinforced walls were in place, and two pumping sets were installed and ready to pump at short notice if required.

Twenty-first Mechanical Equipment Company took the coastal route to [Benghazi](#), which was reached on the 13th, and after passing through streets of native hovels, under an archway of imposing dimensions which proclaimed that they had entered the [Benghazi](#) of the Fascists, past a two-domed cathedral, they travelled four miles along a beautiful tree-lined avenue to [Berca](#), which consisted of a main aerodrome and nine satellites. No. 2 Section stayed there while Headquarters, Repairs and No. 1 moved the next day to Gasr el Mescia, another 11 miles farther west.

Since 3 January the Company had been under Command Engineers Aerodromes, a new engineering unit created for the purpose of constructing or reconstructing runways. The majority of aerodromes captured in [Cyrenaica](#) were merely levelled and graded and suitable only for the restricted use the enemy had been able to put them to during the recent fighting. The Allied Air Force needed runways that could

stand up to constant use and it was the job of Command Engineers Aerodromes to see that they were so provided.

To this end 21 Mechanical Equipment Company had turned its back on harbours and for the rest of its active life worked on landing grounds. Typical of this was the job at [Berca 2](#) aerodrome, where a runway 2000 yards long by 50 yards wide was sealed by sappers using 13 mixers placed at 100-yard intervals on alternate sides of the runway, which gave each group engaged 5000 square yards to tarmac. The work was apportioned among the men; some scooped sand from the hills by carry-alls and carted it to the mixers, others operated the tar-pots and the mixers, others spread the mix, screeded and rolled it.

A pneumatic roller, invented and built by Repairs Section, proved its worth and received official recognition. The steel-tyred rollers hitherto used on clay or mix-in-place runways, besides being slow to move and unwieldy to operate, tended to form a surface crust through the sudden application of their weight on the wet clay or bitumen, whereas the sappers' invention produced a three-inch solid mat. It was built entirely out of salvaged enemy material and consisted of a tray supported by eleven aircraft wheels and tyres. A 3½-inch waterpipe supported five wheels in front and six behind mounted on a similar axle, so placed in echelon that the rear wheels covered the space missed by those in front. Two tons of filled sandbags on the tray provided the weight.

The demand for the Kiwi rollers became so great that eight sappers scoured the battlefields as far as [Tripoli](#) in search of wheels and tyres of enemy aircraft. In the ensuing six months the Repairs Section built seventy such rollers.

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<sup>12</sup> [Capt A. W. Tassell](#); [Whakatane](#); born NZ 21 Nov 1909; county engineer.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## FORESTRY UNITS

### *Forestry Units*

The disposition and command of the New Zealand Forestry Group, with the latest mill at Hereford in full production, was at the end of October 1942:

Headquarters at 'Greenways', Chippenham, Wiltshire— Lt-Col J. G. Elliott, CO; Adjutant, Capt C. McManus, MM. <sup>13</sup>

11 Forestry Company HQ, Cirencester, Gloucestershire (OC, Maj G. A. Gamman), operating Hailey, Overley and one band mill.

Detachment at Hereford (OC, Lt J. B. Valintine <sup>14</sup>) operating Hereford mill.

14 Forestry Company HQ, Chippenham, Wilts. (OC, Maj D. V. Thomas), operating Grittleton and Bowood mills. Detachment at Burbage, Wilts. (OC, Capt K. O. Tunnickliffe), operating Savernake and Chilton Foliat mills.

Detachment at Charfield, Glos. (OC, 2 Lt J. T. Pasco <sup>15</sup>), operating Wickmar mill.

15 Forestry Company HQ, Langrish (OC, Maj Courtney Biggs), operating Langrish mill.

Detachment at Arundel, Sussex (OC, Capt G. Burgess <sup>16</sup>), operating Arundel East and West mills.

Detachment at Woolmer, Hampshire (OC, Lt C. H. Chandler), operating Woolmer mill.

Reference has been made in previous chapters to loss of time, particularly in the winter, owing to lack of lighting, wet weather and breakdowns in the older types of mill. A table attached to the production figures for November 1942 is illuminating, and gives some idea of the difficulties of sawmilling in wartime England:

Weather (Mill flooded 6 hours

(Bad light 24¾ hours

(Wet weather 77¾ hours

(Frozen pipes 21¾ hours Total 130¼ hours

Mill saws were, as in New Zealand, cooled and lubricated with jets of water, and when the jets would not flow on account of frozen pipes the whole mill was held up.

Shortages (Out of logs	94½ hours	
(Out of steam	2 hours	
(Out of water	1 hours	Total 97½ hours
Illness 16 hours	Total 16 hours	
General (Hoist breakdown	5 hours	
(Rough logs	55 hours	
(Saw dressing	16½ hours	
(Broken friction gear	73½ hours	
(Adjustments	35½ hours	
(General repairs	187½ hours	Total 373 hours
Grand total of hours lost	616¾ hours	
Possible working time	2340 hours	
Hours actually worked	1723¼ hours	
Percentage of time lost	26.3%	

The Group reverted to a 44-hour week in November because of a decision that four hours' military training must be undergone every Saturday. It will be remembered that an increase of working hours from forty-four to forty-eight was the Group's answer to an appeal for more timber during the Battle of the [Atlantic](#). A loss of 200 working hours per week was involved, and though output was considered satisfactory no further records were established during the month, except that the Group passed its 10,000,000 cubic feet of output.

The New Zealand Forestry Group had actually reached its zenith for, with the assistance of civilian and pioneer labour, it was operating thirteen mills, as against eight run by each of the [United Kingdom](#) groups and five by the three Australian units.

The labour position in the companies varied, but generally the felling was done by New Zealand personnel and in the mills all but key jobs were filled with Kiwi-trained labourers or pioneers.

Apart from the vexed question of cleaning up—and it was now accepted that seven good men were required to clean up after each New Zealand axeman—nine mills were maintaining a high output. Of the others, the band mill at [Cirencester](#) was not entirely satisfactory; the two [Arundel](#) mills, because of their type, were never likely to produce good figures; while the machinery in the mill at Hereford was of such ancient vintage that almost as much time was spent on repairs and adjustments as on production.

In spite of these inefficient units a table showing the comparative production of Canadian (in [Scotland](#)), [United Kingdom](#), Australian and New Zealand forestry companies (in England) during the six-months' period July to December 1942 gives the New Zealand companies the greatest average output. The table does not take into account the production of pitwood, slabs or other by-products, nor is time lost through mechanical or technical difficulties or bad weather taken into account. Except for the Canadian groups stationed in [Scotland](#), the weather factor was approximate for RE, NZE and RAE units.

The production was in all cases reduced to the average for three companies per month—a standard Forestry Group—and shows the New Zealand monthly output for the period as the highest with 31,593 cubic feet.

Some of the mills were nearing the end of their timber stands. Civilians had been delivering logs to Wickmar for some time; at [Langrish](#) operations had commenced on the last of the original acquisitions; at [Arundel](#) there was only six months' cutting at the east mill, while at the west mill, although there was still ample timber, outside agencies were taking the pick of the trees, making the life of the stand unpredictable.

The CO NZ Forestry Group, towards the end of December 1942, put up the suggestion that portable mills be constructed for forestry companies. He considered that the small mill at [Woolmer](#) was the best in his group. It was far from portable, but he thought it was possible to design a small mill for issue at the rate of four to each company. This question had been under consideration by the War Office, more particularly with regard to the needs of an expeditionary force, and both the Canadian and Australian Forestry Groups had evolved types suitable to their methods of working. Colonel Elliott was told to go ahead and design a mill which

could be carried complete on a five- or six-ton lorry. If approved it might then be adopted for overseas equipment. Any sudden demand for the machinery for such mills could be met at short notice.

The mill which eventually emerged as the official New Zealand portable sawmill unit was designed by Lieutenant K. W. King, a civil engineer with considerable experience in sawmill design and construction in his family business before the war. Something simple to construct, easy to assemble and efficient in operation was called for. A note on the working drawings explains the chief characteristics whereby simplicity and mobility were attained:

'The principle is that the engine and both saw benches are on the same base. This base is of stout construction.

'The runners which carry the rack bench rollers are made to disconnect readily and these are stacked separately.

'For transportation the engine and saw benches, fixed to the base, are loaded in one piece and the runners are loaded separately.

'The weight of the entire mill would be about four tons.'

On 4 February 1943 the Hereford mill was handed over to the Ministry of Supply and the 11 Company detachment returned to [Cirencester](#), where it began cutting pit props with the prototype New Zealand portable mill.

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<sup>13</sup> [Capt C. McManus](#), MM; born NZ 13 Jun 1897; builder; NZ Maori (Pioneer) Bn 1915-19 (2 Lt).

<sup>14</sup> [Lt J. B. Valintine](#); Inglewood; born NZ 14 Jul 1912; logging foreman.

<sup>15</sup> [Lt J. T. Pasco](#); born NZ 22 Feb 1910; carpenter and millwright.

<sup>16</sup> [Capt G. A. Burgess](#); born [Ashburton](#), 17 Jan 1907; sawmill manager.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

# CHAPTER 15 – FLOOD TIDE IN TUNISIA

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## [SECTION]

(March—May 1943)

Word that Major Murray Reid had been found in an Italian hospital in [Tripoli](#) was received with pleasure by his old Company. He, a seriously wounded [RAF](#) sergeant and three critically ill Germans had been transferred to a civilian institution two days before the occupation of the city. When the sappers called on their late commander, who had lost an arm since they were last together, he was busy teaching himself to roll cigarettes with one hand.

The field companies were given little opportunity to contemplate the amenities of the port of [Tripoli](#). Not that there was much to contemplate: empty, shuttered shops, frightened civilians, rubble-filled streets, 'Out of Bounds' notices beyond counting and closed cafés are not wildly exhilarating. When the sappers had any spare time, which was seldom, it was more comfortable in camp.

The companies were widely spread:

Fifth Field Park Company established a water point, first at [Castel Benito](#) and later in the New Zealand area along the [Castel Benito– Suani Ben Adem](#) road; the company bulldozers were engaged on a number of projects such as clearing away wreckage and filling craters on the waterfront, helping 7 Armoured Division remove road blocks and working on the [Castel Benito](#) airfield. The rest of the company repaired the [Tarhuna- Tripoli](#) highway by first making deviations around the craters for urgent traffic and then filling the cavities.

One large crater in an awkward position gave the Bridging Section its first opportunity of using its small box-girder equipment; the bridge was complete and ready for traffic in ninety minutes. The Company concentrated in the Divisional area on 19 February after testing all unit football grounds for mines, and until the end of the month the men played a little football and hockey and did some sightseeing in [Tripoli](#).

It was during this period that all companies were brought partly up to strength

from the 8th Reinforcements, which entailed some reorganisation of the platoons, as the sections were now to be called.

Sixth Field Company camped on the [Castel Benito](#) airfield, already being used by the Desert Air Force, and searched the whole area for mines. None were found, but the sappers maintained that they were being victimised for their lack of success when the unit was warned that it was to represent the Divisional Engineers at a ceremonial parade.

Every spare man spent three very solid days in march discipline and in renewing acquaintanceship with small-arms drill, to both of which activities they had been strangers for many months. But they reckoned they would go well on the day.

The day was 4 February and the Company fielded half its strength, which was paraded for the occasion with the Divisional Signallers. The sappers did all the right things at the right times, listened to a short, inspiring address by [Mr Winston Churchill](#) and returned thankfully to [Castel Benito](#).

After its brief appearance in the military limelight 6 Field Company resumed work. Company Headquarters moved into the Divisional area while No. 3 Section prepared for a job on the [Tripoli](#) waterfront. A length of the Spanish Mole had been blown up and a bridge had to be built to connect it with the mainland. Again it involved sheetpiling, excavating, waiting for heavy scas to subside and driving forty piles. The bridge and other subsidiary jobs were completed by 28 February, when the sappers returned to Company Headquarters. The rest of the Company, under the command of Captain Goodsir, left for [Nalut](#), some 200 miles inland and practically on the Tunisian border, where the road into another of the canyon-like passes that had so bedevilled the Engineers at [Sedada](#) and [Beni Ulid](#) had been demolished.

Lieutenant Hermans gave full marks both to the builders of the road and to those who later blew it up. He says:

‘The original road was quite a feat of engineering so far as road location was concerned and Jerry (or the Ities) had made a pretty thorough job of mining it by putting down shafts and drives under the road itself and packing them full of explosives—it must have been quite a bang when it went up. He chose a spot on the pass where the road zig-zagged backwards and forwards above itself about three

times and blew the lot out. This was several hundred feet above the valley floor which was almost sheer below. However we managed to get a one way track through by dint of hard work.'

The tracks were then widened to 19 feet, entailing a lot of blasting in country already shaken by the enemy demolitions, and so the job took longer than at first estimated. The Company returned to [Tripoli](#) on 28 February.

Seventh Field Company was made responsible for local roads, particularly those from [Tripoli](#) to Castel Verde and [Castel Benito](#). Both were cratered liberally and some stretches were flooded.

Eighth Field Company was instructed that the [Azizia- Garian](#) road craters and demolitions were to be repaired as soon as possible. The biggest job was on an escarpment to the north of [Garian](#) where two large craters, one 50 yards long, 17 feet deep and 30 feet wide, the other 30 yards long, 17 feet deep and 18 feet wide, completely blocked the road, while the rubble from the demolitions provided further blocks in the road below the damage. Some large unexploded charges of oozing gelignite in tunnels under the road gave those who removed them—even though working in short shifts—very nasty headaches.

Compressors were borrowed from 6 Field Company and a bulldozer from 5 Field Park. On 17 February the road was completely restored and the Company returned to the Divisional area.

While the sappers are restoring communications and the Division is providing a 3000-strong waterside force for the unloading of supply ships, this is a convenient time to survey the general situation in North Africa.

When the [First Army](#) landed in French North- [West Africa](#) in November 1942 it was in pursuance of a plan that envisaged the Eighth Army breaking out at [Alamein](#) and joining hands with the Anglo-American force at [Tripoli](#); Allied shipping could then be protected by land-based aircraft from [Gibraltar](#) to [Alexandria](#); and then, in the Churchillian phrase, the soft underbelly, the invasion of [Italy](#).

The Eighth Army was in [Tripoli](#) according to plan but General Eisenhower's army had got stuck; the occupation of [Algeria](#) and [Morocco](#) had been countered by the

landing of another German-Italian army under General von Arnim in French Tunisia. The French colonial administration did not actively oppose either group.

The gap between the two Allied forces was certainly narrow, but General Montgomery could not move far from his new base until supplies were built up and General Eisenhower could not move at all because the enemy would not let him.

The chief obstacle confronting Eighth Army was the French Mareth line fortifications behind which Rommel had deployed the bulk of his strength. Re-equipped and reinforced, he had gone off to launch an offensive against the Americans with his armour. This he had done with some thoroughness, narrowly missing a decisive victory, whereupon he returned to [Mareth](#).

The Mareth line had been built by the French for the purpose of keeping [Italy](#) out of [Tunisia](#), but after the fall of [France](#) it had been demilitarised by an Axis Commission. Now it was rearmed and garrisoned by Italian formations. It was part concrete emplacements, part self-contained strongpoints and part tank-proof wadis, with its inland hinge fastened to a range of hills, the [Monts des Ksour](#), that ran both south and west, so that to turn the line it was necessary to cross the [Monts des Ksour](#) twice. Military opinion had always assumed that the [Mareth](#) line would have to be attacked frontally, for the only reasonable roads across the [Monts des Ksour](#) were strongly defended.

This was, however, not quite the case, for Captain [Wilder](#)<sup>1</sup> of the [Long Range Desert Group](#) had smelt out a road, difficult but possible for a mechanised force, through the southern wing of the Monts about 70 miles south of [Medenine](#). [Medenine](#) was the site of our most advanced fighter airstrip and an important road junction covering the forward supply dump at Ben Gar-dane, where General Montgomery was assembling supplies preparatory to a project he had in mind for reducing the [Mareth](#) fortress area.

Word that the German panzers were returning to [Mareth](#) was received with satisfaction, for it was hoped that they would throw themselves on the gun lines at [Medenine](#) so that a proportion of their strength might be destroyed, and the rest disorganised, before the opening of the offensive that would join the Eighth Army with the First and so end the war in North Africa.

Divisional Engineer Headquarters, however, did not view the eventual resumption of the offensive with an excess of optimism. The success achieved at [Alamein](#) by following the infantry with mine detectors had induced a feeling of security in unit commanders, but the discovery in [Tripoli](#) of a factory for the rapid production of non-magnetic wooden-cased mines suggested that detectors might soon be of little value.

The skilful use of anti-personnel mines, booby traps, dual purpose trip-wired mines and the like made it probable that where time was available these devices could be arranged in such density that infantry would not be able to pass them. And sappers, to do their work, must have infantry protection; they cannot be expected to fight and lift mines at the same time.

The answer seemed to be Scorpions with wider-set flails, plus a motor heavy enough to work them. These recommendations were sent forward but did not induce any noticeable action.

Seventh Field Company, after getting its roads back into shape, had been mixing range-firing practices with a little football, so it was rather a shock to be told on 1 March to pack up at the double.

Captain H. C. Page, who had just come up from [Maadi](#) with a mixed column of vehicles and reinforcements, was informed that he was to take over 7 Field Company from Major Skinner, who was returning to New Zealand to resume his Parliamentary duties. Captain (now Major) Page would have Lieutenant Morgan as his second-in-command as soon as he arrived (11 March).

Fifth Brigade Group started about midnight (1 - 2 March) and moved along the main coastal road from [Tripoli](#) towards [Tunisia](#) with dimmed headlights, probably the first night march so illuminated since [Greece](#) and a commentary on the superiority the Desert Air Force had attained over the [Luftwaffe](#). The column halted for breakfast then passed through [Sabratha](#) and [Zuara](#), crossed the border into [Tunisia](#) late in the afternoon, carried on through [Ben Gardane](#) and reached [Medenine](#) in the early hours, once again in semi-desert after a rough 200-mile drive.

Eighth Field Company's transition from peace to war was not quite so sudden,

inasmuch as it had an extra day to move into 6 Brigade area preparatory to taking up a support position three miles to the east of [Medenine](#) by the afternoon of 3 March.

Sixth Field Company joined the Reserve Group at [Ben Gardane](#), while 5 Field Park Company moved into Rear Division Headquarters area about 30 miles east of [Medenine](#).

Dispositions for the defensive battle at [Medenine](#) were: 51 (Highland) Division, with an armoured brigade under command, held the coastal sector and was deployed in the rear of a wadi that had few crossing places. On its left were two infantry brigades working with 7 Armoured Division. The New Zealand Division, with 5 Brigade forward, was to form a solid line around [Medenine](#) village. Farther south again, a battalion of the [RAF Regiment](#) was holding the [Medenine](#) airfield while a light armoured brigade watched the flank.

As soon as it was light enough 7 Field Company was given an area a mile south-west of the village and a troop of sixpounder guns as defence against tanks. The sappers proceeded to make themselves useful; No. 2 Section cleared a packet of mines in a wadi, which enabled the OC of an artillery unit who was stranded in his jeep in the middle of them to go thankfully about his business; ample supplies of water were located and reported; Company compressors helped the artillery to dig in.

The next two days passed quietly—a few unexploded bombs dropped by the not very frequent enemy planes to be demolished and minefield stores (pickets, long and short, and coils of wire) to be drawn from the Corps dump at [Medenine](#) for work at night. Mines by the thousands had been put out in front of the other formations but the New Zealand sector was to be fenced with the usual single strand of wire and the usual tin triangles indicating a minefield; but, except on roads and tracks leading into the FDLs, the fields were to be dummy. There was a possibility that counter-attacking tanks might have to be sent through the area and freedom to manoeuvre was essential. Adequate steps would be taken to ensure that the enemy would have little opportunity to dismount and test the fields.

When the Maoris saw the sappers put up a minefield wire, dig holes and fill

them up again without putting any mines in the holes, more than one Maori expressed the view that the making of a dummy minefield was a—— Maori trick!

Such was the position before dawn on 6 March 1943.

When the morning mist lifted on the 6th the enemy were deployed on the ten-mile-wide plain in front of the Eighth Army. Beyond digging in their vehicles and detailing demolition parties, the sappers were not actively engaged. In any case the main effort was directed against the British divisions and was completely unsuccessful, with the loss of nearly half the tanks committed to the venture. [No. 3 Platoon](#) was very pleased to hear that the dummy field they had put down in front of the Maoris had led to the destruction of four enemy tanks that had taken the wire at its face value and had become sitting shots for anti-tank guns waiting for them. A sapper party went out forthwith to secure the nameplates and to demolish the tanks properly. This was done by putting a tin of explosive under the gun and close to the turret. The explosion always bent the gun barrel and usually blew the turret off.

Thirteen more tanks knocked out in front of the Scots Greys on the north flank of the Maoris were also investigated but the Royal Engineers had already been on the job. At daylight the next morning the enemy had vanished into the [Matmata Hills](#) again, hills that were in reality the forward defended localities of the [Mareth](#) line. Seventh Field Company salvaged its wire, pickets and minefield accessories like scene shifters preparing the set for the next act.

The only other event of importance to the sappers occurred at [Ben Gardane](#), a village comprising the usual huddle of sunbaked mud huts. The inhabitants were credited with emerging at night and re-laying mines that had been lifted at odd places along the road. [General Freyberg](#)'s mess-truck went up on what was probably a relaid mine, but 6 Field Company got the blame for not finding it and was definitely unpopular in high places. But to continue.

General Montgomery had pushed on with his plans for the assault on the [Mareth](#) line as if the outcome of the looming battle at [Medenine](#) was a foregone conclusion. Operation Pugilist envisaged 2 NZ Division, elevated to the status of a corps by the addition of 8 Armoured Brigade and ancillary units plus Leclerc's Free French fighting column, making a 180-mile-long turning movement around the enemy's western

flank, then advancing northwards through the [Tebaga Gap](#) to cut the [Matmata-Gabes](#) road and on to capture the airfields at [Sfax](#).

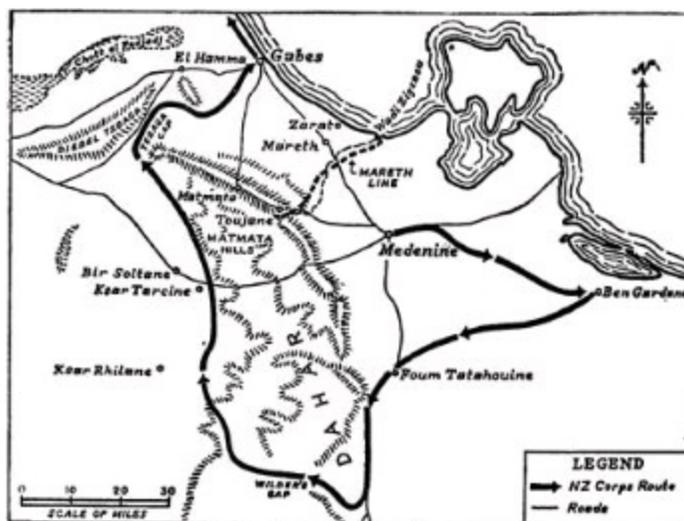
Colonel Hanson had already made a 'recce' of the route from [Ben Gardane](#) south-west for 50 miles to [Foum Tatahouine](#), a road junction about 30 miles from the pass through the hills discovered by Captain Wilder. The road followed a telephone line, was of one-vehicle width and for the most part slightly sunken. There were soft sandy patches where the wheel ruts would provide firm going for ordinary vehicles, but bulldozers would be required to cut the sand to a firm foundation for heavily loaded transporters. A field company and two bulldozers would take six days to do the work required. In addition there were several short sections that had been mined by the enemy and later lifted but probably not properly cleaned up. The terrain passed from light sandy plain into undulations that became hills, until at [Foum Tatahouine](#) the hills closed in.

The day before the [Medenine](#) battle Lieutenants Brady and Morris (6 Field Company) had been instructed by the CRE to 'recce' the road from [Foum Tatahouine](#) to the Remada- [Nalut](#) fork some 30 miles farther south. It was near this fork that a track led north-west across steep-sided watercourses past [Bir Amir](#) to Wilder's Gap.

They reported a good two-vehicle road, partly tarsealed and partly metalled, which after passing through a five-mile-long narrow valley ran into flat country again. Except for a minefield extending along both sides of the road for some distance through which a track had been cleared, and a cratered length in a wet wadi, the road was suitable for any traffic by day or night.

On 8 March, while 7 Field Company was tidying up the [Medenine](#) battlefield and collecting its stores from the dummy minefields and 8 Field Company was improving the landing ground, 6 Field Company with two 5 Field Park bulldozers spread from [Ben Gardane](#) to the [Nalut](#) fork and began putting the road into shape for the passage of [NZ Corps](#). Meanwhile Captain Goodsir and Lieutenant Hermans 'recced' the route through Wilder's Gap to the already selected assembly area west of the [Matmata Hills](#) and about 25 miles south-west from [Foum Tatahouine](#). Before the Corps began moving to the new assembly area (on the 11th), a track had been marked and the road improved through the Gap into the open country where the Corps was to assemble, merged into the landscape by dispersal, camouflage and stillness.

Meanwhile the BBC news bulletins made pointed reference to the fact that the New Zealanders still faced the Mareth line.



LEFT HOOK AT MARETH  
left hook at mareth

It was regarded as an open question whether or not the enemy would stand and fight on the Mareth line or whether he was aware of the threat to his flank. New Zealand Corps was passing through the Monts des Ksour, the range that ran south from the coast, but before it could be a real danger it must cross the other wing of the range that shielded the Tunisian plains some 70 miles to the north. There was, however, a narrow break—the Tebaga Gap—and it was towards this passage that NZ Corps was directed.

As the Corps moved to its assembly area, Operation Order No. 1, published on the 16th, outlined the general plan of the proposed attack on the Mareth line and the part to be played by NZ Corps. It was, inter alia, to complete its concentration by first light on the 19th and, commencing that night, arrive in front of Tebaga Gap in two night marches.

Preparatory to the advance towards the Gap, Captain Goodsir had already been as far forward as the first staging area near Ksar Rhilane, a distance of approximately 30 miles, but had not been able to make a thorough reconnaissance of a wadi lying across the axis of advance because of fire from enemy in command of the high country overlooking the area.

Major Anderson was advised by the CRE that detachments from 6 Field Company would be joining 8 Armoured Brigade and Divisional Cavalry for the forthcoming operation. Their role would be to lift any mines, open and mark lanes, and destroy any captured weapons and so deny them to the enemy in the event of fluctuating fortunes.

The detachments moved out to their new commands while the rear of NZ Corps was moving into position on the 18th. Lieutenants Morris and Brady, Second-Lieutenants Farnell <sup>2</sup> and Veart, <sup>3</sup> with 49 sappers and transport, reported to 8 Armoured Brigade and Lieutenant Hermans with two sections of his platoon, plus a section from 5 Field Park Company, joined Divisional Cavalry.

Another engineer detachment under the command of Captain Goodsir and consisting of the remaining section of No. 1 Platoon, two bulldozers from 5 Field Park Company and No. 2 Platoon, 7 Field Company (Lieutenant Yorke), left with a Free French column for Ksar Rhilane, where the French proposed to chase the enemy patrols away and allow the sappers to work in peace while they improved the track across the Wadi Aredj. Incidentally, what began as the main job, the track across the Wadi Aredj, proved to be the lesser one, for a mile beyond was the Wadi bel Krecheb which had not been 'recced' and which proved to be the greater obstacle.

The column left at seven in the evening (18th), but mines found in the Wadi Aredj held it up until a track was cleared. Then the Free French column pushed on in the moonlight towards the enemy patrol's observation points at El Outid. The lanes were widened so that the two bulldozers could work, and as nine tracks were needed for the passage of the Corps, work went on until the moon set at 5.30 a.m., whereupon the sappers moved back a few miles and had some sleep. They returned at 9 a.m. and were pleased to notice that gunfire had ceased before they arrived back, from which it was inferred that the Free French had chased the hostile elements away.

Nine traffic lanes were ready at two o'clock that afternoon. No mines were found in the flat between the two wadis and sappers and bulldozers pushed a 150-yard lane through drift sand at Wadi bel Krecheb. The job was finished at seven that night, an hour after NZ Corps began to move from its assembly area.

Captain Goodsir's handling of this assignment is mentioned in the citation for the MC awarded him for his skill and determination from [Alamein](#) onwards. As for the sappers, they thankfully went to sleep in the wadi and rejoined their units as they passed through the next day (20th).

The original plan was to stay in the vicinity of the [Wadi Aredj](#) until the night 20 - 21 March, but during the move a code message had been received at [NZ Corps](#) Headquarters indicating that the enemy was presumed to know all about the outflanking movement but did not seem to be impressed. It was decided to have breakfast and then push on and change the enemy's mind about the urgency and reality of the threat to his rear. Lieutenant [Clere](#)<sup>4</sup> with a section of 7 Field Company sappers was sent to operate with the King's Dragoon Guards, an armoured-car unit which performed the same functions for 8 Armoured Brigade as the Divisional Cavalry did for the Division.

The KDG moved off at the head of the Corps and the Divisional Cavalry provided a screen on the right flank. Eighth Armoured Brigade followed and the sapper parties with all these units had good experience keeping in touch with the various sub-units they were spread through. With the exception of the CRE the engineers still had no wireless, and were expected to keep within beckoning distance of the squadron commander's tank at all times. It was not a very good arrangement from the sapper point of view, for in the event of a tank battle the difference in thickness in the armour of a fighting vehicle and a White scout car was quite apparent.

As it happened, the light enemy force fell back before the armoured screen and by last light [NZ Corps](#), after a 35-mile advance, was within sight of the [Tebaga Gap](#). Air reports indicated that the New Zealand threat was now being appreciated, for there was digging going on and much movement of troops. Guns and tanks were in action most of the following day (21st) as the enemy retired behind a minefield across the mouth of the Gap. During this affray [General Freyberg](#) was informed that the frontal attack on the coast had gone in the previous night but a foothold only had been obtained in the [Mareth](#) defences. The enemy clearly intended to defend the line and it might take days to shift him. Would [NZ Corps](#) push ahead and threaten his rear?

[General Freyberg](#) replied that he intended to attack that night. The reader

should visualise an undulating semi-desert where the spring rain had nurtured patches of rough grass coloured with wild flowers. The V in the hills widened as the Corps approached the [Tebaga Gap](#). To those who could translate the wavy contour lines on the maps, the Gap at its narrowest was approximately two miles across at the southern or nearest end, and bounded by foothills not so steep that armoured cars could not move fairly freely for some distance on each side. Two miles to the north the Gap, like the spout of a funnel, rapidly widened into the coastal plain.

There was a road through this defile leading to [El Hamma](#) and thence to [Gabes](#), while across the Gap—perhaps more a matter of historical rather than of military interest—was the remains of a wall built by earlier and tougher Romans to keep out the unconquered southern tribes. Near the road the wall had been removed in the course of the centuries, elsewhere it was a rubble heap, and in few places was it an obstacle to the movement of man or machine.

The enemy forward defended localities followed the line of the Roman Wall and consisted chiefly of an anti-tank ditch, some barbed wire covering an isolated hill feature (Point 201) in the centre of the Gap and an extensive minefield. The plan was to push infantry through the minefield and capture Point 201, whereupon at dawn the tanks would exploit towards [Gabes](#).

Sixth Brigade, ordered to take the Point, planned to do so with two battalions, 26 right and 25 left, with zero hour at 9.30 p.m. No. 2 Section (Lieutenant White) and No. 3 Section (Lieutenant Pickmere) of 8 Field Company (Major Pemberton) were to clear lanes through minefields. The three sapper officers, after looking over the ground to the objective from a convenient rise, attended the brigade orders conference. Lieutenant Pickmere has put on record the manner in which veteran commanders plan a brigade attack:

‘The General told his Brigs what was wanted and then Brig Gentry came over to us and it all seemed too easy the way the battle was planned. Discussing with the Battalion C.Os what time to start—these men rapidly calculating how long it would take to get O Groups, make a recce, bring forward troops etc. Then to the Gunner Brig. “We would like you to lay down a barrage from—— to——; engage any known enemy defended localities; lift at zero to 300 yds ahead of our objective—one round of smoke from each gun ... just to keep us on direction—one round of smoke per

minute on top of feature 201 (the feature which was our objective)—better make sure it lands on this side so that we can see it; may be in your way a bit Fountain<sup>5</sup> but you will know it is coming and can dodge it.” Then on to the sappers, provosts etc., until everybody knew his job and the part he had to play.’<sup>6</sup>

One of the undulations referred to rose to a sharp peak (Point 180) and the traffic flowed around each side where the going was not too steep. Point 180 was the infantry start line, and the engineers parked their trucks in the lee of the peak and waited for the barrage, which opened with a roaring crash.

There was a good moon as the sappers put the gap-clearing drill into operation, one party on each side of the inter-battalion axis and about a quarter of a mile apart. The field, about 400 yards in depth, was exceedingly dangerous because the mines were laid in knee-high barley, tall grass and shrubs, and visual searching had to give place to bayonet prodding. Detectors, owing to the distance they had to be held from the ground, were of little use. Sergeant [Ross](#)<sup>7</sup> and Corporal [Cottrell](#)<sup>8</sup> were awarded MMs for their courageous leadership and example that night. Lieutenant Pickmere, also decorated with the MC for, among other things, moving ahead of his sappers in search of S-mines, rather writes down a very tradesmanlike job of minelifting:

‘Much shouting from our boys in unmistakable NZ invective as well as the cries of the Ities: tracer bullets down both our flanks and then right through us, so we went to ground and it certainly rained lead for 15 to 20 minutes. It was ricocheting all around us and tearing into the grass alongside us—cutting pieces off bushes. It seemed inevitable that many men must be hit but nobody called out until about five minutes, when Stan<sup>9</sup> over on my right called out “Man hit”. I went over to him and asked who was hit and he said quite simply, “Me”. I looked where a bullet had gone into his shoulder and then called for the RAP man—a new man who was having his first taste of war and he was very dicky of moving around; but once he got up and had a job to do he seemed as right as rain. Bandaged Stan up and then he eventually walked himself out—not badly hurt; and that was our only casualty.’

There was also one sapper wounded in Lieutenant White's section. He had been hit in the leg and was gamely trying to carry on working until ordered out by the Company Commander.

Major Pemberton had his scout car and wireless parked near the edge of the minefield and was able to give the Brigadier running comment on the progress of the battle as well as of the sappers' progress.

The minefield ended at the anti-tank ditch. It was newly dug and a very effective obstacle, ten feet wide at the top, eight feet deep, with a vertical face on the enemy side and sloping at 45 degrees on our side.

It must have given the infantry some trouble to cross because one man who was carrying a Bangalore torpedo used it as a bridge.

Some small charges of explosive near the foot of the vertical wall, and then solid pick and shovel work by the sappers and an infantry party detailed from the reserve company, had two 'Irish bridges' on each battalion front ready and the first traffic passing through by 2 a.m.

The lanes were widened from sixteen to twenty-four yards before first light, whereupon the platoons returned to their trucks behind Point 180, had an early breakfast, and tried with varying success to get some sleep. One man wounded in each platoon was the cost of the night's work.

Sappers not employed in gapping had no lack of work the next day for many low-flying enemy planes were over the Divisional area dropping bombs and 'butterflies' all over the place. Infantry dislike butterflies intensely and always call for engineers to take the pests away. The enemy pilots had a free hand that night, for our ack-ack had instructions not to shoot because of the number of our own planes that were over the [Tebaga Gap](#).

It has been mentioned that there were sapper parties with the Divisional Cavalry, KDG, and 8 Armoured Brigade squadrons, but the scattered parties had little contact with each other. The following incident related by Lieutenant Hermans will give some indication of the nature of their work. 'Next morning [after the 6 Brigade attack] Div Cav went through the infantry in their light tanks with me in my 8 cwt truck tucked in behind Col. Bonifant's tank. When we were a few hundred yards ahead of the infantry Ian Bonifant stopped behind a ridge, got out of his tank and walked over the brow on foot. He returned after a few minutes with a host of

Italians in tow who turned out to be a battery of Artillery of some description. He told me there were a lot of guns for me to demolish so I went over and found about a dozen 1914/18 model 50 m.m. jobs well dug in and which had been well and truly done over by our 25 pounders the night before.'

The cavalry did not, however, make a great deal of progress, for the enemy reaction had been immediate and by first light he had sufficient long-range and other guns covering the breach to prevent any break-through.

During the afternoon [No. 3 Platoon](#), 7 Field Company (Lieutenant Standish), arrived to help [No. 1 Platoon](#) of 8 Field Company (Lieutenant Hanger) to gap two more tracks through the minefield. Six 7 Field Company sappers were wounded by heavy and accurate shellfire before the job was finished. Bulldozers filled sections of the anti-tank ditch after dark.

While the sapper work was going on enemy tanks appeared in the gap and the Divisional Cavalry gave way to 8 Armoured Brigade, which fought a no-decision round with the newcomers. The upshot of the day's operations was that between the guns and the armour the bridgehead was advanced by about a mile up the valley and the front widened sufficiently to bring 24 Battalion in on the left of 25 Battalion.

There were other moves pending that were to involve the Engineers in long hours of work and casualties.

The frontal attack at [Mareth](#) was not going according to plan, for during the night 22 - 23 March enemy counter-attacks regained most of their initial losses. The military dictum not to reinforce failure but rather to exploit success was exemplified by the decision to stop the frontal attack and reinforce the outflanking movement. First Armoured Division was ordered to move at once to the New Zealand front.

An immediate result of the change of plan was the instruction to make five more tracks through the minefield covering the entrance to the Gap, then carry all nine lanes up as far as the Roman Wall. From the south edge of the mine belt nine tracks were to be found and marked back for about six miles to where a track crossed the Corps axis, making a convenient marshalling area for the armour.

Every available sapper from the three Field Companies was employed on this

assignment, the cost of which on the first day, when four lanes were completed forward, was three killed and two wounded, either on S-mines or by persistent long-range shelling. Other jobs included in the day's work were the lifting of a patch of 400 mines to the east of the Corps boundary and the construction of a landing strip for an air evacuation centre ten miles to the south. In addition, Lieutenant Clere's party with the KDG cleared two gaps on the eastern boundary of the mined area for the removal of enemy guns, vehicles and prisoners.

The main lane-clearing was carried on throughout the night and fillings made in the anti-tank ditch at a further cost of one killed and two wounded. The construction of the nine tracks back to the east-west track began the next day (24th) while the tanks made a little more ground on the left where the terrain was more suitable for armoured fighting. Corporal [Duncan](#),<sup>10</sup> who commanded the 5 Field Park section with 8 Armoured Brigade, supervised the destruction of thirty-one Italian antitank guns before the tanks withdrew for the night.

Bulldozing of the approach tracks was necessary in places and the laying out of the various routes imposed some problems for the area was not an empty one. There was, in fact, a running comment of abuse from gun crews, hidden behind odd folds in the ground, who did not appreciate the sappers crossing the local skylines in their trucks while enemy bombers flew overhead. It was made perfectly clear that gunners who would serve their pieces to the last man when the occasion demands like to remain in undisturbed seclusion when not at work.

All access lanes were ready by last light on the 25th, but during the night more guns were deployed in the area and four tracks had to be realigned. Ninth Field Squadron, RE, assisted in the work, which was finished just in time to be used by 1 Armoured Division, racing up to be in the battle.

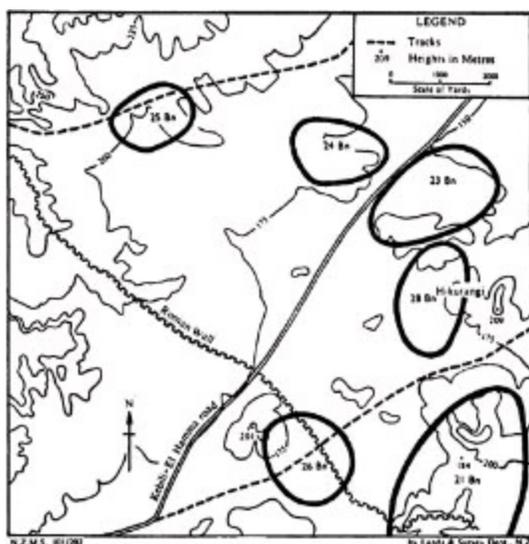
General Montgomery had not taken the sappers into his confidence but they had a fair idea of the situation. Lieutenant Pickmere has put it on record:

'The sappers now had the news of what was going to happen next—whether by bush telegraph or latineogram I don't know, but they always know several days before it comes through official channels—probably in this case it came back through the supply route that the 1st Armoured Div. was on its way to join us and sure

enough on the afternoon of the 26th their tanks and transport just swarmed down through our lines across the flat and on forward—a grand sight.'

The Engineers saw the blitzkrieg for the **Tebaga Gap** from several points of view. For 8 Field Company, less **No. 2 Platoon**, it was a disappointing spectacle. Again quoting Lieutenant Pickmere:

'At this stage we were camped on the forward slope of some hills and hoped to have a grandstand view of the scrap in the distance and the planes overhead. But the day was dusty and windy—ideal for the attack but no good to us—we hardly saw a plane and there were supposed to be 5 wings every 15 minutes on the scene of activities—some concentration! The battle apparently went according to Hoyle—our Armoured Brigade advanced and took their objective, followed by our infantry—a surprise attack launched at 1600 hours—an hour at which we had never attacked before—and this formed the spout through which the 1st Armoured Div. poured out and went right through with very few casualties too.'



**tebaga gap, 26 - 27 march 1943**

**No. 2 Platoon**, 6 Field Company, spread among the various units of 8 Armoured Brigade which led the attack, had changed places with the infantry whom they normally followed. Lieutenant Veart's diary entry for Friday, 26 March, is:

'Terrific barrage going down all morning on Jerrie's positions and a constant stream of planes going over. Whole valley smothered in dust and smoke. Attack

went in with combined inf and tanks and what a day. Tanks running over gun emplacements and firing sideways at others. Jerrie's line broke about midnight and they started to scamper out.'

Eighth Armoured Brigade, with its Shermans and Crusaders spread over the front in two waves, was followed by Bren carriers. Three battalions of infantry—28 (Maori) Battalion right (3 Platoon, 7 Field Company, Lieutenant Standish), 23 Battalion centre (1 Platoon, 7 Field Company, Lieutenant Foster) and 24 Battalion left (2 Platoon, 8 Field Company, Lieutenant White)—followed the mechanised assault while 21 Battalion protected the right flank from a hill position (Point 184) and 25 Battalion made a diversionary attack on the left.

Although the armour had crashed through the defences of the [Tebaga Gap](#) there was some hard fighting before the infantry consolidated at the end of its two and a half mile advance. On the right flank the Maoris did not get to their objective for they were held up by a hill, Point 209, to the north of 21 Battalion. A German battalion that had been rushed across, but which was too late to occupy Point 201, had dug in on the western edge of the Gap as the next best position to halt a break-through. The Maoris, quite apart from the general conflict, fought an epic battle with the German garrison for the possession of the feature. What was left alive of the German unit surrendered on the 27th. In the centre 23 Battalion maintained its momentum and reached its objective according to plan. The sapper column followed the infantry at the head of the battalion transport and dug in on the reverse side of the slight slope that was the unit objective. When the Maoris stopped to wage their private war, there being no mines in the locality, [No. 3 Platoon](#) returned to Company Headquarters.

On the left 24 Battalion had some very hard fighting. The armour ran on to an unsuspected minefield and veered to the right, and so bypassed both the minefield and the dug-in defences it protected. It was a hastily laid field of Tellers which were quite easily seen, and when the fighting ended Lieutenant White began to lift them. It was quite an extensive field and assistance was asked for to complete the job, which was not nearly finished at dark. In the morning (27th) Lieutenant Hanger went forward with his platoon and about 3000 mines were lifted, while the rest of 8 Field Company moved with Headquarters 6 Brigade to a position near the Roman Wall where the two mine-lifting platoons joined it in the early afternoon.

The positions of the other engineer companies were:

Major Page moved 7 Field Company four miles forward through a heavy pall of dust into the [Wadi Aisoub](#), while 5 Brigade deployed east of the Hamma road to protect the line of advance until the Free French secured the right flank.

Sixth Field Company bivvied with the Reserve Group near the Roman Wall.

Fifth Field Park sappers not otherwise employed stayed in position with [Rear Divisional Headquarters](#) and continued operating the Divisional water point.

The position at last light on 27 March was that the bridgehead had been gained for 1 Armoured Division and the enemy was getting his troops out of the [Mareth](#) line as quickly as possible and past the [Gabes Gap](#), a narrow corridor of ground between the sea and one of the many salt marshes in that area. The enemy was holding so strongly at [El Hamma](#), vital for his withdrawal, that 1 Armoured Division was held up and it seemed as if another set-piece attack would be needed to get the armour through. An alternative that promised quicker results was for [NZ Corps](#) to strike north-east around the side of the [Halouga Range](#) for [Gabes](#).

At dawn (28th) 6 Infantry Brigade moved off with two sections of [No. 3 Platoon](#) close up behind the armoured brigade and artillery groups in case there was mine trouble; 5 Brigade remained east of the road.

It was not long before firing ahead halted the convoy and the sappers found themselves much too close to an advanced-guard skirmish for comfort, and at the same time were roundly abused by the 'tankies' for cluttering up the battleground with their trucks. The advance was resumed as soon as the opposition had been disposed of, but again it was not long before the call was 'Bulldozers forward'. The armoured cars had crossed three watercourses that trucks could not negotiate, and as the Corps was travelling on a nine-vehicle front, nine tracks had to be cleared over each obstacle. Fifth Field Park dozers, still with 6 Field Company, were taken forward by Captain Goodsir, made quick work of the watercourses and bivvied nearby while the column pushed on.

By dusk the leading infantry battalion took up a defensive position on the

eastern shoulder of the range, the armoured screen withdrew to laager for the night and the sappers returned to Company Headquarters, halting only long enough to gather some green broad beans from a deserted garden.

The enemy completed his evacuation of the [Mareth](#) position during the night and so once again escaped. About midday 5 Brigade, in order to take the lead, moved off in three columns along a track leading north-east to [Gabes](#), where it was hoped to bag at least the enemy rearguard. It was an afternoon of incidents, beginning when the Free French mistook 5 Brigade for enemy and shot up a couple of 21 Battalion trucks; then the track going through the [Wadi el Merteba](#) was found to be mined on each side so the column was halted while [No. 3 Platoon](#) came up and lifted a number of Tellers and S-mines. In the meantime Major Page, with his driver and batman, had cleared a narrow track, permitting the resumption of the march; then three Messerschmitts arrived at a critical time and strafed the wadi, wounding Sapper Pratt,<sup>11</sup> the Major's batman, and a number of 23 Battalion men who were passing. No. 1 Section was put to clearing a track around the danger area and the column carried on through blinding dust until the early hours of the following morning (29th).

Patrols confirmed that the enemy had departed from [Gabes](#), leaving as a parting gesture a heavily mined crossroads over which 5 Brigade must pass. The mines were lifted at a cost of one sapper killed and one wounded by an S-mine. The following entries from Major Page's diary describe 5 Brigade's activities:

' 5 Bde moved on helter skelter to [Gabes](#). Reached the outskirts of the town at 1330 hrs. One party forward to clear cross roads of wooden mines. Found both bridges over [Wadi Gabes](#) blown a few minutes before we arrived. Heavy congestion of traffic in streets. Stream some 50 yds wide with gravel bottom and very soft low banks.

'Put in a rubble causeway on line of main road, using infantry labour. Started traffic over this and in meantime collected 44 gal petrol drums for use as pipes. Commandeered a 51 Div. Bulldozer and a lot of civilians and put in a culvert downstream from causeway beside the second demolished bridge. Put in 5 rows of drums and covered with 3 ft of shingle and spoil. Traffic across at 1930 hrs. Carried on with maintenance all night.'<sup>12</sup>

Major Page does not mention that the sappers found it difficult to give their whole-hearted attention to the work in hand for the females of [Gabes](#) had dressed themselves in their finest raiment to watch the work. To the desert-dwelling engineers the mesdemoiselles and their mamas would still have looked as glamorous as film stars had they been garbed in sack cloth and ashes. The Company handed over to a party from 8 Field Company in the morning and rejoined 5 Brigade.

Tactical Headquarters [NZ Corps](#) had been established a couple of miles west of [Gabes](#), which was the eastern terminal of the Tunisian railway system. The intention was to deploy the fighting formations in the area in readiness to continue the pursuit.

Eighth Field Company was ordered to send a working platoon to report to Major [Thornton](#) <sup>13</sup> at the head of the column and deal with 'some little round things they thought were mines'. The quest for the head of the column eventually landed the platoon at Tactical Headquarters, which was the head of the Corps column, and had entailed 25 miles of dodging through dense traffic and very unkind remarks. Lieutenant Pickmere, to whose platoon the job had fallen, wrote:

'The Major was at Tac Hq with the General and we were to clear the verge of the road of mines for about 2½ miles ahead—"don't go any further or you might get shot at". We got right on with the mine detection and by dark had cleared the verges of the road for 2½ miles up to where a bridge had been blown and the deviation cratered—no sign of any mines. I reported the demolished bridge to the General and he urged me to do all I could to get traffic lanes open by morning, most important to "push on"; also whistled up a bulldozer for my use over the radio.

'I pointed out that a dozer operator could not work unless he could see his blade and the half moon did not come up till 2 a.m. At first he suggested turning on the headlight but thank God Major Thornton said, "I think it's a little too far forward for that Sir" and I was instructed to get cracking at 0200 hrs. Before I left I was offered my choice of a drink with the Gen. which rather shook me, after such a long drought, but I accepted a whiskey gratefully and soon felt it would be no trouble to turn on a dozen headlamps—as events turn out I don't think it would have mattered either.'

The platoon worked throughout the night (29 - 30 March) with the help of the

dozer and Lieutenant Hermans' group of sappers with the Divisional Cavalry and had seven lanes through by midday, only to find out that the Division had swung inland again and the platoon was to make for [Oudref](#).

The two platoons from 7 Field Company had also worked right through the night maintaining the river crossings, which needed constant attention, and were relieved in the morning by 1 and 2 Platoons of 8 Field Company, who stayed there all day.

Fifth Field Park Company, still with [Rear Divisional Headquarters](#) south of [El Hamma](#), was told to get to [Gabes](#) as fast as possible because the box-girder bridge might be needed. On arrival, after a fast drive through the various Corps formations, they were told at [Gabes](#) that the bridge was not needed and to carry on and join Main [NZ Corps](#) Headquarters about six miles west of the town.

In the meantime the armoured screen had been stopped by mines and demolitions in the [Wadi el Melab](#) at [Oudref](#), about 15 miles west of [Gabes](#). Lieutenant Morris, still under command 8 Armoured Brigade, immediately went forward with his platoon. He found one armoured car blown up on a mine, a second knocked out by shellfire and the remainder, owing to mines and craters, unable to advance. To quote from the citation for his MC:

'Despite continuous heavy shelling and two dive bombing attacks Lieut Morris left his own armoured vehicle and without hesitation and with no assistance proceeded to search out and lift the mines so that the demolished road could be by-passed. It was owing to his initiative and gallantry that the armd cars were able to push ahead so quickly.'

Sixth Field Company was instructed to get men and machines up to [Oudref](#) at the double. Captain Goodsir left immediately with a section of sappers and lifted mines until the rest of the platoon arrived with the bulldozers.

When Lieutenant Pickmere came up early in the afternoon the dozers were on the job of filling a crater into which sixteen truckloads of spoil were emptied. He stood by in reserve until the next day (31st), but the 6 Field Company platoon carried on picking up mines and maintaining the surface of the filling.

Some eight miles to the north of [Oudref](#) was a complicated network of wadis

and salt marches through which the [Wadi Akarit](#) stretched across the narrow coastal plain from the sea to the hills. [Wadi Akarit](#) is wide, flat bottomed, with steep banks, not unlike the dry course of a Canterbury river. The enemy had strengthened the position with an anti-tank ditch and had dug himself in along the line of the wadi and in the hilly country at its western extremity. It appeared that he was getting tired of being left-hooked out of his defensive positions and was taking extensive precautions against a recurrence. Another nightmare that was haunting the enemy's sleep, in addition to the now unstoppable Eighth Army, was the fact that the Americans, although not advancing at the same rate, were now not very far away to the north-west. It was soon clear that he meant to stop and fight on the line of the [Wadi Akarit](#).

While General Montgomery planned for the removal of the enemy from this area, 2 NZ Division was given a few days for rest and maintenance.

The sappers did not participate noticeably in this. Sixth Field Company, camped 14 miles west of [Gabes](#), was told that nine tracks were to be formed from [Oudref](#) towards [Wadi Akarit](#), which meant laying culverts in wet wadis and building causeways where necessary. Fifth Field Park Company, also camped in the vicinity and, as usual, operating water points for the Division and any other formation near enough to draw from them, was given the job of marking out the nine lanes forward from 5 Brigade to where 6 Field Company started, a matter of some four to five miles.

Seventh and 8th Field Company detachments were recalled to their companies with the infantry brigades and managed a little sea bathing between checking stores and keeping as far as possible out of sight of Authority. A short lecture by General Montgomery to officers and sergeants on the strategy of the [Mareth](#) battle and a forecast of future operations, the first of which would be the [Wadi Akarit](#), was given on the second of the month.

Eighth Field Company took a polite but academic interest in the talk, for 6 Brigade had led most of the way from [Medenine](#) to [Gabes](#) and 5 Brigade was due to take over in any proceedings affecting 2 NZ Division; which meant that any dirty work that was going would fall to 7 Field Company.

Their complacency was justified up to a point. Tenth Corps' operation orders outlined a three-divisional attack on the [Wadi Akarit](#) position, with 51 (Highland) Division right, 50 (Northumbrian) Division centre, and 4 (Indian) Division left, while 2 NZ Division stood by in an exploitation role in which 5 Brigade would lead when the Division was passed through the bridgehead.

It was an unpleasantly surprised 8 Field Company which was told that, in order to keep 7 Field Company intact to move with 5 Brigade, it would do any gapping that might be necessary. The final instructions were that a special task force commanded by the CRE, and consisting of 8 Field Company, D Company of 26 Battalion, a squadron of Crusader tanks and a detachment from the [Divisional Provost Company](#), would move in the rear of 50 Division to construct and mark two gaps in any minefields and fill the anti-tank ditch for the passage of vehicles.

During the late afternoon of Monday, 5 April, 8 Field Company left 6 Brigade and assembled near [Oudref](#). As the sappers understood it, if the attack was a success they would move up at 5.30 in the morning (6th), do the job and be back in time for breakfast. Work before breakfast did not appeal greatly and in the event did not occur, for 50 Division was held up near the minefield.

It had been the practice for infantry to advance across minefields on a broad front, but it will be remembered that the CRE had advised that a really heavy concentration of anti-personnel mines would require different tactics, for infantry would not be able to pass through them. If the engineers must go ahead of the infantry it was essential to provide them with protection, because they could not be expected to fight and lift mines at the same time. Since Alamein the Division had been the 'left hook' specialists and consequently had largely avoided the deliberately laid minefields that had caused very heavy casualties in the formations attacking prepared positions. Fiftieth Division had tried to cross this minefield with infantry following in single file behind small engineer lifting parties, had lost the barrage, suffered severely from the counter-barrage, and stopped near the edge of the field.



**gabes to enfidaville**

The success of the whole operation was in the balance, with the flanking divisions fighting hard for their objectives. Captain Wildey, second-in-command of 8 Field Company, went forward in the early morning to Point 85, just short of the minefield on 50 Division's axis, to send back advice of that division's success. Meanwhile the rest of the CRE's force had breakfast.

At 9 a.m. on receipt of Wildey's cryptic message, '50 golfers won't play', meaning that the infantry were still not through the minefield, and on further advice that tanks and infantry were moving through a gap in 51 Division's front on the right flank, Colonel Hanson decided that it was no good waiting any longer and took over the conduct of the local operations himself.

He instructed his tank and infantry commanders to move forward and take up appropriate positions about Hill 85, and instructed Major Pemberton to go ahead and start gapping. The gapping force drove forward, tidily dispersed in desert formation, and took cover near Hill 85 while Pemberton and Wildey looked over the job. They decided to make two gaps, one platoon working straight ahead, another about 200 yards farther west and the third in reserve.

'We advanced as a Coy in desert formation and though the shells and mortars were coming in thick and fast no one got hit. We halted out there and took what cover we could behind small slopes and hillocks while the OC and 2 I/C made a quick reconnaissance. Then Nos. 2 and 3 platoons got busy on the job—mines were easily seen and detectors hardly necessary except for checking suspicious looking places —

not a sure guarantee anyway as there were a good many wooden box mines about. My lane ran right up the main track and I had just given the lads a starting point when he began to plaster it with mortars so we waited a few minutes until he switched a bit and then got cracking. Shells and mortars were still whistling in all round the place so believe me we lost no time.... It was a long lane and had quite a variety of mines—tellers, wooden box, A/P, N5, and B2. At one point where it crossed over a slight rise a sniper with a machine gun let go a burst or two every time he saw anyone but either he was a good distance back or not a very good shot as none of his bullets found a home. The zip zip overhead was rather disconcerting though.’<sup>14</sup>

A walking track was put through to the far side and the infantry went forward to line the wadi bank and protect the sappers from enemy interference. It was not long before groups of prisoners were being shepherded back, and although the sappers had no casualties a number of the prisoners were wounded by their own gunners. The 26 Battalion men also helped to fill the anti-tank ditch and the first lane was opened by 2 p.m., permitting the tanks to begin moving through. The whole job was completed at 4 p.m., when the sappers returned unscathed to a late lunch while 50 Division was again able to advance. Major Pemberton was awarded a bar to his Military Cross and Colonel Hanson an immediate DSO in recognition of their leadership and disregard of personal safety during this operation.

Colonel Hanson later reported that in his opinion—

‘The whole enemy position was a strong one and why they allowed us to gap the minefield after the barrage had passed over them I do not understand. Our D Coy Inf and our Crusader Squadron were certainly alert and were determined to shoot up any signs of the enemy so that the sappers could get on with the job, but at the same time a really aggressive enemy would never have allowed us to gap the minefield as we did. Luck was certainly with us this day. 50 Div Inf and Sappers had fairly heavy casualties when they were first halted on the minefield and they were unlucky again when they eventually pushed ahead.... We were fortunate that from the late morning onwards much of the fire which was still heavy was directed on the track a little to the east of our right.’

The situation at the end of the day was that both flanking divisions had

achieved most of their objectives but 50 Division was still making slow progress. The 2 NZ Division breakout was accordingly postponed until the next morning (7 April).

During the night the enemy, by withdrawing, saved 5 Brigade the trouble of making a fighting breakout from the [Wadi Akarit](#) line. He was possibly assisted in this decision by the fact that the Americans were now making some progress towards closing the gap between themselves and Eighth Army.

Sixth Field Company joined 6 Brigade as the Division felt its way forward behind the cavalry screen and 8 Armoured Brigade, where the attached sappers were generally one demolition behind the retreating enemy. Lieutenant Veart wrote:

'Just as we had finished clearing mines and made a passage round the demolition with Infantry labour (lorried infantry attached to [8 Armd Bde](#)) we would hear the next one go up. I remember [General Freyberg](#) came up just as we had finished one demolition, and he was on a hill when a big one went up about 1/2 mile in front. We copped a packet just in front of [Enfidaville](#) and that was the end of our association with 8 Arm. Bde—a great bunch.'

Fifth Brigade, using the nine tracks marked by the engineers, progressed about 15 miles after several halts while the enemy rearguard was pushed from position to position by the advanced formation. Fourth Indian Division and 50 Division stayed behind and formed a firm base at [Wadi Akarit](#), and now the Highland Division was near the coast, the Kiwis on their left and an armoured division on the inland flank.

The next day (8th) was a busy one for 7 Field Company. The pace was lively for the first 12 miles, then came a series of bad wadis that the brigade crossed in single file. There was fighting only three miles ahead on the line of the [Gafsa–Mahares](#) road which held 5 Brigade up until the late afternoon. The sappers, after a route had been 'recced' as far as the shelling would permit, brought a bulldozer forward and formed crossings over three nasty wadis. During the day No. 3 Section was detached to 6 Field Company for mine clearing on an airstrip nearby. The brigade moved again at 5 p.m. through waist-high wheat-fields. The enemy rearguard was now holding on a line south of [Sfax](#) and 2 NZ Division was to swing north-east and then east to the north of [Sfax](#) to cut it off. Fifth Brigade Group moved off after breakfast and broke tracks through high grass and poppies to the road skirting [Sfax](#). From there the route

lay over lightly ploughed country between endless rows of olive trees. Once again the quarry slipped away in time and [Sfax](#) was occupied by 7 Armoured Division.

Eighth Army had now debouched on to the Tunisian plain and it moved on a wide front against a skilful retreat until the 14th, when the harassed enemy again had the benefit of mountainous, broken country where the light tanks and armoured cars of the cavalry screen would have to give place to the infantry if the enemy was to be forced into a Tunisian Dunkirk.

The plain was a delight to the eye. It was a succession of olive groves, fields of bright-green spring wheat and barley, and wild flowers in even greater profusion than at [Medenine](#). 'The olive trees were set out in orderly spaced rows which made it difficult to keep direction, for due to the even spacing avenues opened up in every direction. Everywhere we went the fields were very colourful with wild flowers—some brilliant red with poppies, some yellow with daisies and buttercups, some white and some just a glorious kaleidoscopic mixture of all the colours. The Major made a collection to press between the leaves of a book and found forty different kinds I believe—not all separate species but at least different in colour. At times we literally drove over a carpet of flowers, while their sweet fragrance filled the air. What a change after so many months of desert and more desert, sand and more sand, duststorms, drab monotony of colour and unpleasant smells.'

The impression must not be gained that once 7 Field Company got the leading 5 Brigade over the bad patches all the rest of the Division just motored along looking at the scenery. It was not like that. Eighth Field Company took over from 7 Field Company, maintaining tracks and making new ones for the passage of 6 Brigade; 6 Field Company did the same service for the Divisional Reserve Group, and in addition cleared enemy airstrips of mines. A section of 7 Field Company attached for this job lost six wounded and two killed from bombing as they were leaving La Fauconnarie airstrip. Fifth Field Park Company with the Administrative Group worked on roads, erected its box-girder set where required, 'recced' for and operated the Divisional water points and did any other odd tasks that came along. In general it was a busy time for the sappers; bulldozers bellied down in salt marshes, and one particular crater in a causeway over a salt marsh at [La Hencha](#) was an all-night job. Rocks were gathered from far and near, and incidentally were loaded and unloaded by hand into the same trucks in which the sappers travelled and carried all their worldly

belongings. Tip-trucks were still to be added to engineer equipment. The railway provided the sleepers for a corduroy road when the rock fill was high enough, and in the morning, so that 7 Field Company might carry on with 5 Brigade, 6 Field Company took over to finish and maintain the road.

In general, when the sappers were not working they were travelling and sleeping (as well as the lurching trucks would permit) while moving across the scenery described above. The only time they were really alert was when the columns were passing through the outskirts of the seaport town of [Sousse](#) (12 April). Crowds of civilians waved to the passing trucks, the French flag flew from every vantage point and even the Arabs gave the Churchillian victory sign. Smartly dressed girls smiled to, and threw flowers at, him personally, each sapper averred, and there were fervent prayers that an axle might break or some other decent catastrophe occur so that they would camp for the night. But sapper prayers were not being answered that day and [Sousse](#) was soon only a wistful memory.

At this time the forward elements of Eighth Army, some 30-odd miles farther west, had decided that the 1800-mile advance was, for the time being, over and that the enemy, again in country that favoured the defence, was going to fight a back-to-the-wall battle as we had at [Alamein](#).

In essence the situation was that the Axis forces, based on the ports of [Tunis](#) and [Bizerta](#), held, with interior lines, the promontory of northern [Tunisia](#). Pressing against the 110 miles of mostly mountainous front were Eighth Army in the south and [First Army](#), plus the United States Corps, in the west. The Mediterranean was still closed to Allied shipping, and the overall plan was to end the war in [Africa](#) by an armoured assault from the more suitable west and thereby open the sea-lanes to the [Suez Canal](#).

The Eighth Army that had marched so far and fought so often was to have the secondary role of pinning as many enemy as possible in the south before the grand assault was mounted in the west.

First, the sappers with the Divisional Cavalry and, a little later, those with 8 Armoured Brigade returned to their units.

At daylight on the 13th forward elements were probing for the enemy rearguard, and the engineers were repairing cunningly placed demolitions, a detailed description of which would be without interest. The next day was much the same except that the infantry had reached the foothills; and 7 Field Company, coming across a herd of cattle, contrived to find one 'killed by shellfire', with consequent improvement to the unit menu. Fifth Brigade had by this time halted in front of [Takrouna](#) hill, a 600-foot-high outpost of the broken country behind it, and 6 Brigade was feeling its way to [Enfidaville](#), a three-road-junction village at the base of the foothills and about five miles from the coast.

The two New Zealand brigades were separated by three miles of wheat and barley patches, olive trees, clumps of cactus and high grass. On the left of the Division but some distance away, 4 Indian Division faced the Garci mountain massif.

The Engineer dispositions were: 7 Field Company with 5 Brigade, 8 Field Company with 6 Brigade; 6 Field Company and 5 Field Park Company were both with the Divisional Reserve Group about ten miles north of [Sousse](#) and 15 miles south of [Enfidaville](#). Both rear companies were busy on road maintenance, demolitions, mine clearing and operating water points.

Eighth Armoured Brigade tried to outflank [Enfidaville](#) but was held up by a minefield. The next morning Sergeant [Fraser](#)<sup>15</sup> went forward with two sappers in an armoured car to fix the limits of the field, but found that he was under enemy observation, that a Sherman tank was stranded in the minefield and that an armoured car had been blown up and its occupants wounded. He sent his own car and men back out of trouble, which was now coming in thick and fast, and cleared a route through the mines for the tank to withdraw and another track for an ambulance to get the wounded men out. He then got on with his own job of defining the limits of the field and marked a safe route for other tanks should they come that way. In due course Sergeant Fraser was awarded a DCM.

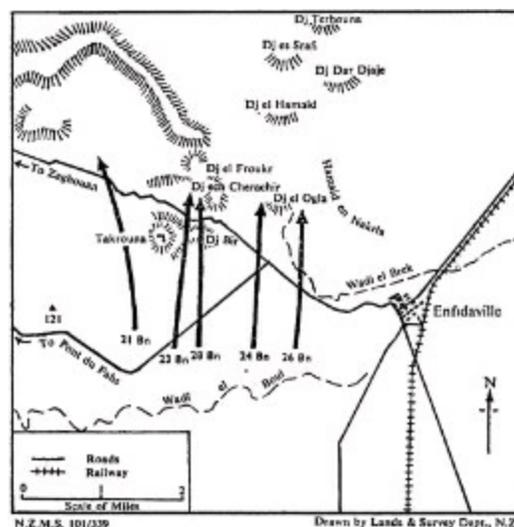
To revert to 5 Brigade in front of [Takrouna](#). Between the forward troops and [Takrouna](#) was the [Wadi el Boul](#), across which 23 Battalion was to form a bridgehead. Major Page was instructed to build a crossing for the unit vehicles.

'I was amused,' Page wrote, 'when I went up in the morning to recce the job we

were to do that night and made the usual enquiries from the troops in their slitties in the FDLs to be told by 'Sandy' Thomas,<sup>16</sup> "Yes, quite OK out there. Some Free French blokes went out an hour or so ago and reached that little rise over there before they were fired on". The "little rise" was about half way to where I had to go. However a cautious prowl down into the wadi brought me to the creek, remarkable for the number of little swimming tortoises it contained.'

The actual creek was some five to six feet wide with four-foot-high banks, and the versatile railway sleepers were used to construct a short-span bridge that night (14 - 15 April). All vehicles were across by daylight.

Preparations had meanwhile been finalised for an attack on the [Enfidaville–Takrouna](#) position at 11 p.m. on 19 April, two days before the main thrust from the west. Sixth Brigade was to advance across the flat country on the left of and past [Enfidaville](#) and seize the nearest spurs running down from the higher features, while 5 Brigade was to capture [Takrouna](#) and a ragged ridge beyond the [Zaghouan–Enfidaville](#) road. On the Division's right flank 201 Guards Brigade would demonstrate with fire against [Enfidaville](#), while on the left the Indians were to assault the Garci massif. If all went well, there was to be exploitation into the ranges and a left hook to the coast.



TAKROUNA, 19 - 20 APRIL 1943

### **takrouna, 19 - 20 april 1943**

Preparatory to 5 Brigade's deployment across the [Wadi el Boul](#), 7 Field Company was to prepare two more crossings and make all three suitable for the passage of

tanks. All trucks were out that morning (15th) collecting railway sleepers, while nails and wire were drawn from 5 Field Park stores section. The first track was strengthened up to tank standard and the other two partially completed before daylight. The next two days and nights were devoted to collecting railway sleepers and forming marked approach tracks up to and crossings over the [Wadi el Boul](#). During this period [No. 3 Platoon](#), 7 Field Company, was given the job of lifting a minefield across the [Kairouan– Enfidaville](#) road and quite close to the latter village. Lieutenant Standish wrote of this assignment:

'We were helped while we were working in daylight by the standing barley etc., growing on the low ground slightly overlooked by [Enfidaville](#). The mines were laid among the crops, wooden box by the way, so [it was] a visual and prodding job done on hands and knees. Fortunately no A/P mines. I suppose we were about 1,000 yards from [Enfidaville](#)—too close! and astride the main road with mines on both sides. They filled our truck full of shell splinter holes, fortunately not hitting the engine or petrol tank, and we crawled back at night after the job was finished in what looked like a mobile colander on three flat tyres. The night was quiet and we expected to be fired on at any moment as we ground slowly away on bottom gear. However we were lucky—no casualties either. We were all pretty good by this time at taking cover in holes—fast.'

Standish had been a platoon commander during the whole advance from [Alamein](#) and, vide the citation for his MC, 'during the many actions in which his Unit has taken part ... displayed outstanding gallantry and devotion to duty'.

Eighth Field Company's tasks on 6 Brigade sector were of a similar nature. The infantry positions lay a mile or more south of the [Wadi el Boul](#) but patrols had reported no enemy in the vicinity. During the night 17 - 18 April the sappers completed three crossings over the wadi and a similar number over the [Wadi Moussa](#), a few hundred yards farther north. Between the two wadis lay the remains of a Roman aqueduct, the proposed start line for the attack.

A last-minute alteration in the 6 Brigade plan, whereby two battalions were to make the initial attack instead of one as at first contemplated, meant the construction of an extra double-width crossing over the [Wadi Moussa](#). This was attended to on the night 18 - 19 April. As with the other company, a dump of

sleepers was gathered and put in a handy position.

For the operation 8 Field Company was to detail minelifting and gapping parties to move behind each battalion headquarters.

Major Pemberton's dispositions were:

**No. 3 Platoon** (Lieutenant Pickmere) was to accompany 26 Battalion on the right of the attack and **No. 1 Platoon** (Lieutenant Hanger) was with 24 Battalion on the left. The job of **No. 2 Platoon** (Lieutenant White) was to light the tracks up to the two crossings over the **Wadi el Boul** and then stand by to maintain them.

The two platoons assembled on a flat near **Enfidaville** and followed the track already lighted by 2 Platoon to a position behind the infantry start line. There was a half-moon when the barrage opened and the attack went in at half an hour before midnight. Twenty-sixth Battalion on the right had a good passage, as did 3 Platoon spread out behind searching for mines. There were plenty of good landmarks in the hills ahead but the smoke and dust of the barrage was so thick that direction had to be kept by compass. There was some trouble trying to get the attached Scorpions across the **Wadi Moussa** for the track was too steep, and Major Pemberton who, it will be remembered, did not like them much, told the 'Scorp' commander to remain there while the sappers pushed on. Their path was only a few hundred yards from **Enfidaville**, but they were not fired on from that quarter.

'Our MMG's were now playing a tune on **Enfidaville** and some of those boys must have had tired thumbs for days afterwards from the length of time they were holding down the button and we had no trouble from our right flank all night.'

In the light of after-knowledge, it seems that the enemy was too busy getting away from **Enfidaville** to spare any lead for the sappers.

The trucks came under fire crossing the lateral **Zaghuan** road and four men were hit, one fatally. Twenty-sixth Battalion lay about half a mile ahead of the road, and after some delay in locating a track across the sandy **Wadi el Brek**, where the vehicles stopped for shelter, Lieutenant Pickmere went forward and found the battalion commander, who said there were no mines ahead of his men and that unless they were wanted on the other track the engineers could return. They

returned without mishap and reported in before daybreak.

Major Pemberton had seen both platoons over the [Wadi Moussa](#) and had then followed Pickmere's column as far as the [Zaghuan](#) road, which was the first objective for 5 Brigade and which, owing to the angle of approach to [Enfidaville](#), was a much shorter distance than that to be traversed by Hanger's platoon.

While returning to the left-hand column he met 24 Battalion transport that had lost direction and guided it towards the crossroads, where heavy defensive fire from [Takrouna](#) hill had already wounded a dozen sappers.

Lieutenant Hanger later wrote:

'We had a fairly quiet approach march and hit bang on the cross roads then all Hell was let loose. Spandaus, Moaning Minnies, 88's, in fact the whole treatment. We found mines but it was so damned hot that no one could stand up for any length of time to do anything about them. The Scorpions refused to have a go. My Sergt Newton [Ayson](#) <sup>17</sup> (later Lieut) was wounded right at the start. I asked the tanks to shoot up the MGs but they said it would draw fire down on them!! I asked their leader what the "BH" he thought they were shooting at then, but got no reply as he had his lid down by then. It was the hottest spot I struck in all my experience.'

Lieutenant Veart, late of the 8 Armoured Brigade detachment and now second-in-command [No. 1 Platoon](#), carries on the story of that costly night:

'In the meantime the chaps were doing a marvellous job under heavy fire and the gap was slowly moving forward, but it was obvious that we would run out of men or daylight would arrive, at the rate we were going. Runners were sent off to Dick Pemberton and in the meantime Tom Hanger had gone forward to try and locate a better route, and I think, to notify the Infantry of our difficulties. At this stage I went forward with two others to try and get a better picture. We located an anti-tank trench, and had to jump into it to get out of heavy fire from the other side. We followed the A.T. trench to a wadi and located the approx. extent of the minefield which was very deep and was the main obstacle to a major wadi between the hills.'

Major Pemberton had arrived by this time. Because of Veart's report of at least five Spandaus enfilading the ditch, the continued absence of Lieutenant Hanger, and

the report of Lance-Corporal [Quinn](#),<sup>18</sup> who had accompanied Hanger and returned through heavy fire, that there was another minefield ahead, Pemberton decided to try another route more to the east and towards 26 Battalion. The platoon therefore crossed the road towards the wadi and located the minefield. The sappers reconnoitred forward for an entrance to and an exit from the wide sandy wadi, taped a line and started visual searching while the Scorpions prepared to work.

Having heard Pickmere's column crossing the wadi, and as [No. 1 Platoon](#) was making very poor progress, Major Pemberton crossed over to Pickmere's route on foot about 3 a.m. and contacted the 26 Battalion commander, to find that all was well and that Pickmere and his men had gone.

Meanwhile, time was passing fast. CSM [Matthews](#),<sup>19</sup> who was waiting in the OC's jeep, heard the noise of transport on the 26 Battalion route while 1 Platoon was still under fire, called up Brigade, and suggested that 24 Battalion's support weapons should be routed up 26 Battalion's track.

When Pemberton returned to 1 Platoon about 4 a.m. he found one Scorpion still working. The other had lost a track, both commanders were wounded, and those remaining in [No. 1 Platoon](#) were under heavy fire. A party was sent on foot to 24 Battalion headquarters to advise the battalion commander to send guides to 26 Battalion to meet his support weapons, and the battered platoon was withdrawn.

Before moving over to 5 Brigade it remains to be recorded that Sapper [Willis](#),<sup>20</sup> who drove the OC's jeep, turned it into an ambulance and carried the wounded who could not walk out to the RAP. The jeep was damaged by mortar fire and a tyre punctured, but Willis effected repairs, changed the tyre and carried on. Both he and Corporal Quinn, who had done sterling work that night and in earlier engagements, were awarded Military Medals.

Lieutenant Hanger had passed through the second minefield and was, as he says, 'having a shufti beyond the field to see if I could find a crossing for the transport when I suddenly found there were unfriendly bodies between me and home. After that I spent a lot of time trying to look like a hole in the ground until eventually I worked my way along to 26 Battalion and came out that way.'

Incidentally, Hanger should not have been there, and had he not disobeyed orders would have been in a Casualty Clearing Station having his feet attended to. Major Pemberton commented:

'Lieut Hanger was one of the solidest and gamest of the Div. Engineer platoon commanders who had not been awarded a decoration. By rights he should have been evacuated two days earlier with shockingly sore feet, but he stayed on to lead his Platoon in this attack and was evacuated the next day. It was very bad luck that his last night was such a gallant failure.'

Eighth Field Company casualties for the night were two killed and sixteen wounded, and as the total brigade casualties were about sixty-five, the Company had suffered more than its share.

Fifth Brigade's infantry forward line was a little beyond the [Wadi el Boul](#), with [Takrouna](#) some three miles away dominating the area and the first objective, the [Zaghouan– Enfidaville](#) road, immediately behind it. The infantry start line was half a mile ahead of its FDLs, and the barrage was to open a mile farther forward and roll to the road. Twenty-eighth Battalion, right, and 21 Battalion, left, making the initial assault, would halt there and 23 Battalion would pass through to the final objective.

There was hard fighting almost from the first and by midnight, an hour after the barrage opened, the sapper columns had not moved very far nor were any mines reported, although both battalions had been disorganised by trip-wired S-mines and booby traps. The engineer part in the operation is best described in extracts from Major Page's private diary:

'Comds Orders Conference held at [5 Bde](#) HQ at 0900 hrs. Attack for tonight. Had a busy day organising working parties and liaising with other arms. One detachment with each battalion as usual. With 23 and 28 Bn parties (Nos. 1 and 3 Pls) two scorpions and 3 Crusader tanks as protection. No report of mines but quite probable. All Platoon Officers reported to their respective Bn Comdrs in afternoon and moved off with their detachments. Collected No. 2 troop of Crusaders from Notts Yeomanry. On 4 Ind Div sector on our left barrage opened at 2130 hrs our own commencing at 2300 hrs. Inspected the maintenance parties of the 3 Crossings over the Wadi Boul and reported to [5 Bde](#) Tac HQ. Our barrage terrific—some return from enemy. No

minefields reported up to midnight. Infantry having a very stiff fight. Casualties heavy—all three Bn Comdrs wounded. My detachments with the three battalions pushed on behind the infantry. Progress very slow owing to intense enemy fire. Up till daylight no minefields encountered so my detachments were all withdrawn to 5 Bde.'

In actual fact 21 Battalion had been withdrawn before daylight, and 28 Battalion, with most of its officers casualties, was spread in small parties almost from the start line to the objective.

'We found no A/T mines but some A/P in a small orchard. These were not holding up the Maoris who were very disorganised so I recced forward with my Sergeant (Dudeck) till we found things a bit lonely and no mines so we returned to 5 Bde.'<sup>21</sup>

The situation at first light on the 20th was, in short, that 6 Brigade's support arms were dug in and a regiment of tanks was in position. On the 5 Brigade sector only isolated parties of Maoris had reached the Zaghuan road; the position on Takrouna was uncertain but a small party of Maoris was established on the summit. How they got there is a story that may be followed in detail in the official history of 28 (Maori) Battalion. Twenty-first Battalion was back at the start line. Twenty-third Battalion had not gained possession of its objective and was without support arms and virtually surrounded. Seventh Field Company was near Main Headquarters 5 Brigade.

Major Page later put on record:

'I did not contact Yorke at all that night and his party came back with 21 Bn. He had no scorpions or tanks with him. Foster and Standish were under very heavy fire all night, the tanks under our command came under fire from 88mm guns firing from somewhere near 23 Bn objective and were somewhat reluctant to push ahead, and the supporting arms and vehicles were unable to follow the infantry—not because of mines, but because of the terrific fire which came down between Takrouna and the feature on its right. Foster reached the main minefield across the valley but could do no lifting. It was not until the following night that this field was gapped and taped.... Most of the time I was with Foster and Standish we spent on our tummies, in

between exhorting the tanks to have a go at settling some of the opposition between us and the 23rd Bn. In the light of after knowledge, this came from the enemy on the shoulder of [Takrouna](#) and just beyond the mine field, who had been bypassed.'

The sappers were not involved in the fighting during the day, when the attached tanks helped the infantry to clean out enemy pockets, leaving, in the process, some of their number sitting in the minefields with damaged tracks. As soon as darkness fell 7 Field Company became very active; with the help of three Scorpions a track 16 feet wide was made through the minefield that stretched from the sides of [Takrouna](#) across 5 Brigade's and part of 6 Brigade's front, mines were cleared from the [Zaghouan](#) road and a crossing was made for carriers and jeeps over the anti-tank ditch. The whole area was still under enemy fire and two Scorpions were damaged, but there were no casualties. Included in the Company tasks had been the job of clearing [Takrouna](#) of mines, but as bitter fighting was still going on for its possession the instruction was cancelled by 5 Brigade.

The next night was equally full, with working parties out filling road demolitions and making tracks for the recovery of tanks. And then, from Major Page's diary:

'At 2100 hrs message from [5 Bde](#) H.Q. Whole of [Takrouna](#) now captured. Sappers reqd to recce route up for supporting arms. Went out with Lt Standish in armoured car. Lt Yorke following with det of [No. 2 Sec.](#) Collected convoy of 3? mortars, LMG's etc., at Bde HQ and a patrol of 4 men from Maori Bn. Recced a good track up to top—very steep but negotiable. Pockets of enemy still about—fired on several times from close range. No mines encountered. Guided the convoy up to top. All up by midnight.'

All damaged tanks were recovered by daybreak on 23 April, which was Good Friday although few remembered it. Fifth Brigade was to be relieved that night by 152 Brigade of 51 Highland Division, and the day was passed in showing 275 Field Company, RE, over the ground that could be covered in daylight. The company returned to the area it had occupied prior to the attack, about eight miles behind the [Wadi el Boul](#).

Sixth Brigade was not relieved. On the contrary, two silent night attacks went in

to improve the position, but engineer assistance was not required and the brigade was relieved on the night 26 - 27 April by elements of 51 and 56 Divisions. Another major attack was under consideration, but although it was later cancelled the work of putting down the approach vehicle tracks went on.

It was a sizeable job and all three Field Companies were involved. During the nights from 26 to 29 April seven tracks incorporating those already mentioned were carried as far as the [Zaghuan](#) road, where [10 Corps](#) RE took over. According to the [10 Corps](#) Engineering Instruction, the tracks were 14 feet wide and graded and smoothed to the extent of being clearly defined on a dark, moonless night. Major Anderson borrowed an auto-patrol from [10 Corps](#) and four other graders from an aerodrome construction unit to work in conjunction with the 5 Field Park bulldozers still attached to 6 Field Company.

It was the last serious engineering job the field units' sappers did in North Africa, for Eighth Army was virtually out of the ring where the final round was being fought. The companies bathed at [Hergla](#) beach and overhauled their vehicles until 4 May, when the Division moved some 16 miles inland to [Djebibina](#), on the right flank of the Free French, to help by some active patrolling an enterprise the French had in mind to pin down as many enemy as possible.

Fifth Brigade led the Division to the new [Djebibina](#) area, and 6 Brigade remained in Divisional Reserve during the operations there. Seventh Field Company lifted scattered mines, groups of mines, and fields of mines all over the area. They were the most thickly sown the Division had ever experienced, and there must have been some hard fighting to get the enemy out of his defended localities. In addition to making the place safe to walk in, sections of sappers went by night with infantry patrols 'peacefully penetrating', in the infantry parlance, from hill to hill, during which time five sappers were wounded.

Colonel Hanson later commented on this period and locality:

'This was a particularly nasty job for Inf patrols and attached sappers. S mines and booby traps were laid in a very cunning and ingenious manner all over the place. Any spot which was likely to provide shelter was well and truly mined. I crawled round and inspected as much of the area as I could by day and then just at dusk. I

was really amazed at the mining the enemy had done and I have nothing but admiration for the Inf and Sappers who went into this duty. When a man became a casualty the difficulty of attending him and moving around can be imagined. Men can stand up to heavy fire but to operate in minefields of this nature is soul destroying and takes real guts.'

Sixth Brigade went back to the [Enfidaville](#) area on the 8th, 5 Brigade followed on the 10th, and the attached sappers returned to the command of the CRE in Divisional Reserve Group.

At this period the only person, apparently, who did not realise that the enemy position was impossible was the enemy himself.

Major Anderson had received instructions to be ready to do a mine-clearing job first thing on 10 May, when 56 Division was to attack along the coastal sector. His force consisted of [No. 2 Platoon](#) of 6 Field Company, 5 Field Park bulldozers and a section of [No. 1 Platoon](#) (Captain Goodsir), a platoon from 8 Field Company (Lieutenant Pickmere) and a party from 5 Field Park Company (Major Rix-Trott).

The [56th Division](#) attack was not a success and the sapper force remained standing by until the afternoon of 12 May, when the war diary announces casually: 'Many prisoners coming in. Looks as if the show might be over.' It was. [First Italian Army](#) surrendered at 11.45 a.m. on 13 May.

One of the most welcome movement orders the New Zealand sappers had read up to that date was issued by HQ 2 NZ Divisional Engineers on 14 May. It ran:

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<sup>1</sup> [Lt-Col N. P. Wilder](#), DSO; [Waipukurau](#); born NZ 29 Mar 1914; farmer; patrol commander LRDG; CO [2 NZ Div Cav](#), 1944; wounded 14 Sep 1942.

<sup>2</sup> [Capt E. Farnell](#), MC, m.i.d.; [Auckland](#); born England, 10 Jan 1921; surveyor's cadet.

<sup>3</sup> [Capt A. Veart](#), MC, m.i.d.; [Auckland](#); born [Auckland](#), 6 Jan 1920; engineering draughtsman; twice wounded.

<sup>4</sup> Lt J. T. Clere; born NZ 30 Jul 1917; architectural draughtsman; wounded 20 Mar 1944; died Lower Hutt, 16 Mar 1950.

<sup>5</sup> Col D. J. Fountaine, DSO, MC, m.i.d.; Westport; born Westport, 4 Jul 1914; company secretary; CO 20 Bn 21 Jul-16 Aug 1942; 26 Bn Sep 1942-Dec 1943, Jun-Oct 1944; comd NZ Adv Base Oct 1944-Sep 1945; wounded 19 Nov 1941.

<sup>6</sup> R. A. Pickmere, manuscript, With the NZ Division in North Africa.

<sup>7</sup> Lt J. Ross, MM; Te Horati, Dannevirke; born Auckland, 24 Apr 1908; farm manager.

<sup>8</sup> L-Sgt W. P. Cottrell, MM; Whangarei; born NZ 8 May 1916; metalworker's assistant; wounded 22 Jul 1942.

<sup>9</sup> Spr S. Standen; Auckland; born Wellington, 1 Nov 1908; painter; wounded 21 Mar 1943.

<sup>10</sup> Cpl L. R. Duncan, MM; Hokitika; born NZ 7 Jul 1917; roof tiler; wounded Mar 1943.

<sup>11</sup> Cpl H. A. Pratt; Auckland; born NZ 22 Feb 1909; linesman; wounded 28 Mar 1943.

<sup>12</sup> The Wadi Gabes at that point was approximately 50 yards from bank to bank, carrying about fifty feet of water up to three feet deep in the middle. The banks on each side were very soft and the causeway over the 44-gallon drums was therefore built farther downstream where the water was not so wide.

<sup>13</sup> Maj-Gen L. W. Thornton, CBE, m.i.d.; Wellington; born Christchurch, 15 Oct 1916; Regular soldier; BM 6 Bde Feb-Sep 1942; GSO II 2 NZ Div Oct 1942-Jun 1943; CO 5 Fd Regt Jun-Dec 1943, Apr-Jun 1944; GSO I 2 NZ Div 1944; CRA 2 NZ Div 1945; DCGS Apr 1948-Jan 1949; QMG 1955-56;

Adjutant-General 1956-58; Chief of SEATO Military Planning Office, 1958-60; Chief of General Staff Sep 1960–.

<sup>14</sup> Pickmere, op. cit.

<sup>15</sup> 2 Lt E. J. A. Fraser, DCM; Christchurch; born Port Chalmers, 6 Jan 1908; carpenter.

<sup>16</sup> Lt-Col W. B. Thomas, DSO, MC and bar, m.i.d., Silver Star (US); London; born Nelson, 29 Jun 1918; bank officer; CO 23 Bn Jun-Aug 1944, Oct 1944-May 1945; 22 Bn ( Japan) Oct 1945-Nov 1946; wounded and p.w. 25 May 1941; escaped Nov 1941; returned to unit May 1942; twice wounded; Hampshire Regt, 1947–.

<sup>17</sup> 2 Lt N. S. Ayson; Balclutha; born Balclutha, 29 Nov 1918; carpenter; wounded 20 Apr 1943.

<sup>18</sup> Lt R. J. Quinn, MC, MM; Auckland; born Auckland, 24 May 1915; insurance clerk.

<sup>19</sup> WO II C. H. Matthews; Linden; born Porirua, 27 Oct 1908; foreman carpenter.

<sup>20</sup> L-Sgt A. W. Willis, MM; Invercargill; born Riverton, 6 Sep 1918; carpenter; wounded 18 Dec 1943.

<sup>21</sup> Letter, Lt Standish.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## MOVEMENT ORDER

### ***MOVEMENT ORDER***

HQ 2 NZ Div Engineers will move to EGYPT commencing 15 May 43.

POSITION IN CONVOY. Behind 5 NZ Inf Bde. In front of 6 NZ Fd Coy.

ROUTE. **KAIROUAN**–Sth LONDON Rd and Y Track–Main Coast Rd– **TRIPOLI**.

START TIMES. Start time each day 0900 hrs. Tomorrow approx 0840 hrs.

SPEED AND DENSITY. 20 mih. 40 vtm.

HALTS. For 10 mins at 10 mins to each odd hour.

1200-1300.

All day halts for maintenance 22 and 29 May.

MEALS. Breakfast at cook's truck 0700 hrs.

Lunch at trucks.

Dinner ??? to be notified daily.

STAGING AREAS. At approx 120 miles intervals and marked by fernleaf signs.

DISPERSION. In staging areas 50 yds.

MINES. There is a danger of mines around staging areas.

SANITATION. Leave staging areas tidy....

TYRE PRESSURE. To be checked each morning.

WELFARE. Mobile cinema will be travelling with each gp. Patriotic Parcels and issue of cigarettes at **TRIPOLI**.

PETROL. Drivers are responsible for the drawing of petrol up to 300 miles from Cpl Roper<sup>22</sup> before 1900 hrs today 14 May 43.

CHANGE OF TIME. Watches will be put forward one hour at MARBLE ARCH.

P. H. G. Hamilton,<sup>23</sup> Capt

Adjutant 2 NZ Div Engineers.

Engineer casualties for all ranks in the Tunisian campaign were:

Killed Wounded

13 68

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<sup>22</sup> Cpl J. N. Roper; Warkworth; born NZ 20 Sep 1909; motor mechanic.

<sup>23</sup> Lt-Col P. H. G. Hamilton, m.i.d.; Wellington; born Auckland, 26 Apr 1918; mining student; OC 8 Fd Coy May-Jun 1944; Chief Engineer, NZ Army, Nov 1960–.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

# CHAPTER 16 – REORGANISATION

## CHAPTER 16

### *Reorganisation*

#### *The Railway Groups*

During the months of April and May 1943, while 2 NZ Division was in [Tunisia](#), there was no major variation in the activities of the New Zealand Railway Construction and Maintenance Group, which was spread along the [Haifa– Beirut– Tripoli](#) railway track; 10 Company was still having trouble in the cotton-soil country, 9 Company was ballasting and doing maintenance and 13 Company was preoccupied with metal-crushing problems.

There was general recognition that the days of the Axis in North Africa were numbered, and the question, 'Where do we go from here?' was answered by rumours that were the distorted shadows of facts being anxiously considered in high places.

The core of the matter was that the manpower position in New Zealand made it impossible fully to maintain two divisions overseas indefinitely. Parliament, in secret session, had decided that 2 Division should stay in the [Middle East](#), and that both divisions should be maintained as long as possible, if necessary with smaller establishments. In the case of 2 NZ Division, this foreshadowed the use of non-divisional units as a reinforcement pool. Consideration was also being given to a scheme whereby men of the first three echelons would have a period of furlough in New Zealand.

While these and other weighty decisions were being made, at sapper levels the Construction Group was practically on its way to England in readiness for the opening of the Second Front.

The surrender of the enemy in North Africa on 13 May, information on the 15th that an Indian unit was going to take over from the Group in the near future, and proposals on 21 May for the reorganisation of the Group in an operational role simply confirmed what was already accepted as a fact—service in another campaign.

But the really electric instructions were received the following day. According to the Group Headquarters diary:

'Received from HQ 2 NZEF details of proposed scheme for leave to New Zealand summarised as follows: All men of the 1st, 2nd and 3rd Echelons married on embarkation were to have three clear months of leave on full pay in New Zealand; not less than 35% and not more than 65% of all single men of the first three Echelons to have similar leave. Signal received from HQ 2 NZEF instructing the CO to report to HQ 2 NZEF as soon as possible—by air if possible. Air passage booked accordingly.'

Colonel Smith phoned his headquarters on the 24th to advise that 349 men from the Group would go on leave to New Zealand, names to be advised later, and that arrangements for the operational groups, less the leave party, be pushed ahead.

Nearly everybody was completely happy; the married men were sure of a trip home, as were also about half the single men of the first three echelons. As for the rest, their turn must come, and until then they would move from the Middle East to fresh woods and pastures new. But Colonel Smith returned with heavy tidings of ill import—the Group would Not be going on operations. The New Zealand Government had instructed to that effect, and further, there would be no more reinforcements. The leave draft would depart from Syria and Palestine about 4 June and the rest of the Group would probably move to the Suez Canal area.

It was a stunning blow to the pride of the builders of the Western Desert Extension—no less than a sentence of lingering death, and in the meantime a condemnation to unimportant employment outside the field of active operations.

This point of view was advanced by Colonel Smith in a letter to Headquarters 2 NZEF wherein he suggested that surely, if the Division became involved in an attack on Axis-held territories, it would prefer to have its lines of communication maintained by the Group rather than by some less experienced and less adaptable railway troops.

No doubt a suitable reply was sent, but as the Administration was acting under instructions from New Zealand there was not much that could be done about it.

The list of men who were returning to New Zealand on three months' leave (Ruapehu draft) was received on the 29th, together with instructions that the draft

was to be assembled in NZ Crowley Camp, [Mena](#), Egypt, not later than 6 June.

A Group sports meeting being organised to mark the virtual end of construction work in [Syria](#) became a general reunion before the furlough party left for Egypt. The meeting was held in the American University grounds at [Beirut](#) on 1 June, the same day that the whole of the [Haifa– Beirut– Tripoli](#) railway was opened for daylight operation.

The furlough group left on 3 June, but that was not quite the end of the non-stop administrative work of the Company and Group Headquarters staffs. Group Headquarters' war diary entry for 4 June is illuminating:

'The main Ruapehu draft was safely despatched by train close on midnight the preceding night, but there has been little let up in administrative work on that account. Signals are still flowing in from [2 NZEF](#) requesting the deletion from the draft of men who have already been despatched, and the inclusion of others who had not been balloted and were out on the job, while signals are originating from this HQ and Coys explaining that men who had been balloted could not be sent for a variety of reasons. One man was en route to [Turkey](#) for special survey work, another found himself in hospital after a fall from a third story balcony, another, on guard duty, tripped and removed a portion of his nose with his bayonet and others were incapacitated by less spectacular injuries and by sickness.

'During this time too, we have been in almost daily communication with GHQ at [Cairo](#) who are continually making fresh demands for the release of Group plant and vehicles to be used on more important work elsewhere and it must be seen to that all such vehicles and plant—low-loaders, compressors, crushers, trucks, LAD and machinery, lorries and so on—are sent away in first class condition.'

Major W. F. Young (promoted lieutenant-colonel), who assumed command of the depleted Group, was advised that it would probably remain as an independent formation for another six months, which actually was the time expected to elapse before the return of the first furlough draft and the departure of the balance of the three echelons in the second draft (Wakatipu).

He was also informed that the new war establishment would be:

Group Headquarters: 2 officers, 1 Padre, 1 medical officer, 15 other ranks.

9 NZ Railway Survey Company: 3 officers, 37 other ranks (Captain G. Rushton).

10 NZ Railway C and M Company: 4 officers, 156 other ranks (Major F. R. [Askin](#) <sup>1</sup>).

13 NZ Railway C and M Company: 4 officers, 156 other ranks (Major D. J. B. Halley).

The work of the Group was organised as follows:

Ninth Survey Company resumed its normal functions and moved to [Beirut](#).

Tenth Company was to carry on with its marshalling yards and other jobs between [Haifa](#) and [Beirut](#), as well as other depot work if needed.

Thirteenth Company was to complete its jobs between [Beirut](#) and [Tripoli](#) and also take over the clearing of a big slip on the Chekka headland, 40 miles north of [Beirut](#), where a landslide threatened the safety of both the road and the railway. Company Headquarters would occupy the camp vacated by the Survey Company at Byblos.

Group Headquarters remained at [Az Zib](#).

The slip on the Chekka headland, where the road and the railway clung to the face of a steep hillside, was inspected by geologists, Lebanese Public Works Department engineers and other officials having to do with earth movements, including the Commander, NZ Railway C and M Group, and the upshot was that on the last day of June the New Zealanders formally assumed responsibility for all work involved in the removal of the slip, or Job 901 as it was called officially.

The intention was to remove the slip; to rebuild approximately 150 feet of railway retaining wall; to rebuild in concrete crib the damaged support wall on the outside of the road; to build a new crib wall along the toe of the slip for the full length of the damaged road; to drain the slip; to maintain road and restricted rail traffic. For Job 901 the Group would have under its command 870 Mechanical Equipment Company, 112 Mechanical Workshops Company and 250 unskilled native labourers. Finally, a bypass road around the Chekka bluff was to be surveyed by 9 Survey Company and built by Royal Engineers.

The earthwork at the slip, 118,830 cubic yards solid measurement, was completed on 28 September.

In the meantime final decisions had been made regarding the fate of all non-divisional units in the [Middle East](#). In effect the personnel of all ancillary units would be used as reinforcements for 2 NZ Division or returned to New Zealand and civilian life with the next furlough draft, irrespective of time of service overseas. In other words, the Railway Construction and Maintenance and Operating Groups, 18 and 19 Army Troops Companies, and 21 Mechanical Equipment Company would cease to exist. The probable departure date was advanced from December to the end of October, which left about three weeks for the restoration and rebuilding of the road and railway walls, drainage and general clearing up.

These jobs were also finished before the end of October, when 10 Company and all sappers at [Az Zib](#) moved to Chekka. Ninth Survey Company, spread as usual halfway across the [Middle East](#), completed the plans for sheds at [Tel el Kebir](#), exchange yards at [El Shatt](#), a connecting line to [Kad el Marakeb](#), an ammunition depot at Gilbane and a base planning project in [Turkey](#).

The handing back of equipment and the cleaning-up of the camp area was finished by 23 October, and on the 28th a seventy-vehicle column assembled at the [Beirut](#) petrol supply point and moved off for [Maadi Camp](#), which was reached without incident on the afternoon of 31 October 1943—the end of the war for the New Zealand Railway C and M Group.

The marching-out of men not affected by the repatriation scheme to training depots commenced forthwith, while those of the Wakatipu furlough draft, being the balance of those who missed the Ruapehu draft, marched into New Zealand Railway Operating Details Group on 2 November.

The New Zealand Railway Operating Group, after its return to [Maadi](#) in February and March, went on leave and then began to train for what was confidently expected to be a move to England. Non-commissioned officers departed en masse to Schools of Instruction, while infantry instructors took the sappers through training in rifle, Bren gun, Thompson sub-machine gun, grenade throwing, company drill, route-marching and organised sport. Rifles were examined by armourers from the Engineer

Training Depot and respirators were adjusted and disinfected. Twenty-odd sappers departed most cheerfully to duties with 169 Railway Workshops Company and 182 Railway Operating Company, RE, respectively, the latter to drive diesel locos on the [Kantara– El Shatt](#) line. Towards the end of the month training emphasis was on mortars, enemy mines and booby traps, while an island began to be spoken of as the next sphere of operations. It would be interesting to know how close the rumours were to decisions being taken at the very highest levels. A move from [Maadi to Mena Camp](#) late in May confirmed everyone in his pet destination. Two days later (28th) information was released about the Ruapehu furlough scheme.

With the Japanese navy still in being, the Admiralty considered that there was more than an element of risk in the sea voyage of the furlough draft to New Zealand, which they felt, when spoken of, should be referred to by its code-name only. Inside a matter of hours every 'Wog' in [Cairo](#) knew all about the scheme, and if the enemy Intelligence was not fully informed it was not our fault. The usual greeting was 'Draw a marble?' or 'Are you Ruapehu?'

The furlough draft marched out to [Mena Camp](#) on 15 June and the rest of the Group was organised into a composite unit, New Zealand Railway Operating Details, under command of Major R. O. Pearse.

This Group, into which marched the Wakatipu drafts of the other ancillary units as they became available, functioned until 21 November doing camp duties, supplying men for No. 1 Guards Company at [Suez](#), and carrying on what was called, for want of a better name, 'normal routine'—in other words a short route march in the mornings and leave in the afternoons.

New Zealand Non-Divisional Engineer Details was formed from the disbanded Details Group on 21 November and comprised the men who finally, after several delays, left for New Zealand on 9 January 1944 with the Wakatipu draft.

### ***The Army Troops Companies***

Repair and salvage jobs kept 19 Army Troops Company busy in [Benghazi](#) throughout March, with sixty different works orders in varying stages of completion from not started to almost finished. They ranged in complexity from the removal of

petrol installations from a derelict ship and the raising of sunken tugs to Job 109/112, which was—'Construct one 6 hole squatter native latrine for 209 Z Craft Co. and one similar 3 holer at Ceremonial Landing'.

The storm-wrecked port was now of little consequence as a supply point for the Eighth Army but was assuming importance for another project scarcely dreamed of in sapper circles outside the Directorate of Works at General Headquarters, [Middle East Force](#); [Benghazi](#) was, even then, being prepared for use in the contemplated invasion of [Italy](#) that was to follow the end of the fighting in North Africa. In addition, the vast [Benina](#) airfield where 21 Mechanical Equipment Company was working needed water for the growing [RAF](#) and [USA](#) bombing forces which were to precede and accompany the landing in [Sicily](#).

Many months of work lay ahead for the New Zealand sappers, but since the concentration of the unit, billets were overcrowded and the offer of the White Barracks was gladly accepted. Some scope for renovators existed, for after being bombed by both armies, much of the barracks' roofing needed repairs and all the windows were without glass. There was also a complete absence of furnishings and the water supply had been demolished.

The reconstruction of the barracks was entrusted to No. 4 Section, which had previously shown marked acquisitive ability, and Major Marchbanks co-operated by not finding any reason to be in the vicinity. Sergeant Bert [Adamson](#),<sup>2</sup> who was in charge of the job, held an Army Headquarters salvaging authority which he used to good effect in collecting doors, windows, beds and furnishings for the new home, an activity certainly not envisaged when the authority was issued. A clean sweep was made of a recently renovated building, and Adamson found his detachment under close arrest for despoiling the new quarters of the [Provost Corps](#).

The Kiwi sergeant had to disclose considerable ability as a bush lawyer and listen to a crisp address on the predatory instincts of New Zealanders in general, and 19 Army Troops Company in particular, before his men were released.

The Electrical and Mechanical Section had by this time linked up and was operating all the powerhouses in [Benghazi](#), and favourable comment was made by Army and Navy authorities on the freedom from faults and power failures.

The port was to be a fuel-oil base for light craft, and probably as a result of the successful commissioning of the Kiwi referred to in a previous chapter the Company was found another ship, the sunken oil tanker Speranzo, which the Navy considered could be salvaged for use in the operation of the base.

The Speranzo was an entirely different problem from the wooden Kiwi. She was steel-built and had a hole in her side 15 feet wide by 25 feet deep which called for extensive welding. It was really a shipyard job—but there was no shipyard.

When the Company took over in the middle of April the wreck had been beached near Customhouse Quay, together with a number of other derelicts cleared from the channels adjacent to the berths. She was winched into shallower water, a section cut out of the steel deck and a start made on burning off the jagged plates with oxy-acetylene torches. The problem of welding 16 ft by 4 ft straight steel plates on to a curving bow was solved by overlapping each plate, and by the end of May, with improvisations of concrete, steel mesh and a two-inch seal of plaster, the Speranzo was made watertight and handed over to the naval people as an oil supply ship.

Concurrent with the ship-repairing operations was the building of a 1000-ton oil reservoir and the construction of floating pipelines of alternate lengths of steel pipe and rubber hosing. Permanent submarine pipelines posed more problems, for steel piping was in very short supply. Salvaged 100 ft lengths of pipe joined with rubber hose were not satisfactory and an original procedure was adopted in the laying of a second oil pipeline. Some 250 yards of pipe were welded into a unit, floated into position along a line cleared of sunken obstacles and, after some trouble, securely anchored and connected to the shore by flexible armoured hose—an unorthodox solution but a complete success.

The responsibility for the supply of water to [Benghazi](#) and [Benina](#) was another major project entrusted to the Company. A South African unit had maintained the existing water points but an extensive programme of works to meet the growing demands included reservoirs, booster stations and pumphouses, all of which were built by the New Zealand engineers.

Work had not been long started when the Company was called on to supply water for a welcome customer. The Division was passing en route to [Cairo](#) and

needed hot showers. On no other occasion had the sappers to meet such a demand and on no other occasion did they work with greater enthusiasm; the boosters went flat out for twenty-four hours non-stop, and the supply somehow survived the demand without a breakdown.

Further evidence of the port's new importance was provided by the arrival of specialist engineers on 12 May—the day before hostilities ceased in North Africa—to select Fairmile slipway sites for the shipping repairs which might reasonably be anticipated by an invasion force.

The western end of Cathedral Mole was chosen and the construction of two slipways entrusted to 19 Army Troops Company, but apparently the specialists were not in complete accord for amendments and a stream of correspondence seeking additional data held the project up until the strength of the Company had been depleted by the departure on 3 June of the Ruapehu draft.

At that period No. 2 Section was employed on [Benghazi](#) water supply; No. 3 Section on the construction of the concrete reservoir for Navy fuel oil; No. 4 Section on the Fairmile slipways and timber fenders for underwater fuel pipes; E and M Section on fuel pipelines, electrical supply, welding jobs on tank landing craft and on various shop jobs.

The revised design for the Fairmile slipways meant, for each one, the precasting of fourteen 25 feet concrete sleepers weighing approximately ten tons each, which were to be laid for 250 feet underwater. There was, in addition, the dredging, underwater filling and grading before the concrete sleepers could be lifted by the Kiwi and laid in position—a heavy engineering project of some complexity. Work on this and the other assignments went on steadily until the middle of August, during which time (on 9 August) Major Marchbanks left to take command of 5 Field Park Company and Major Learmonth became OC 19 Army Troops Company. A couple of days later the Company was instructed that the Fairmile slipways were a No. 1 priority job and that every endeavour should be made to assure the completion of the first one before the end of September. Despite interruptions through the diversion of the dredge and lighters to presumably even more important work, the first slipway was practically finished a week before the deadline.

The fuel-oil installation—reservoirs, pumphouse and pipelines—was ready, 700 tons of fuel oil discharged into the reservoir and the job handed over to the Navy on 29 September.

Arrangements were now being made for the return of the Company to [Maadi](#) and an extra effort was put into finishing the second slipway. On 7 October, when a week of fine weather would have seen it ready, OC 19 Army Troops Company received a signal from No. 109 RE Works Section, Middle East Forces, 'As second slipway [Benghazi](#) not required stop work on this'.

Such a blow would have broken the hearts of ordinary men, but the sappers of 19 Army Troops Company were used to it. Had they not helped to build a complete harbour at [Safaga](#) which was never used? The upsets that happen in long-range planning were no concern of theirs, and the second leave draft would soon be leaving for home. But a stack of a hundred tons of cast concrete frames was a testimony to the vagaries of wartime engineering.

On 8 October a Palestinian Army Troops Company began to take over the water-supply installations, and two days later the Company was told to be ready to move out at an early date.

Equipment was handed over and gear packed, and on 17 October 19 Army Troops Company left [Benghazi](#) and marched into NZ Railway Operating Details; four days later those not eligible for the second leave draft were posted to other units and 19 Army Troops Company was disbanded.

The possibility of a change in location implied in the instructions received by 18 Army Troops Company at the end of January became a probability in February and a fact in March, during which period the drop in the amount of water pumped into the [Western Desert](#) pipeline and the diminished maintenance consequent thereon permitted Headquarters to get rid of non-essential material and have a general clean-up. No. 4 Detachment at [Burbeita](#) was the first to move out. It completed the handing over of all duties west of [Daba](#), exclusive, to 44 Water Maintenance Company, SAEC, on 10 March, spent a few days in smartening-up drill, proceeded to [Ismailia](#), found the orders to join No. 2 Detachment cancelled, and by the end of the month had settled into a camp built for the Company at [Adabiya Bay](#).

No. 1 carried on at [Alamein](#) with normal pumping duties. The highlights of the month, according to the Detachment diary, were the accouchement on 7 February of [Farida](#), the family cat, in the cook's bed, and the mixture of gale force wind, sand, rain and cold that raged for three days (22nd–24th), considered the worst yet experienced. March was a succession of sandstorms, in between which 44 Water Maintenance Company was shown over the area. The Detachment diary sketches the scene:

'March 30—Morning spent winding up the estate—tidying up the area, disposing with poultry, dogs, cats etc., and placing the house in order. Saw Signals and returned telephones and gave new address.'

No. 2 Detachment at Chevalier Island, which, it will be remembered, consisted of any sappers sent down from the 'Blue' for a change of air, had been pile-driving and siting and tying in fuel pipelines, a job very similar to that done by 19 Army Troops Company at [Benghazi](#), when it was told to get its works orders cleaned up as soon as possible as it would probably be leaving some time in March. The convoy left [Ismailia](#) on 1 April and, together with Headquarters and No. 1 Detachment, settled into the new camp at [Adabiya Bay](#) that evening.

No. 3 Detachment sappers at [Amiriya](#) were not relieved of [Western Desert](#) water-supply duties by 44 Company until 9 April, when they joined the rest of the company at [Adabiya Bay](#). The crew of Water Barge No. 4 from [Tobruk](#) had already marched in, No. 3 came in from [Alexandria](#) a fortnight later, and No. 5 from [Benghazi](#) rejoined on 5 May.

Eighteenth Army Troops Company re-formed into sections and spent three weeks training with American pontoon bridging, tubular scaffolding, bridging cribs, sheetpiling and light standard steel trestlework. It did not escape the notice of the trainees that an ability with such materials would be very handy when forcing a landing on a hostile coast. Morale rose to a pitch indicated by an entry in the war diary when the Company, after its tour of training at Adabiya, moved on to the RE Training Depot at [Moascar](#) for its post-graduate course in assault landing technique. The single entry for the afternoon 21 April, while the Company was en route for [Moascar](#), read: 'Tally Ho!'

The whole of May was spent in general field engineer training, and the Company was spreading along the Canal area in various stand-by jobs on 4 June when the blow fell. Eighteenth Army Troops Company was not eligible under the furlough scheme, but its fate was to provide reinforcements for 2 NZ Division. Even the GOC's letter to Major Learmonth did not help much:

My Dear Major Learmonth,

I would like to write and express my regret that circumstances have made it necessary to disband 18 Army Tps Coy. It is doubly hard as I have heard from all quarters high praise of the work done by the Company, and I am well aware that their work, while not as spectacular as that of the Division, contributes in full measure to the common cause. The reputation of NZ Engineers stands very high.

Would you please explain the situation to the men and give my sincere thanks to the Unit for good and faithful service.

Yours Truly,

B. C. Freyberg

In accordance with a signal from Chief Engineer, British Troops in Egypt, the Company handed back the jobs it had taken over and on 4 July marched in to New Zealand Engineer Training Depot, [Maadi](#), gave itself a 'break-up' party, handed in its equipment, and ceased to be a unit of the New Zealand armed forces on 24 July 1943.

## ***21 Mechanical Equipment Company***

By the end of February the [Tobruk](#) water-supply installation at [Wadi Sahal](#) was well forward and a start had been made in excavating a site for the pumphouse; at [Benghazi](#) the provision by No. 3 Section of tarmac runways for the landing grounds at [Berca](#) was making some progress after more than a fair share of teething troubles. Repairs Section had to make an extensive overhaul of the tar pots and mixers before they would work satisfactorily. The Kiwi sapper is a prince of improvisers but detests having to put up with inefficient machinery.

The next difficulty was damp sand. The weather broke and the frequent winter showers raised the water content of the sand to a point beyond the margin where it would mix successfully with hot tar. Repairs Section overcame that problem with sand driers. Then the most suitable tar, F 70, ran out and a lower grade that came solid in drums took three hours to heat before it was ready for mixing, which meant starting an hour earlier for the tar-pot attendants. February had seen the end of these hold-ups, and the sealing work was accelerated when Repairs produced another amenity in the shape of a rubber-tyred wheelbarrow made from a large petrol drum and a small wheel stripped from an enemy plane. The barrows held one mix and were easy to push.

[Berca](#) No. 2 runway was finished by the end of March and No. 2 Section left immediately for [Marble Arch](#). The standard of work performed by 21 Mechanical Equipment Company on the [Benghazi](#) airfields did not go unnoticed. Headquarters IX Bomber Command, Ninth US Air Force, wrote:

Colonel A. G. Bonn,

D.C.E. Aerodromes,

[Benghazi](#)

Dear Colonel Bonn,

Please allow me to express to you and the officers and men of your command, the sincere appreciation of all flying officers in this command, for the excellent job you have done in the construction of aerodromes in this area. I have heard nothing but praise from the pilots, which you will agree with me is exceptional and is certainly a tribute to the thoroughness of your work.

I have taken the liberty of writing of this to Major General Louis Brereton.

Sincerely,

U. G. Ent,

Colonel, A.C.

No. 1 Section spent two months grading the several aerodromes in the [Benghazi](#) area before it was given a single task that could employ the whole section. An advance party left on 2 March for [Savoia](#), where a large landing ground was to be built, and the balance of the sappers followed about three weeks later. [Savoia](#) was about five miles from [Cyrene](#), midway between [Benghazi](#) and [Tobruk](#), and the centre of an Italian farm colony but once the capital of the Roman province of [Cyrenaica](#). Little beyond the enormous amphitheatre and extensive caves in the hills remain of the once-proud city. The sappers occupied the deserted houses of Italian colonists and made themselves thoroughly at home. The airfield was to consist of three runways, forming a capital A, the two landing strips to be 1600 yards by 50 yards and the third one 2000 yards by 50 yards respectively.

The work differed in no way from that of levelling the thousands of square yards of [Middle East](#) already undertaken by the Company over the previous two years and the first strip was handed over to the [RAF](#) on 1 April.

Repairs Section also had its hands full, for owing to the acute shortage of plant caused by urgent demands from the front and the necessity of maintaining landing strips in the [Benghazi](#) area, the section was asked to think up ways and means of constructing improvised graders. Three German tractors were brought in from the desert and two made serviceable with parts from the other. Graders were built on the pattern of one made from bits and pieces twelve months earlier.

Repairs Section and Company Headquarters joined No. 3 Section in new quarters near [Tobruk](#) for convenience in administration and maintenance.

No. 3 Section completed the pumping station towards the end of May, and after some small jobs such as grading the [El Adem](#) landing ground and adjacent roads, was assigned to the repairing of a slipway at [Tobruk](#) for the use of assault landing craft.

The project was somewhat different from that of 19 Army Troops Company in [Benghazi](#), inasmuch as the slipway had actually been in use until it received a direct hit from an [RAF](#) bomber during the enemy occupation. The underwater section had been extensively damaged and there was a large amount of debris which had to be removed by a scoop and a tractor winch; snags were dislodged by naval divers and

the sea bed graded by dredge, while crane barges were provided by salvaging three from the bottom of [Tobruk](#) harbour. They were christened nostalgically [Waitemata](#), Tui and Hokanui, New Zealand beverages not unknown to thirsty civilian engineers.

The Company was not affected to any extent by the Ruapehu furlough draft and the work went on steadily until its completion on 30 October.

The reconstruction by No. 2 Section of the airfield at [Marble Arch](#) into an all-weather 'drome prior to Eighth Army's resuming its advance on [Tunis](#) meant the provision of three temporary strips as the field was being used by aircraft ambulances. These were ready by the middle of April and an immediate start was made on No. 1 runway, 2000 yards long by 50 wide, which was to be covered with three inches of bitumen mix. Eight mixers were used and worked sixteen hours daily. The job was started on 15 April and handed over to the Air Force on the 30th—100,000 square yards of bitumen laid in sixteen days, less four half-days lost through shortage of bitumen supplies.

The war in North Africa ended but the aerodrome work went on in readiness for the invasion of [Italy](#). Imagine then the consternation of the section when it was informed that it was to represent the Company at an inspection by a VIP at [Tripoli](#) on 21 June. It has been indicated in this history that non-divisional engineers had not been very successful at ceremonial parades, and No. 2 Section, according to its unofficial historian, ran true to form:

'The writer will never forget the spectacle that No. 2 Section of the 21st Mech. Equip. Co. made on that parade at [Tripoli](#). 38 men in all, wearing NZ Summer dress showing, despite creditable efforts at cleaning and pressing, much sign of the hard wear and grime it had been subject to.... When we arrived at the [Tripoli](#) Marine Parade lined with date palms and immaculately dressed and drilled troops from all parts of the Empire our officer called us to attention and commenced to career down the centre of the awe inspiring avenue bounding with his long legs and peculiar gait like a gazelle over thorn bushes. The leaders of the column made gallant attempts to keep at least within hearing distance... imagine the spectacle! Imagine the shame! However, we saw the King and the King saw us and after seven days we were back on the job again.'<sup>3</sup>

The New Zealand non-divisional engineers were definitely not parade-ground soldiers.

No. 1 Section carried on with the draining and grading of the second runway, which was ready at the end of May, and a start was made on the third, with sub-sections away on other like jobs at [Barce](#) and [Tocra](#) aerodromes. By the end of June the greater part of the earthwork on No. 3 runway was completed and an 'aerodrome planer', invented and built by Repairs Section, used crosswise and longitudinally on all three with excellent results. The marching in of an Indian labour unit and the setting up of two metal crushers for stockpiling material for tarsealing were the only events of note during this period.

The [Marble Arch](#) project was finished on the last day of June and No. 2 Section, which had watched with pride the fighting men of 2 NZ Division roll past [Mussolini's](#) edifice on 22 and 23 May and were thus the last New Zealanders in [Tripolitania](#), began to move to [Savoia](#) where they were to work with No. 1 Section. The move with all the heavy equipment was completed on 9 July, when the sappers had moved into a batch of farmhouses near No. 1 Section.

[Savoia](#) aerodrome was a big construction job and an important one, for it was part of the Air Force base for the invasion of [Italy](#). The crushing, spreading and rolling of metal, the heating and spraying of bitumen was done in double shifts and more labour was marched in to assist. Before the metalling began on No. 1 runway (10 August), two West African and one Palestinian Arab pioneer companies were working under the direction of the Kiwi sappers.

The job was going ahead at a satisfactory pace but faster progress was asked for, even though it might affect the quality of the work. September the 30th was given as the deadline for the completion of Nos. 1 and 3 runways, north and south taxiing tracks, dispersal and access roads. Extra plant was promised which, of course, never arrived, but the place was haunted by inspecting officials of high and low degree. No. 1 runway was completed at midday on 18 September and one aircraft took off and landed again. In the meantime the deadline for No. 3 had been extended to 15 October. The metalling was finished on 9 October but rain held up the sealing until the 17th, as the Company war diary, incidentally almost the last entry, describes:

'Usual Sunday routine except for men assisting [No. 1 Sec.](#) All runways, taxi tracks, dispersal bays and roads are now complete. Only work remaining consists of small jobs for DCRE and [RAF](#) and cleaning and dispatching plant. Section won cricket match against BMA from Beda Littoria.'

Twenty-first Mechanical Equipment Company had finished its last construction job.

The sections concentrated at [Tobruk](#) and proceeded in convoy to [Maadi Camp](#), whither Headquarters had preceded them. It was the first time in two years and nine months' campaigning that the whole Company was in the one place at the same time. Men were marched out to different units until the Company ceased to exist at midnight on 21 November 1943, when the remaining strength marched out to New Zealand Non-Divisional Engineer Details.

## *Forestry Group*

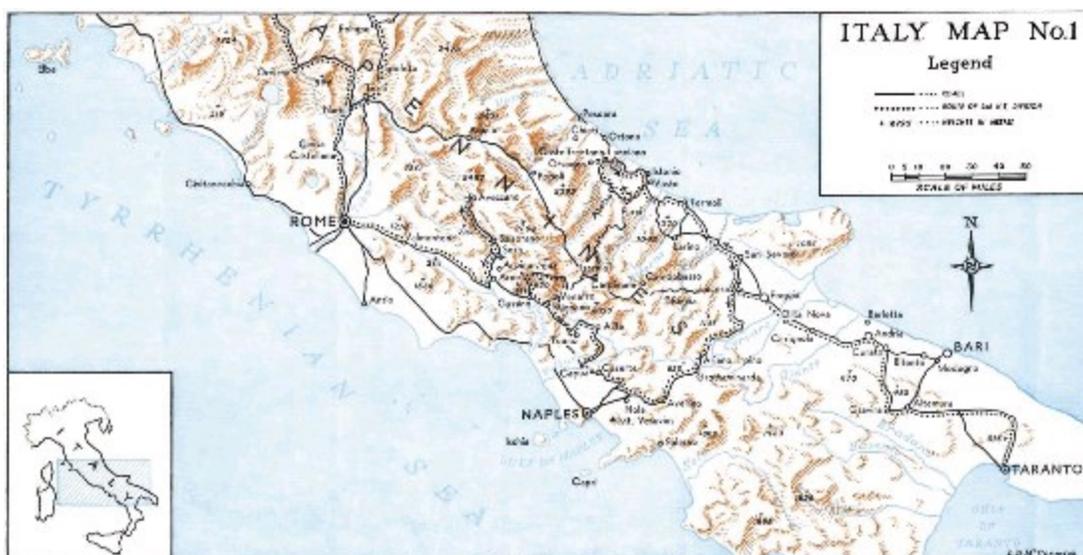
The strengths and locations of the units of the Forestry Group, NZE, as at 1 March 1943 were:

Company	Location	Strength	
		Offrs	Other ranks
Headquarters	<a href="#">Chippenham, Wilts.</a>	6	17
11 Company	<a href="#">Cirencester, Gos.</a>	7	159
14 Company	<a href="#">Chippenham, Wilts.</a>	4	98
	<a href="#">Burbage, Wilts.</a>	2	58
	<a href="#">Charfield, Gos.</a>	1	14
15 Company	<a href="#">Langrish, Hants.</a>	2	54
	<a href="#">Arundel, Sussex</a>	3	80
	<a href="#">Woolmer, Hants.</a>	2	29
		27	509

A weekly average of 326 Pioneers worked under the direction of the Group, 95 with 11 Company, 147 with 14 Company and 84 with 15 Company.

It was announced that owing to the considerable variation in the weekly hours worked by forestry units, the War Office, on request, had regularised the position. Commencing on Monday, 15 March, the weekly working hours were increased from

40 to 45, which meant a nine-hour day, but the actual times for starting and stopping were left to company commanders. Saturday mornings were to be devoted to training, while the days of collective training were increased from ten to fourteen every six months. Attention was also drawn to the fact that frequent attacks by low-flying enemy planes had been made in the Southern Command recently and that all troops had to be prepared to take retaliatory action.



Production continued to run at a satisfactory level until new specifications were received from the Ministry of Supply in April. Concern was expressed over the high proportion of the thicker sizes of square hardwood planks and boards which military mills continued to produce for the National Stock. The greatest demand was for 1½ in. and 2 in. thicknesses and the largest single item was timber for ammunition boxes. It was admitted that the cutting of such small sizes would curtail the output of mills employing circular saws, but this loss, it was suggested, would be more than counter-balanced by the saving in labour and transport during later handling and conversion.

Little of note occurred during the period April to July; there was a drop in production through major breakdowns in the hauling equipment and the [Arundel East](#) mill was closed down for lack of timber.

The furlough scheme in 2 NZ Division was not considered as being applicable to the Forestry and other New Zealand personnel in the [United Kingdom](#), and consequently the reorganisation and elimination of non-divisional units that took place in Egypt had no counterpart in England.

The later policy of returning specialist groups to civilian life was in due course extended to include the New Zealand Forestry Group. This was mentioned when the decision was communicated by the [New Zealand Government](#) to the Secretary of State for Dominion Affairs:

'Because of the very heavy demands for timber construction work for the [United States Forces](#) in New Zealand and the [Pacific](#), consideration is also being given to the withdrawal of one or more of the New Zealand Forestry companies, which since 1940 have been stationed in the [United Kingdom](#). This matter will be the subject of a later message.'<sup>4</sup>

Lieutenant-Colonel Elliott relinquished command of the Group on 1 July 1943 and Lieutenant-Colonel H. M. Reid, last mentioned as having been recaptured in a hospital in [Tripoli](#), became CO NZ Forestry Group the same day.

The sappers were doing their half-yearly training in field works at this time, and before timber production was resumed Colonel Reid was instructed to assemble at [Cirencester](#) all Grade III men and all men married in New Zealand in preparation for their return about mid-August.

Hard on the heels of this instruction came the news that Allied Force Headquarters in North Africa had asked for the early despatch of a forestry company for operations in that theatre, and that the [New Zealand Government](#) had agreed to form one company for service under Allied Force Headquarters. The remaining men would return to New Zealand.

Fourteenth Company was selected to proceed to a tropical destination at an early date, but not as then constituted. The Group was to be reorganised on a medical grading basis with all Grade I men transferred to 14 Company; men married in New Zealand and all single Grade III men went to 11 Company, and men married in England and all single Grade II men to 15 Company.

Fourteenth Company handed over its equipment and plant to the appropriate authorities and thanked 1 Spanish Pioneer Company for its goodwill and efforts over the two years they had been together, efforts that had helped materially in the creditable showing made in competition with all the forestry companies in England.

The new 14 Company was assembled for the first time on 28 July and went on embarkation leave the next day. On return it crated two portable mills, entrained on 11 August and sailed on 16 August 1943 for a tropical, but officially unknown, destination.

The command of 14 Forestry Company at the date of sailing was:

Major D. V. Thomas

Captain K. O. Tunncliffe

Lieutenant A. P. Thomson

Lieutenant L. J. McKenzie

Lieutenant W. L. Cook

Lieutenant A. N. Sexton

Lieutenant J. T. Pasco

The day after 14 Company entrained, 11 Company was warned to be ready to move overseas on 4 September and went on embarkation leave forthwith. This left the reorganised 15 Company the only New Zealand unit working in England. It was during this period that the following appeared in Southern Command orders:

### ***Act Of Gallantry***

On July 1st 1943 an aircraft crashed and burst into flames. No. 12887 Sapper O. N. Stokes<sup>5</sup> and No. 35563 Sapper B. Leydon,<sup>6</sup> 14 Forestry Company, New Zealand Engineers, showing complete disregard for their own personal safety, immediately ran towards the aircraft and, in spite of exploding ammunition, burst petrol tanks and flames, made a gallant effort to rescue the crew.

The G.O.C.-in-C. wishes that a record of this act be made in the documents of Sappers Stokes and Leydon.

There was not a great deal of cutting done in August because of cleaning up and

reorganisation. [Langrish](#) and [Woolmer](#) were short of labour and [Arundel](#) had trouble with large logs that had to be blasted open, and with dry logs requiring the frequent changing of saws. Fifteenth Company's troubles came to an abrupt end on 30 August when a telephone message ordered the Company to prepare for embarkation with 11 Company, whose sailing date had been altered to 18 September.

The Company ceased operations on 2 September with a tally of 3888 cubic feet of sawn timber, bringing the grand total of sawn timber produced by the New Zealand Forestry Group in the [United Kingdom](#) to 3,255,339 cubic feet.

New Zealand bushmen had been felling timber in the south and west of England for three years. During that time the output of the Group was consistently higher than that of like formations from [Canada](#), [Australia](#), [Newfoundland](#) and the [United Kingdom](#). As with the sappers of the other non-divisional units, the Kiwi bushman stood in no man's shadow.

## ***2 NZ Division***

On its return journey from [Tunisia](#) the Division rolled peacefully back over the thousand-odd miles of desert, semi-desert and cultivated land of North Africa where it had made New Zealand history over the past three years. Between [Benghazi](#) and [Derna](#) advance parties from the Field Companies peeled off and headed straight for [Maadi](#) to organise the camp for the Division. The sappers stopped not for break and stayed not for stone, but drove for twenty-four hours flat out to arrive at the New Zealand Forces Club unwashed and unshaven, in time for breakfast and a heroes' welcome from everybody in the building. Wherever the Division had halted for replenishment, indents for beer and other soldierly comforts were drawn for engineer units whose existence was purely imaginary but helpful in alleviating the desert-induced aridity.

The Division settled into [Maadi](#) on the last day of May and the first day of June. Fantastic stories that had filtered through the security net were forgotten when the details of the furlough scheme were announced.

The fitting-out of the lucky ones who drew a marble, the administration of the Ruapehu scheme instructions, the warrants for leave travel and such matters kept

the orderly rooms too busy to notice the passage of time. The drawers of marbles were too excited and the others too unsettled to care. The Ruapehu draft marched out of [Maadi](#) on 15 June and the rest of the month was taken up with leave, fatigues and camp duties.

July was a month of absorbing reinforcements and filling the gaps left by the Ruapehu draft specialists. Radio sets had at long last become engineer equipment, and sappers attended schools of instruction in their use and upkeep. General training began at recruit level, mixed with route marches and smartening-up drill, and progressed through August and September in what might be termed graduate military engineering theory and practice, ending in attachment to the infantry brigades for manoeuvres.

During this period the Eighth and [United States](#) armies invaded and overran [Sicily](#), leapt the Straits of Messina and carried the war on to the mainland of [Europe](#). The Italian Government asked for an armistice, changed sides and became our co-belligerents. [Germany](#) countered by taking over the defence of [Italy](#), and before the Eighth Army had cleared the toe of [Italy](#) and the American Fifth Army, which included a British corps, had advanced from its beach-head at [Salerno](#), the Germans had disarmed the Italian Army and rushed enough strength to the danger points to prevent a quick Allied advance on [Rome](#).

September saw the end of training and make-believe attacks, real enough to the reinforcements but a crashing bore to the battle hardened types who knew all there was to know about mines and mine lifting from bitter experience.

One bright spot in this period was a couple of weeks on the [Suez Canal](#) near the pleasant town of [Ismailia](#), where each company in turn did some training on American pontoon bridge equipment. The equipment was completely foreign to the Kiwis and the value of the training negligible as they were not likely to use American Army bridging, but it was an excellent excuse for a change from [Maadi](#) and the sappers made the most of it.

October opened with the field companies preparing transport and equipment for embarkation. Their destination was unknown but not very difficult to guess.

[Burg el Arab](#) was the assembly area for the Division. It is about one hundred

miles from [Maadi](#), and as a final toughening up exercise everyone had to march like the infantry of an earlier war: everyone but the engineers, who were excused on the understanding that they did the same mileage in route marches after arrival. They were at [Burg el Arab](#) about a fortnight, a period of short route marches followed by swims in the [Mediterranean](#).

Advance parties packed up and disappeared; rear parties were told off to travel with the vehicles when instructed. Fifth Field Park and 8 Field Company were divided into two parties which would embark on different transports as a safety measure; 6 and 7 Field Companies would follow in due course. On 3 September the first embarking units, plus advance parties from 6 and 7 Field Companies, moved by MT to [Ikingi Maryut](#) transit camp. It was just as well that they were taken by transport for each sapper had fastened to his person his web equipment, full-scale summer and winter clothing, four blankets and one empty water can plus one bivouac tent to two men. There was probably a reason for this exercise in weight-lifting but it was kept a deep military secret. It could have been poor staff work by the embarkation people.

The engineers moved on to [Alexandria](#), embarked, and sailed on 6 October to campaign anew in a new country, now officially known to be [Italy](#).

Engineer officers, including those attached, who sailed with the Division to [Italy](#) were:

HQ NZ Divisional Engineers

Col F. M. H. Hanson

Capt P. H. G. Hamilton

[Capt E. M. Nanson](#), RMO

[Lt J. T. Clere](#)

Lt H. C. Gayford

5 Field Park Company

Maj F. R. Askin

Capt K. F. Jones

Capt J. M. Walmsley, LAD

Lt O. L. Cuthbertson

Lt G. A. O'Leary

Lt G. C. Mountain

## 6 Field Company

Maj J. A. Goodsir

Capt D. U. White

Lt R. E. Hermans

Lt J. B. McGregor

Lt D. Foord

Lt S. M. F. Martin

Lt C. S. Fraser

Lt L. T. Skipage

Lt G. S. Menzies

Lt R. B. Smith

Rev. J. K. Watson, Chaplain

## 7 Field Company

Maj A. R. Currie

Capt P. W. de B. Morgan

Lt J. R. Concher

Lt I. G. Budge

Lt A. Veart

Lt J. S. Callaway

Lt B. J. Loudon

Lt D. McCormick

Lt E. G. Prosser

## 8 Field Company

Maj D. S. G. Marchbanks

Maj R. C. Pemberton

Capt H. L. Yorke

Capt G. K. Armstrong

Lt T. Hanger

Lt F. M. Dahl

Lt E. Farnell

Lt W. E. Fisher

Lt J. G. Gowan

Lt A. L. King

Lt E. L. R. Whelan

Lt A. G. Hunter

## Divisional Postal Unit

Lt W. H. McClure

Lt J. L. Cragg

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<sup>1</sup> Maj F. R. Askin; Wellington; born Timaru, 8 Mar 1909; civil engineer; wounded 18 Mar 1944.

<sup>2</sup> WO II A. Adamson; born NZ 10 Nov 1900; carpenter.

<sup>3</sup> D. D. Alderton, Unofficial History of No. 2 Section, 21 Mechanical Equipment Company.

<sup>4</sup> Documents, Vol. II, p. 247.

<sup>5</sup> Spr O. N. Stokes; Westport; born Granity, 12 Apr 1901; forestry department, NZR.

<sup>6</sup> S-Sgt B. McM. Leydon; Wellington; born Palmerston North, 7 Apr 1916; customs clerk.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## THE RAILWAY GROUPS

### *The Railway Groups*

During the months of April and May 1943, while 2 NZ Division was in [Tunisia](#), there was no major variation in the activities of the New Zealand Railway Construction and Maintenance Group, which was spread along the [Haifa– Beirut– Tripoli](#) railway track; 10 Company was still having trouble in the cotton-soil country, 9 Company was ballasting and doing maintenance and 13 Company was preoccupied with metal-crushing problems.

There was general recognition that the days of the Axis in North Africa were numbered, and the question, 'Where do we go from here?' was answered by rumours that were the distorted shadows of facts being anxiously considered in high places.

The core of the matter was that the manpower position in New Zealand made it impossible fully to maintain two divisions overseas indefinitely. Parliament, in secret session, had decided that 2 Division should stay in the [Middle East](#), and that both divisions should be maintained as long as possible, if necessary with smaller establishments. In the case of 2 NZ Division, this foreshadowed the use of non-divisional units as a reinforcement pool. Consideration was also being given to a scheme whereby men of the first three echelons would have a period of furlough in New Zealand.

While these and other weighty decisions were being made, at sapper levels the Construction Group was practically on its way to England in readiness for the opening of the Second Front.

The surrender of the enemy in North Africa on 13 May, information on the 15th that an Indian unit was going to take over from the Group in the near future, and proposals on 21 May for the reorganisation of the Group in an operational role simply confirmed what was already accepted as a fact—service in another campaign.

But the really electric instructions were received the following day. According to the Group Headquarters diary:

'Received from HQ 2 NZEF details of proposed scheme for leave to New Zealand summarised as follows: All men of the 1st, 2nd and 3rd Echelons married on embarkation were to have three clear months of leave on full pay in New Zealand; not less than 35% and not more than 65% of all single men of the first three Echelons to have similar leave. Signal received from HQ 2 NZEF instructing the CO to report to HQ 2 NZEF as soon as possible—by air if possible. Air passage booked accordingly.'

Colonel Smith phoned his headquarters on the 24th to advise that 349 men from the Group would go on leave to New Zealand, names to be advised later, and that arrangements for the operational groups, less the leave party, be pushed ahead.

Nearly everybody was completely happy; the married men were sure of a trip home, as were also about half the single men of the first three echelons. As for the rest, their turn must come, and until then they would move from the Middle East to fresh woods and pastures new. But Colonel Smith returned with heavy tidings of ill import—the Group would Not be going on operations. The New Zealand Government had instructed to that effect, and further, there would be no more reinforcements. The leave draft would depart from Syria and Palestine about 4 June and the rest of the Group would probably move to the Suez Canal area.

It was a stunning blow to the pride of the builders of the Western Desert Extension—no less than a sentence of lingering death, and in the meantime a condemnation to unimportant employment outside the field of active operations.

This point of view was advanced by Colonel Smith in a letter to Headquarters 2 NZEF wherein he suggested that surely, if the Division became involved in an attack on Axis-held territories, it would prefer to have its lines of communication maintained by the Group rather than by some less experienced and less adaptable railway troops.

No doubt a suitable reply was sent, but as the Administration was acting under instructions from New Zealand there was not much that could be done about it.

The list of men who were returning to New Zealand on three months' leave (Ruapehu draft) was received on the 29th, together with instructions that the draft

was to be assembled in NZ Crowley Camp, [Mena](#), Egypt, not later than 6 June.

A Group sports meeting being organised to mark the virtual end of construction work in [Syria](#) became a general reunion before the furlough party left for Egypt. The meeting was held in the American University grounds at [Beirut](#) on 1 June, the same day that the whole of the [Haifa– Beirut– Tripoli](#) railway was opened for daylight operation.

The furlough group left on 3 June, but that was not quite the end of the non-stop administrative work of the Company and Group Headquarters staffs. Group Headquarters' war diary entry for 4 June is illuminating:

'The main Ruapehu draft was safely despatched by train close on midnight the preceding night, but there has been little let up in administrative work on that account. Signals are still flowing in from [2 NZEF](#) requesting the deletion from the draft of men who have already been despatched, and the inclusion of others who had not been balloted and were out on the job, while signals are originating from this HQ and Coys explaining that men who had been balloted could not be sent for a variety of reasons. One man was en route to [Turkey](#) for special survey work, another found himself in hospital after a fall from a third story balcony, another, on guard duty, tripped and removed a portion of his nose with his bayonet and others were incapacitated by less spectacular injuries and by sickness.

'During this time too, we have been in almost daily communication with GHQ at [Cairo](#) who are continually making fresh demands for the release of Group plant and vehicles to be used on more important work elsewhere and it must be seen to that all such vehicles and plant—low-loaders, compressors, crushers, trucks, LAD and machinery, lorries and so on—are sent away in first class condition.'

Major W. F. Young (promoted lieutenant-colonel), who assumed command of the depleted Group, was advised that it would probably remain as an independent formation for another six months, which actually was the time expected to elapse before the return of the first furlough draft and the departure of the balance of the three echelons in the second draft (Wakatipu).

He was also informed that the new war establishment would be:

Group Headquarters: 2 officers, 1 Padre, 1 medical officer, 15 other ranks.

9 NZ Railway Survey Company: 3 officers, 37 other ranks (Captain G. Rushton).

10 NZ Railway C and M Company: 4 officers, 156 other ranks (Major F. R. [Askin](#) <sup>1</sup>).

13 NZ Railway C and M Company: 4 officers, 156 other ranks (Major D. J. B. Halley).

The work of the Group was organised as follows:

Ninth Survey Company resumed its normal functions and moved to [Beirut](#).

Tenth Company was to carry on with its marshalling yards and other jobs between [Haifa](#) and [Beirut](#), as well as other depot work if needed.

Thirteenth Company was to complete its jobs between [Beirut](#) and [Tripoli](#) and also take over the clearing of a big slip on the Chekka headland, 40 miles north of [Beirut](#), where a landslide threatened the safety of both the road and the railway. Company Headquarters would occupy the camp vacated by the Survey Company at Byblos.

Group Headquarters remained at [Az Zib](#).

The slip on the Chekka headland, where the road and the railway clung to the face of a steep hillside, was inspected by geologists, Lebanese Public Works Department engineers and other officials having to do with earth movements, including the Commander, NZ Railway C and M Group, and the upshot was that on the last day of June the New Zealanders formally assumed responsibility for all work involved in the removal of the slip, or Job 901 as it was called officially.

The intention was to remove the slip; to rebuild approximately 150 feet of railway retaining wall; to rebuild in concrete crib the damaged support wall on the outside of the road; to build a new crib wall along the toe of the slip for the full length of the damaged road; to drain the slip; to maintain road and restricted rail traffic. For Job 901 the Group would have under its command 870 Mechanical Equipment Company, 112 Mechanical Workshops Company and 250 unskilled native labourers. Finally, a bypass road around the Chekka bluff was to be surveyed by 9 Survey Company and built by Royal Engineers.

The earthwork at the slip, 118,830 cubic yards solid measurement, was completed on 28 September.

In the meantime final decisions had been made regarding the fate of all non-divisional units in the [Middle East](#). In effect the personnel of all ancillary units would be used as reinforcements for 2 NZ Division or returned to New Zealand and civilian life with the next furlough draft, irrespective of time of service overseas. In other words, the Railway Construction and Maintenance and Operating Groups, 18 and 19 Army Troops Companies, and 21 Mechanical Equipment Company would cease to exist. The probable departure date was advanced from December to the end of October, which left about three weeks for the restoration and rebuilding of the road and railway walls, drainage and general clearing up.

These jobs were also finished before the end of October, when 10 Company and all sappers at [Az Zib](#) moved to Chekka. Ninth Survey Company, spread as usual halfway across the [Middle East](#), completed the plans for sheds at [Tel el Kebir](#), exchange yards at [El Shatt](#), a connecting line to [Kad el Marakeb](#), an ammunition depot at Gilbane and a base planning project in [Turkey](#).

The handing back of equipment and the cleaning-up of the camp area was finished by 23 October, and on the 28th a seventy-vehicle column assembled at the [Beirut](#) petrol supply point and moved off for [Maadi Camp](#), which was reached without incident on the afternoon of 31 October 1943—the end of the war for the New Zealand Railway C and M Group.

The marching-out of men not affected by the repatriation scheme to training depots commenced forthwith, while those of the Wakatipu furlough draft, being the balance of those who missed the Ruapehu draft, marched into New Zealand Railway Operating Details Group on 2 November.

The New Zealand Railway Operating Group, after its return to [Maadi](#) in February and March, went on leave and then began to train for what was confidently expected to be a move to England. Non-commissioned officers departed en masse to Schools of Instruction, while infantry instructors took the sappers through training in rifle, Bren gun, Thompson sub-machine gun, grenade throwing, company drill, route-marching and organised sport. Rifles were examined by armourers from the Engineer

Training Depot and respirators were adjusted and disinfected. Twenty-odd sappers departed most cheerfully to duties with 169 Railway Workshops Company and 182 Railway Operating Company, RE, respectively, the latter to drive diesel locos on the [Kantara– El Shatt](#) line. Towards the end of the month training emphasis was on mortars, enemy mines and booby traps, while an island began to be spoken of as the next sphere of operations. It would be interesting to know how close the rumours were to decisions being taken at the very highest levels. A move from [Maadi](#) to [Mena Camp](#) late in May confirmed everyone in his pet destination. Two days later (28th) information was released about the Ruapehu furlough scheme.

With the Japanese navy still in being, the Admiralty considered that there was more than an element of risk in the sea voyage of the furlough draft to New Zealand, which they felt, when spoken of, should be referred to by its code-name only. Inside a matter of hours every 'Wog' in [Cairo](#) knew all about the scheme, and if the enemy Intelligence was not fully informed it was not our fault. The usual greeting was 'Draw a marble?' or 'Are you Ruapehu?'

The furlough draft marched out to [Mena Camp](#) on 15 June and the rest of the Group was organised into a composite unit, New Zealand Railway Operating Details, under command of Major R. O. Pearse.

This Group, into which marched the Wakatipu drafts of the other ancillary units as they became available, functioned until 21 November doing camp duties, supplying men for No. 1 Guards Company at [Suez](#), and carrying on what was called, for want of a better name, 'normal routine'—in other words a short route march in the mornings and leave in the afternoons.

New Zealand Non-Divisional Engineer Details was formed from the disbanded Details Group on 21 November and comprised the men who finally, after several delays, left for New Zealand on 9 January 1944 with the Wakatipu draft.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## THE ARMY TROOPS COMPANIES

### *The Army Troops Companies*

Repair and salvage jobs kept 19 Army Troops Company busy in [Benghazi](#) throughout March, with sixty different works orders in varying stages of completion from not started to almost finished. They ranged in complexity from the removal of petrol installations from a derelict ship and the raising of sunken tugs to Job 109/112, which was—'Construct one 6 hole squatter native latrine for 209 Z Craft Co. and one similar 3 holer at Ceremonial Landing'.

The storm-wrecked port was now of little consequence as a supply point for the Eighth Army but was assuming importance for another project scarcely dreamed of in sapper circles outside the Directorate of Works at General Headquarters, [Middle East Force](#); [Benghazi](#) was, even then, being prepared for use in the contemplated invasion of [Italy](#) that was to follow the end of the fighting in North Africa. In addition, the vast [Benina](#) airfield where 21 Mechanical Equipment Company was working needed water for the growing [RAF](#) and [USA](#) bombing forces which were to precede and accompany the landing in [Sicily](#).

Many months of work lay ahead for the New Zealand sappers, but since the concentration of the unit, billets were overcrowded and the offer of the White Barracks was gladly accepted. Some scope for renovators existed, for after being bombed by both armies, much of the barracks' roofing needed repairs and all the windows were without glass. There was also a complete absence of furnishings and the water supply had been demolished.

The reconstruction of the barracks was entrusted to No. 4 Section, which had previously shown marked acquisitive ability, and Major Marchbanks co-operated by not finding any reason to be in the vicinity. Sergeant Bert [Adamson](#),<sup>2</sup> who was in charge of the job, held an Army Headquarters salvaging authority which he used to good effect in collecting doors, windows, beds and furnishings for the new home, an activity certainly not envisaged when the authority was issued. A clean sweep was made of a recently renovated building, and Adamson found his detachment under

close arrest for despoiling the new quarters of the [Provost Corps](#).

The Kiwi sergeant had to disclose considerable ability as a bush lawyer and listen to a crisp address on the predatory instincts of New Zealanders in general, and 19 Army Troops Company in particular, before his men were released.

The Electrical and Mechanical Section had by this time linked up and was operating all the powerhouses in [Benghazi](#), and favourable comment was made by Army and Navy authorities on the freedom from faults and power failures.

The port was to be a fuel-oil base for light craft, and probably as a result of the successful commissioning of the Kiwi referred to in a previous chapter the Company was found another ship, the sunken oil tanker Speranzo, which the Navy considered could be salvaged for use in the operation of the base.

The Speranzo was an entirely different problem from the wooden Kiwi. She was steel-built and had a hole in her side 15 feet wide by 25 feet deep which called for extensive welding. It was really a shipyard job—but there was no shipyard.

When the Company took over in the middle of April the wreck had been beached near Customhouse Quay, together with a number of other derelicts cleared from the channels adjacent to the berths. She was winched into shallower water, a section cut out of the steel deck and a start made on burning off the jagged plates with oxy-acetylene torches. The problem of welding 16 ft by 4 ft straight steel plates on to a curving bow was solved by overlapping each plate, and by the end of May, with improvisations of concrete, steel mesh and a two-inch seal of plaster, the Speranzo was made watertight and handed over to the naval people as an oil supply ship.

Concurrent with the ship-repairing operations was the building of a 1000-ton oil reservoir and the construction of floating pipelines of alternate lengths of steel pipe and rubber hosing. Permanent submarine pipelines posed more problems, for steel piping was in very short supply. Salvaged 100 ft lengths of pipe joined with rubber hose were not satisfactory and an original procedure was adopted in the laying of a second oil pipeline. Some 250 yards of pipe were welded into a unit, floated into position along a line cleared of sunken obstacles and, after some trouble, securely anchored and connected to the shore by flexible armoured hose—an unorthodox solution but a complete success.

The responsibility for the supply of water to [Benghazi](#) and [Benina](#) was another major project entrusted to the Company. A South African unit had maintained the existing water points but an extensive programme of works to meet the growing demands included reservoirs, booster stations and pumphouses, all of which were built by the New Zealand engineers.

Work had not been long started when the Company was called on to supply water for a welcome customer. The Division was passing en route to [Cairo](#) and needed hot showers. On no other occasion had the sappers to meet such a demand and on no other occasion did they work with greater enthusiasm; the boosters went flat out for twenty-four hours non-stop, and the supply somehow survived the demand without a breakdown.

Further evidence of the port's new importance was provided by the arrival of specialist engineers on 12 May—the day before hostilities ceased in North Africa—to select Fairmile slipway sites for the shipping repairs which might reasonably be anticipated by an invasion force.

The western end of Cathedral Mole was chosen and the construction of two slipways entrusted to 19 Army Troops Company, but apparently the specialists were not in complete accord for amendments and a stream of correspondence seeking additional data held the project up until the strength of the Company had been depleted by the departure on 3 June of the Ruapehu draft.

At that period No. 2 Section was employed on [Benghazi](#) water supply; No. 3 Section on the construction of the concrete reservoir for Navy fuel oil; No. 4 Section on the Fairmile slipways and timber fenders for underwater fuel pipes; E and M Section on fuel pipelines, electrical supply, welding jobs on tank landing craft and on various shop jobs.

The revised design for the Fairmile slipways meant, for each one, the precasting of fourteen 25 feet concrete sleepers weighing approximately ten tons each, which were to be laid for 250 feet underwater. There was, in addition, the dredging, underwater filling and grading before the concrete sleepers could be lifted by the Kiwi and laid in position—a heavy engineering project of some complexity. Work on

this and the other assignments went on steadily until the middle of August, during which time (on 9 August) Major Marchbanks left to take command of 5 Field Park Company and Major Learmonth became OC 19 Army Troops Company. A couple of days later the Company was instructed that the Fairmile slipways were a No. 1 priority job and that every endeavour should be made to assure the completion of the first one before the end of September. Despite interruptions through the diversion of the dredge and lighters to presumably even more important work, the first slipway was practically finished a week before the deadline.

The fuel-oil installation—reservoirs, pumphouse and pipelines—was ready, 700 tons of fuel oil discharged into the reservoir and the job handed over to the Navy on 29 September.

Arrangements were now being made for the return of the Company to [Maadi](#) and an extra effort was put into finishing the second slipway. On 7 October, when a week of fine weather would have seen it ready, OC 19 Army Troops Company received a signal from No. 109 RE Works Section, Middle East Forces, 'As second slipway [Benghazi](#) not required stop work on this'.

Such a blow would have broken the hearts of ordinary men, but the sappers of 19 Army Troops Company were used to it. Had they not helped to build a complete harbour at [Safaga](#) which was never used? The upsets that happen in long-range planning were no concern of theirs, and the second leave draft would soon be leaving for home. But a stack of a hundred tons of cast concrete frames was a testimony to the vagaries of wartime engineering.

On 8 October a Palestinian Army Troops Company began to take over the water-supply installations, and two days later the Company was told to be ready to move out at an early date.

Equipment was handed over and gear packed, and on 17 October 19 Army Troops Company left [Benghazi](#) and marched into NZ Railway Operating Details; four days later those not eligible for the second leave draft were posted to other units and 19 Army Troops Company was disbanded.

The possibility of a change in location implied in the instructions received by 18 Army Troops Company at the end of January became a probability in February and a

fact in March, during which period the drop in the amount of water pumped into the [Western Desert](#) pipeline and the diminished maintenance consequent thereon permitted Headquarters to get rid of non-essential material and have a general clean-up. No. 4 Detachment at [Burbeita](#) was the first to move out. It completed the handing over of all duties west of [Daba](#), exclusive, to 44 Water Maintenance Company, SAEC, on 10 March, spent a few days in smartening-up drill, proceeded to [Ismailia](#), found the orders to join No. 2 Detachment cancelled, and by the end of the month had settled into a camp built for the Company at [Adabiya Bay](#).

No. 1 carried on at [Alamein](#) with normal pumping duties. The highlights of the month, according to the Detachment diary, were the accouchement on 7 February of [Farida](#), the family cat, in the cook's bed, and the mixture of gale force wind, sand, rain and cold that raged for three days (22nd–24th), considered the worst yet experienced. March was a succession of sandstorms, in between which 44 Water Maintenance Company was shown over the area. The Detachment diary sketches the scene:

'March 30—Morning spent winding up the estate—tidying up the area, disposing with poultry, dogs, cats etc., and placing the house in order. Saw Signals and returned telephones and gave new address.'

No. 2 Detachment at Chevalier Island, which, it will be remembered, consisted of any sappers sent down from the 'Blue' for a change of air, had been pile-driving and siting and tying in fuel pipelines, a job very similar to that done by 19 Army Troops Company at [Benghazi](#), when it was told to get its works orders cleaned up as soon as possible as it would probably be leaving some time in March. The convoy left [Ismailia](#) on 1 April and, together with Headquarters and No. 1 Detachment, settled into the new camp at [Adabiya Bay](#) that evening.

No. 3 Detachment sappers at [Amiriya](#) were not relieved of [Western Desert](#) water-supply duties by 44 Company until 9 April, when they joined the rest of the company at [Adabiya Bay](#). The crew of Water Barge No. 4 from [Tobruk](#) had already marched in, No. 3 came in from [Alexandria](#) a fortnight later, and No. 5 from [Benghazi](#) rejoined on 5 May.

Eighteenth Army Troops Company re-formed into sections and spent three

weeks training with American pontoon bridging, tubular scaffolding, bridging cribs, sheetpiling and light standard steel trestlework. It did not escape the notice of the trainees that an ability with such materials would be very handy when forcing a landing on a hostile coast. Morale rose to a pitch indicated by an entry in the war diary when the Company, after its tour of training at Adabiya, moved on to the RE Training Depot at [Moascar](#) for its post-graduate course in assault landing technique. The single entry for the afternoon 21 April, while the Company was en route for [Moascar](#), read: ' Tally Ho!'

The whole of May was spent in general field engineer training, and the Company was spreading along the Canal area in various stand-by jobs on 4 June when the blow fell. Eighteenth Army Troops Company was not eligible under the furlough scheme, but its fate was to provide reinforcements for 2 NZ Division. Even the GOC's letter to Major Learmonth did not help much:

My Dear Major Learmonth,

I would like to write and express my regret that circumstances have made it necessary to disband 18 Army Tps Coy. It is doubly hard as I have heard from all quarters high praise of the work done by the Company, and I am well aware that their work, while not as spectacular as that of the Division, contributes in full measure to the common cause. The reputation of NZ Engineers stands very high.

Would you please explain the situation to the men and give my sincere thanks to the Unit for good and faithful service.

Yours Truly,

B. C. Freyberg

In accordance with a signal from Chief Engineer, British Troops in Egypt, the Company handed back the jobs it had taken over and on 4 July marched in to New Zealand Engineer Training Depot, [Maadi](#), gave itself a 'break-up' party, handed in its equipment, and ceased to be a unit of the New Zealand armed forces on 24 July 1943.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 21 MECHANICAL EQUIPMENT COMPANY

### *21 Mechanical Equipment Company*

By the end of February the [Tobruk](#) water-supply installation at [Wadi Sahal](#) was well forward and a start had been made in excavating a site for the pumphouse; at [Benghazi](#) the provision by No. 3 Section of tarmac runways for the landing grounds at [Berca](#) was making some progress after more than a fair share of teething troubles. Repairs Section had to make an extensive overhaul of the tar pots and mixers before they would work satisfactorily. The Kiwi sapper is a prince of improvisers but detests having to put up with inefficient machinery.

The next difficulty was damp sand. The weather broke and the frequent winter showers raised the water content of the sand to a point beyond the margin where it would mix successfully with hot tar. Repairs Section overcame that problem with sand driers. Then the most suitable tar, F 70, ran out and a lower grade that came solid in drums took three hours to heat before it was ready for mixing, which meant starting an hour earlier for the tar-pot attendants. February had seen the end of these hold-ups, and the sealing work was accelerated when Repairs produced another amenity in the shape of a rubber-tired wheelbarrow made from a large petrol drum and a small wheel stripped from an enemy plane. The barrows held one mix and were easy to push.

[Berca](#) No. 2 runway was finished by the end of March and No. 2 Section left immediately for [Marble Arch](#). The standard of work performed by 21 Mechanical Equipment Company on the [Benghazi](#) airfields did not go unnoticed. Headquarters IX Bomber Command, Ninth US Air Force, wrote:

Colonel A. G. Bonn,

D.C.E. Aerodromes,

[Benghazi](#)

Dear Colonel Bonn,

Please allow me to express to you and the officers and men of your command, the sincere appreciation of all flying officers in this command, for the excellent job you have done in the construction of aerodromes in this area. I have heard nothing but praise from the pilots, which you will agree with me is exceptional and is certainly a tribute to the thoroughness of your work.

I have taken the liberty of writing of this to Major General Louis Brereton.

Sincerely,

U. G. Ent,

Colonel, A.C.

No. 1 Section spent two months grading the several aerodromes in the [Benghazi](#) area before it was given a single task that could employ the whole section. An advance party left on 2 March for [Savoia](#), where a large landing ground was to be built, and the balance of the sappers followed about three weeks later. [Savoia](#) was about five miles from [Cyrene](#), midway between [Benghazi](#) and [Tobruk](#), and the centre of an Italian farm colony but once the capital of the Roman province of [Cyrenaica](#). Little beyond the enormous amphitheatre and extensive caves in the hills remain of the once-proud city. The sappers occupied the deserted houses of Italian colonists and made themselves thoroughly at home. The airfield was to consist of three runways, forming a capital A, the two landing strips to be 1600 yards by 50 yards and the third one 2000 yards by 50 yards respectively.

The work differed in no way from that of levelling the thousands of square yards of [Middle East](#) already undertaken by the Company over the previous two years and the first strip was handed over to the [RAF](#) on 1 April.

Repairs Section also had its hands full, for owing to the acute shortage of plant caused by urgent demands from the front and the necessity of maintaining landing strips in the [Benghazi](#) area, the section was asked to think up ways and means of constructing improvised graders. Three German tractors were brought in from the desert and two made serviceable with parts from the other. Graders were built on the pattern of one made from bits and pieces twelve months earlier.

Repairs Section and Company Headquarters joined No. 3 Section in new quarters near [Tobruk](#) for convenience in administration and maintenance.

No. 3 Section completed the pumping station towards the end of May, and after some small jobs such as grading the [El Adem](#) landing ground and adjacent roads, was assigned to the repairing of a slipway at [Tobruk](#) for the use of assault landing craft.

The project was somewhat different from that of 19 Army Troops Company in [Benghazi](#), inasmuch as the slipway had actually been in use until it received a direct hit from an [RAF](#) bomber during the enemy occupation. The underwater section had been extensively damaged and there was a large amount of debris which had to be removed by a scoop and a tractor winch; snags were dislodged by naval divers and the sea bed graded by dredge, while crane barges were provided by salvaging three from the bottom of [Tobruk](#) harbour. They were christened nostalgically [Waitemata](#), Tui and Hokanui, New Zealand beverages not unknown to thirsty civilian engineers.

The Company was not affected to any extent by the Ruapehu furlough draft and the work went on steadily until its completion on 30 October.

The reconstruction by No. 2 Section of the airfield at [Marble Arch](#) into an all-weather 'drome prior to Eighth Army's resuming its advance on [Tunis](#) meant the provision of three temporary strips as the field was being used by aircraft ambulances. These were ready by the middle of April and an immediate start was made on No. 1 runway, 2000 yards long by 50 wide, which was to be covered with three inches of bitumen mix. Eight mixers were used and worked sixteen hours daily. The job was started on 15 April and handed over to the Air Force on the 30th—100,000 square yards of bitumen laid in sixteen days, less four half-days lost through shortage of bitumen supplies.

The war in North Africa ended but the aerodrome work went on in readiness for the invasion of [Italy](#). Imagine then the consternation of the section when it was informed that it was to represent the Company at an inspection by a VIP at [Tripoli](#) on 21 June. It has been indicated in this history that non-divisional engineers had not been very successful at ceremonial parades, and No. 2 Section, according to its unofficial historian, ran true to form:

'The writer will never forget the spectacle that No. 2 Section of the 21st Mech. Equip. Co. made on that parade at [Tripoli](#). 38 men in all, wearing NZ Summer dress showing, despite creditable efforts at cleaning and pressing, much sign of the hard wear and grime it had been subject to.... When we arrived at the [Tripoli](#) Marine Parade lined with date palms and immaculately dressed and drilled troops from all parts of the Empire our officer called us to attention and commenced to career down the centre of the awe inspiring avenue bounding with his long legs and peculiar gait like a gazelle over thorn bushes. The leaders of the column made gallant attempts to keep at least within hearing distance... imagine the spectacle! Imagine the shame! However, we saw the King and the King saw us and after seven days we were back on the job again.' <sup>3</sup>

The New Zealand non-divisional engineers were definitely not parade-ground soldiers.

No. 1 Section carried on with the draining and grading of the second runway, which was ready at the end of May, and a start was made on the third, with sub-sections away on other like jobs at [Barce](#) and [Tocra](#) aerodromes. By the end of June the greater part of the earthwork on No. 3 runway was completed and an 'aerodrome planer', invented and built by Repairs Section, used crosswise and longitudinally on all three with excellent results. The marching in of an Indian labour unit and the setting up of two metal crushers for stockpiling material for tarsealing were the only events of note during this period.

The [Marble Arch](#) project was finished on the last day of June and No. 2 Section, which had watched with pride the fighting men of 2 NZ Division roll past [Mussolini's](#) edifice on 22 and 23 May and were thus the last New Zealanders in [Tripolitania](#), began to move to [Savoia](#) where they were to work with No. 1 Section. The move with all the heavy equipment was completed on 9 July, when the sappers had moved into a batch of farmhouses near No. 1 Section.

[Savoia](#) aerodrome was a big construction job and an important one, for it was part of the Air Force base for the invasion of [Italy](#). The crushing, spreading and rolling of metal, the heating and spraying of bitumen was done in double shifts and more labour was marched in to assist. Before the metalling began on No. 1 runway (10 August), two West African and one Palestinian Arab pioneer companies were

working under the direction of the Kiwi sappers.

The job was going ahead at a satisfactory pace but faster progress was asked for, even though it might affect the quality of the work. September the 30th was given as the deadline for the completion of Nos. 1 and 3 runways, north and south taxiing tracks, dispersal and access roads. Extra plant was promised which, of course, never arrived, but the place was haunted by inspecting officials of high and low degree. No. 1 runway was completed at midday on 18 September and one aircraft took off and landed again. In the meantime the deadline for No. 3 had been extended to 15 October. The metalling was finished on 9 October but rain held up the sealing until the 17th, as the Company war diary, incidentally almost the last entry, describes:

'Usual Sunday routine except for men assisting [No. 1 Sec.](#) All runways, taxi tracks, dispersal bays and roads are now complete. Only work remaining consists of small jobs for DCRE and [RAF](#) and cleaning and dispatching plant. Section won cricket match against BMA from Beda Littoria.'

Twenty-first Mechanical Equipment Company had finished its last construction job.

The sections concentrated at [Tobruk](#) and proceeded in convoy to [Maadi Camp](#), whither Headquarters had preceded them. It was the first time in two years and nine months' campaigning that the whole Company was in the one place at the same time. Men were marched out to different units until the Company ceased to exist at midnight on 21 November 1943, when the remaining strength marched out to New Zealand Non-Divisional Engineer Details.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## FORESTRY GROUP

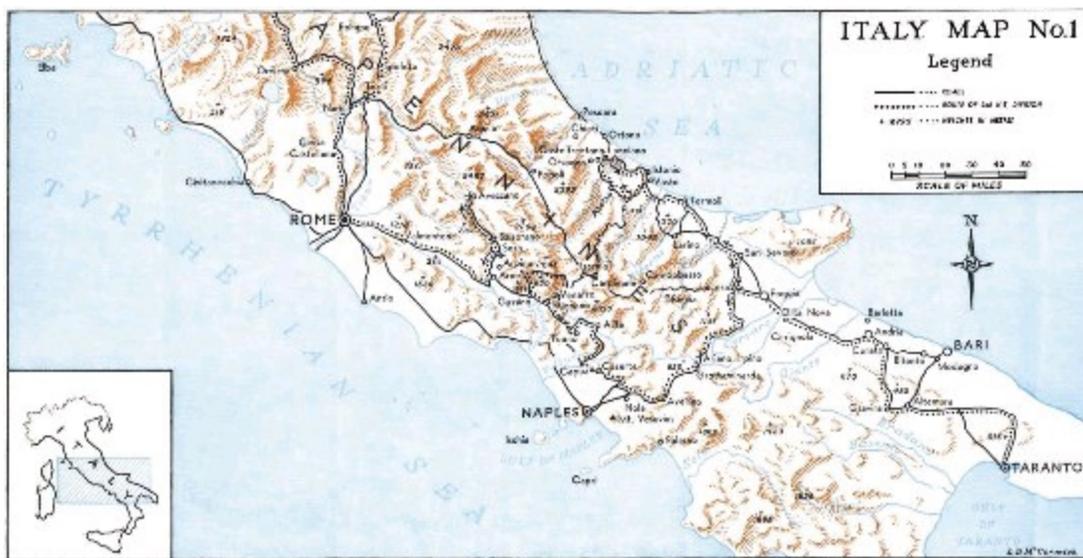
### *Forestry Group*

The strengths and locations of the units of the Forestry Group, NZE, as at 1 March 1943 were:

Company	Location	Strength	
		Offrs	Other ranks
Headquarters	Chippenham, Wilts.	6	17
11 Company	Cirencester, Gos.	7	159
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	Charfield, Gos.	1	14
15 Company	Langrish, Hants.	2	54
	Arundel, Sussex	3	80
	Woolmer, Hants.	2	29
		27	509

A weekly average of 326 Pioneers worked under the direction of the Group, 95 with 11 Company, 147 with 14 Company and 84 with 15 Company.

It was announced that owing to the considerable variation in the weekly hours worked by forestry units, the War Office, on request, had regularised the position. Commencing on Monday, 15 March, the weekly working hours were increased from 40 to 45, which meant a nine-hour day, but the actual times for starting and stopping were left to company commanders. Saturday mornings were to be devoted to training, while the days of collective training were increased from ten to fourteen every six months. Attention was also drawn to the fact that frequent attacks by low-flying enemy planes had been made in the Southern Command recently and that all troops had to be prepared to take retaliatory action.



Production continued to run at a satisfactory level until new specifications were received from the Ministry of Supply in April. Concern was expressed over the high proportion of the thicker sizes of square hardwood planks and boards which military mills continued to produce for the National Stock. The greatest demand was for 1½ in. and 2 in. thicknesses and the largest single item was timber for ammunition boxes. It was admitted that the cutting of such small sizes would curtail the output of mills employing circular saws, but this loss, it was suggested, would be more than counter-balanced by the saving in labour and transport during later handling and conversion.

Little of note occurred during the period April to July; there was a drop in production through major breakdowns in the hauling equipment and the [Arundel East](#) mill was closed down for lack of timber.

The furlough scheme in 2 NZ Division was not considered as being applicable to the Forestry and other New Zealand personnel in the [United Kingdom](#), and consequently the reorganisation and elimination of non-divisional units that took place in Egypt had no counterpart in England.

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'Because of the very heavy demands for timber construction work for the [United States Forces](#) in New Zealand and the [Pacific](#), consideration is also being given to the

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Fourteenth Company was selected to proceed to a tropical destination at an early date, but not as then constituted. The Group was to be reorganised on a medical grading basis with all Grade I men transferred to 14 Company; men married in New Zealand and all single Grade III men went to 11 Company, and men married in England and all single Grade II men to 15 Company.

Fourteenth Company handed over its equipment and plant to the appropriate authorities and thanked 1 Spanish Pioneer Company for its goodwill and efforts over the two years they had been together, efforts that had helped materially in the creditable showing made in competition with all the forestry companies in England.

The new 14 Company was assembled for the first time on 28 July and went on embarkation leave the next day. On return it crated two portable mills, entrained on 11 August and sailed on 16 August 1943 for a tropical, but officially unknown, destination.

The command of 14 Forestry Company at the date of sailing was:

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Captain K. O. Tunncliffe

Lieutenant A. P. Thomson

Lieutenant L. J. McKenzie

Lieutenant W. L. Cook

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Lieutenant J. T. Pasco

The day after 14 Company entrained, 11 Company was warned to be ready to move overseas on 4 September and went on embarkation leave forthwith. This left the reorganised 15 Company the only New Zealand unit working in England. It was during this period that the following appeared in Southern Command orders:

### *Act Of Gallantry*

On July 1st 1943 an aircraft crashed and burst into flames. No. 12887 Sapper O. N. Stokes<sup>5</sup> and No. 35563 Sapper B. Leydon,<sup>6</sup> 14 Forestry Company, New Zealand Engineers, showing complete disregard for their own personal safety, immediately ran towards the aircraft and, in spite of exploding ammunition, burst petrol tanks and flames, made a gallant effort to rescue the crew.

The G.O.C.-in-C. wishes that a record of this act be made in the documents of Sappers Stokes and Leydon.

There was not a great deal of cutting done in August because of cleaning up and reorganisation. Langrish and Woolmer were short of labour and Arundel had trouble with large logs that had to be blasted open, and with dry logs requiring the frequent changing of saws. Fifteenth Company's troubles came to an abrupt end on 30 August when a telephone message ordered the Company to prepare for embarkation with 11 Company, whose sailing date had been altered to 18 September.

The Company ceased operations on 2 September with a tally of 3888 cubic feet

of sawn timber, bringing the grand total of sawn timber produced by the New Zealand Forestry Group in the [United Kingdom](#) to 3,255,339 cubic feet.

New Zealand bushmen had been felling timber in the south and west of England for three years. During that time the output of the Group was consistently higher than that of like formations from [Canada](#), [Australia](#), [Newfoundland](#) and the [United Kingdom](#). As with the sappers of the other non-divisional units, the Kiwi bushman stood in no man's shadow.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

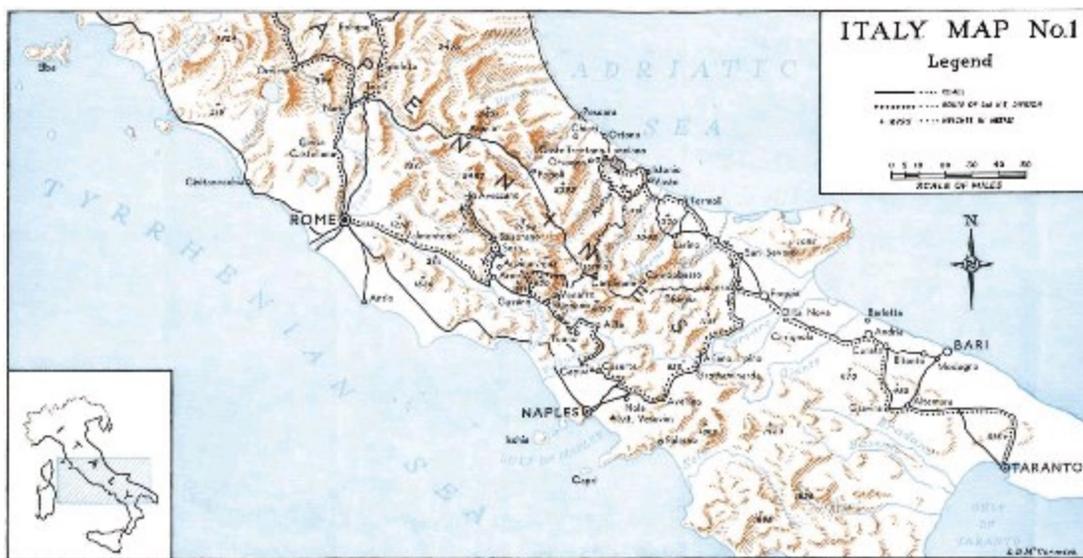
## [SECTION]

The strengths and locations of the units of the Forestry Group, NZE, as at 1 March 1943 were:

Company	Location	Strength	
		Offrs	Other ranks
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# NEW ZEALAND ENGINEERS, MIDDLE EAST

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 2 NZ DIVISION

### *2 NZ Division*

On its return journey from [Tunisia](#) the Division rolled peacefully back over the thousand-odd miles of desert, semi-desert and cultivated land of North Africa where it had made New Zealand history over the past three years. Between [Benghazi](#) and [Derna](#) advance parties from the Field Companies peeled off and headed straight for [Maadi](#) to organise the camp for the Division. The sappers stopped not for break and stayed not for stone, but drove for twenty-four hours flat out to arrive at the New Zealand Forces Club unwashed and unshaven, in time for breakfast and a heroes' welcome from everybody in the building. Wherever the Division had halted for replenishment, indents for beer and other soldierly comforts were drawn for engineer units whose existence was purely imaginary but helpful in alleviating the desert-induced aridity.

The Division settled into [Maadi](#) on the last day of May and the first day of June. Fantastic stories that had filtered through the security net were forgotten when the details of the furlough scheme were announced.

The fitting-out of the lucky ones who drew a marble, the administration of the Ruapehu scheme instructions, the warrants for leave travel and such matters kept the orderly rooms too busy to notice the passage of time. The drawers of marbles were too excited and the others too unsettled to care. The Ruapehu draft marched out of [Maadi](#) on 15 June and the rest of the month was taken up with leave, fatigues and camp duties.

July was a month of absorbing reinforcements and filling the gaps left by the Ruapehu draft specialists. Radio sets had at long last become engineer equipment, and sappers attended schools of instruction in their use and upkeep. General training began at recruit level, mixed with route marches and smartening-up drill, and progressed through August and September in what might be termed graduate military engineering theory and practice, ending in attachment to the infantry brigades for manoeuvres.

During this period the Eighth and [United States](#) armies invaded and overran [Sicily](#), leapt the Straits of Messina and carried the war on to the mainland of [Europe](#). The Italian Government asked for an armistice, changed sides and became our co-belligerents. [Germany](#) countered by taking over the defence of [Italy](#), and before the Eighth Army had cleared the toe of [Italy](#) and the American Fifth Army, which included a British corps, had advanced from its beach-head at [Salerno](#), the Germans had disarmed the Italian Army and rushed enough strength to the danger points to prevent a quick Allied advance on [Rome](#).

September saw the end of training and make-believe attacks, real enough to the reinforcements but a crashing bore to the battle hardened types who knew all there was to know about mines and mine lifting from bitter experience.

One bright spot in this period was a couple of weeks on the [Suez Canal](#) near the pleasant town of [Ismailia](#), where each company in turn did some training on American pontoon bridge equipment. The equipment was completely foreign to the Kiwis and the value of the training negligible as they were not likely to use American Army bridging, but it was an excellent excuse for a change from [Maadi](#) and the sappers made the most of it.

October opened with the field companies preparing transport and equipment for embarkation. Their destination was unknown but not very difficult to guess.

[Burg el Arab](#) was the assembly area for the Division. It is about one hundred miles from [Maadi](#), and as a final toughening up exercise everyone had to march like the infantry of an earlier war: everyone but the engineers, who were excused on the understanding that they did the same mileage in route marches after arrival. They were at [Burg el Arab](#) about a fortnight, a period of short route marches followed by swims in the [Mediterranean](#).

Advance parties packed up and disappeared; rear parties were told off to travel with the vehicles when instructed. Fifth Field Park and 8 Field Company were divided into two parties which would embark on different transports as a safety measure; 6 and 7 Field Companies would follow in due course. On 3 September the first embarking units, plus advance parties from 6 and 7 Field Companies, moved by MT to [Ikingi Maryut](#) transit camp. It was just as well that they were taken by transport

for each sapper had fastened to his person his web equipment, full-scale summer and winter clothing, four blankets and one empty water can plus one bivouac tent to two men. There was probably a reason for this exercise in weight-lifting but it was kept a deep military secret. It could have been poor staff work by the embarkation people.

The engineers moved on to [Alexandria](#), embarked, and sailed on 6 October to campaign anew in a new country, now officially known to be [Italy](#).

Engineer officers, including those attached, who sailed with the Division to [Italy](#) were:

#### HQ NZ Divisional Engineers

Col F. M. H. Hanson

Capt P. H. G. Hamilton

[Capt E. M. Nanson](#), RMO

[Lt J. T. Clere](#)

Lt H. C. Gayford

#### 5 Field Park Company

[Maj F. R. Askin](#)

Capt K. F. Jones

[Capt J. M. Walmsley](#), LAD

[Lt O. L. Cuthbertson](#)

Lt G. A. O'Leary

Lt G. C. Mountain

#### 6 Field Company

Maj J. A. Goodsir

Capt D. U. White

Lt R. E. Hermans

Lt J. B. McGregor

Lt D. Foord

Lt S. M. F. Martin

Lt C. S. Fraser

Lt L. T. Skipage

Lt G. S. Menzies

Lt R. B. Smith

Rev. J. K. Watson, Chaplain

## 7 Field Company

Maj A. R. Currie

Capt P. W. de B. Morgan

Lt J. R. Concher

Lt I. G. Budge

Lt A. Veart

Lt J. S. Callaway

Lt B. J. Loudon

Lt D. McCormick

Lt E. G. Prosser

## 8 Field Company

Maj D. S. G. Marchbanks

Maj R. C. Pemberton

Capt H. L. Yorke

Capt G. K. Armstrong

Lt T. Hanger

Lt F. M. Dahl

Lt E. Farnell

Lt W. E. Fisher

Lt J. G. Gowan

Lt A. L. King

Lt E. L. R. Whelan

Lt A. G. Hunter

## Divisional Postal Unit

Lt W. H. McClure

Lt J. L. Cragg

# NEW ZEALAND ENGINEERS, MIDDLE EAST

# CHAPTER 17 – THE ITALIAN WINTER LINE

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## [SECTION]

Three days on overcrowded transports, with a calm sea and a sky clear of enemy planes, brought the first flight of the Division across the [Mediterranean](#) to [Taranto](#) on 9 October 1943.

There was doubtless no thought of poetic justice in the mind of Authority when it decided on the port of arrival; it was, however, from [Taranto](#) that the Italian invasion fleet had sailed for the conquest, via [Albania](#), of [Greece](#). The discomfiture of the Italians in this enterprise was perhaps the chief factor in [Germany's](#) declaring war on [Greece](#), a consequence of which was the rapid removal of the New Zealand Division from that country to [Crete](#). Now the New Zealand Division was about to land at [Taranto](#) and help chase the Germans out of [Italy](#), but, unlike 'the ranks of [Tuscany](#)', the populace had no difficulty in withholding its cheers.

The transports stayed in the outer harbour and the sappers strapped their multitudinous belongings around their persons before struggling down the ships' sides into landing barges. Near the wharf in the inner harbour they saw their first Italian castle, one that had been there in some form or another for about three thousand years. [Taranto](#) is one of the oldest continuously inhabited cities in [Europe](#).

Those sappers who were new to war also had their first glimpse of what bombing can do to a waterfront; but there was little time 'to stand and stare', for after stacking their heavy gear they were led through the narrow streets of the dock area into the open country of stone houses, red-tiled roofs, terraced vineyards and stone fences enclosing tiny paddocks.

Four miles inland and something over an hour later, the column halted on a hillside strewn with olive trees and overlooking the harbour. There were rows of Italian submarines and destroyers peacefully moored and protected by barrage balloons along the waterfront. The advance party that had arrived some time earlier to lay out a camp for the Division was told that it could help itself to as much of [Italy](#) as it liked—so long as it did not ask for stores, labour or equipment. There was, in consequence, virtually no camp, but there were compensations in the form of

vendors of sweet grapes at threepence per pound and sour wine at less than threepence per pint. Waves of minstrelsy rose and fell before the sappers settled down under the olive trees for their first night in [Italy](#).

Light showers in the morning were suffered with indulgent fortitude by men who had last seen rain clouds in [Tunisia](#). A two hours' route march was followed by a talk on anti-malaria precautions. Leave to [Taranto](#) followed for those free from camp duties, but apart from distant views of the castle and close views of Italian soldiery carrying arms but peaceably disposed, there was little to appeal. The streets were narrow, for the most part dirty, very smelly and faintly reminiscent of [Cairo](#). Italian medieval history has no place in sapper military education, so there were few who knew that [Taranto's](#) streets had, with deliberate intent, been built narrow; it is easier to drop stones or pour boiling water on enemies confined in narrow places.

The Germans had not left much behind them in the way of supplies. Sergeant Begbie <sup>1</sup> noted in his diary after a day's sight-seeing:

'We were having our bully beef and biscuits on a park seat overlooking the harbour when a well dressed middle aged lady came along and just stared at us. We gave her most of the bully, a bit of bread, some margarine and biscuits. The tears almost came into her eyes. It's the kids that are suffering most.'

Fifth Field Park Company was given the job of improving the Divisional camp site, which involved the building of rough shelters for cookhouses and latrines.

Eighth Field Company supplied carpenters and such extra labour as was required; the rest of the company formed roads and, to quote the diary again, 'carried the metal in buckets, sacks, and any old thing that would hold it. Bob Semple would have had a fit.'<sup>2</sup>

When the other two sapper companies arrived on 22 October they found a reasonably equipped bivouac camp awaiting them. Fifth Field Park Company received an addition to its strength of 27 sappers late of 21 Mechanical Equipment Company. There had been second thoughts about the use that might be found for bulldozers and other heavy plant in a mountainous country. Chrystal's Rift, [Sedada](#) and [Beni Ulid](#), to name but a few instances, had proved the worth of such machines. Colonel Hanson, in planning and reorganising for the new theatre well before

departing from Egypt, had proposed the attachment to 5 Field Park Company of a Mechanical Equipment Platoon with an establishment of 4 officers and 100 other ranks, and the twenty-seven sappers were the nucleus of the new sub-unit. Captain [Armstrong](#),<sup>3</sup> late Adjutant of the Railway Construction and Maintenance Group, with Lieutenant Gowan as his second-in-command, was the original commander.

'Jerry Gowan and I were the joint founders. We were both from [8 Fd Coy](#) and thanks to the cooperation of Don Marchbanks, our OC, we took with us our drivers, the Company transport sergeant, Bert Church, and one or two others. We had no fixed establishment to begin with and of course no G.1098. Jerry was a great scrounger and we soon got a bit of gear together. We picked up our first plant at [Bari](#), 2 D8 dozers, a D4, a power grader, two RB excavators (dismounted) and a number of dumpers, 12 I think. About twenty blokes under Sergt [Young](#)<sup>4</sup> ex 21 Mech Equip Coy had crossed from Egypt with this plant and it was mounted where necessary on six tank transporters from an NZASC unit and we set out to join the Div waiting on the [Sangro](#). It was a nightmare trip on the steep, narrow and winding roads but we got there and were soon organised after a fashion. We took over 3 D6 dozers which had been with the Div in [Africa](#) and which had been working forward under the direct control of Major Russ Currie. We were short of men at that time but we had a good team with many versatile types who could drive a dumper or operate a dozer or shovel as required. The show gradually built up and got organised as the war went on.'

Little training was possible until equipment arrived and so there was much route-marching. Usually the sappers followed a narrow stone-walled highway out and returned across country, which was easier walking, for, after centuries of use by donkey carts, the roads had three deep ruts worn into the underlying rock—one in the centre made by the donkey and one on each side by the wheels.

It was now late autumn and football fields became a first priority. Working parties removed many boulders from the selected area and play commenced forthwith. It was pretty rugged rugby, even slightly gladiatorial, for the first four games produced one broken finger and four broken legs.

As soon as the first vehicle flight was unloaded the CRE borrowed a vehicle and a driver and went forward to make a reconnaissance of the rivers, bridges and roads

over which the Division was likely to pass. It was an interesting trip and included being shot at and missed by a Canadian tank, the commander of which at first flatly refused to believe that the New Zealanders were in [Italy](#). And if they were New Zealanders, how was it that they were driving along a road that Jerry had just vacated? A detailed explanation, plus an identification card, secured their freedom. After sheltering in a culvert from a mountain storm and upsetting the domestic arrangements of a large snake in whose company they had unknowingly passed the night, they met 78 Division on the Trigno River. 'The CRE [78 Div.](#) asked me to go down and have a look at his improvised bridge across the river ...,' said Colonel Hanson. 'The enemy mortar crews and machine gunners showed considerable ill feeling towards us and we could not get within several hundred yards of the bridge. I felt that I had already nosed into enough which was not my business and my driver and I were quite happy to turn about and make back towards [Taranto](#)'.

The broad outline of the war in [Italy](#) at the end of October was that, on the west coast, the Anglo-American Fifth Army had made good its landing at [Salerno](#), captured the essential port of [Naples](#) and, with its sights fixed on the glittering political prize of [Rome](#), had crossed the [Volturno River](#). Eighth Army, on the eastern side of the mountain backbone, had secured the ports of [Taranto](#), [Brindisi](#) and [Bari](#), had captured and put into use the airfields at [Foggia](#) and was meeting increased resistance as it neared the chosen enemy defence line. A glance at the map will confirm that the Italian waist is narrowest from the mouth of the Garigliano River on the west to the mouth of the [Sangro River](#) on the east—less than ninety miles in a direct line—and that both rivers are by way of being moats along the bottoms of ridges which, so to speak, are like ribs extending from the central spine. This was the southern edge of the Winterstellung, the Germans' [Winter Line](#) on which the invaders were to be held, at least over the winter months. In this design the German generals could count on the wet months as an ally as helpful as a rainy day to a nearly defeated test cricket team.

Fifth Field Park Company was the first sapper unit to leave [Taranto](#). The day the second flight arrived it left for the Joia del Colla area, halfway to [Bari](#) some 60 miles to the north, to build roads and set up a camp for 2 NZ Division Advanced Base; there was also work in [Bari](#), where a building had been commandeered for the use of New Zealand troops on leave and in which many alterations were necessary. [Bari](#) is

a modern city, the second in southern [Italy](#) and the largest on the east coast south of [Venice](#). There is a fine harbour and, like [Taranto](#), a venerable castle, with a tradition far removed from the bitterness of warring nations. The basilica of San Nicola has, for over nine hundred years, housed the remains of a saint whose name has been anglicised into Santa Claus.

Earthmoving equipment at Joia was of the same primitive design as that at [Taranto](#). There were picks and shovels and nothing else; indents for wheelbarrows drew the information that there were none in [Italy](#), but timber was available at the RE dump in [Taranto](#) for building wooden boxes with long carrying handles. The sappers consoled themselves by remarking that if [Japan](#) happened to win the war they would be set for jobs as rickshaw men. Lieutenant 'Bailey George' O'Leary,<sup>5</sup> who commanded the bridging platoon and was so called to distinguish him from Captain George Armstrong, OC [Mechanical Equipment Platoon](#)—Kiwi sappers were not strong on military titles—wrote of his first operational job:

'It was at this dump that Sergt Stan [Kerr](#)<sup>6</sup> spotted one almost serviceable wheelbarrow and the remains of another—the main working part, the wheel, was still attached. He had had plenty of experience with RE dumps in Egypt and suggested the best time to collect the barrows would be at lunch time as he felt sure the sappers would be observing regular working hours.'

Accordingly a borrowed 3-ton truck arrived at the dump just before midday and events fell out as the Kiwi sergeant foretold—the gates were closed and the guardians of the dump went to lunch. A proper requisition to collect a load of short lengths of timber had been produced and Sergeant Kerr suggested that, as his men had not brought lunch with them, they would load the truck while the others had their meal. Some fast work followed and, as 'Bailey George' concludes, 'Thus 5 Fld Park became the proud owners of the only two wheel barrows in occupied [Italy](#)'.

[Bari](#) was the disembarkation port for all vehicles. The eagerly awaited first vehicle flight was driven down to [Taranto](#) on the 29th, the day after the big storm there.

Heavy, banked-up black clouds were the forerunners of a wild night with lashing rain, lightning flashes thirty-five to the minute, and continuous peals of thunder.

Twelve barrage balloons came down in flames. The rain continued all the next day, with another but lesser thunderstorm at night. Washed-out bivvies and ankle-deep mud drew comparisons with the [Western Desert](#), which now appeared almost Elysian in retrospect.

It was, to borrow a musical phrase, the opening movement of a theme with variations—the theme was mud and the variations snow and slush. They became as much a part of a sapper's life in [Italy](#) as had the searing dust-storms of North Africa.

The engineer component of 2 NZ Division began in the middle of November to move towards the war, 200 miles away, and it was soon realised that 200 miles across the desert and 200 miles across [Italy](#) were not the same. They crossed valley after valley beyond counting, along roads built by Italian civil engineers who were skilled beyond the ordinary in herring-boning a road up a range and down the other side, thereby doubling the distance in running miles. Another novelty to the desert-dwelling Kiwi was the sight of villages and quite considerable towns perched insecurely on the sides and tops of hills. There was argument as to whether the roads went up the hills because the villages were there, or whether the villages were there because the roads went over the ranges.

There were two staging areas on the way to the north— [Altamura](#) and [Lucera](#), one near [Bari](#) and the other beyond [Foggia](#). It was at the latter place that shattered bridges, cratered cross-roads and blown-off hairpin bends were proof that the German sapper had not lost his cunning in demolitions.

He had evidently not expected to return to southern [Italy](#), for there was scarcely an undamaged culvert or an undisturbed electric power pole. On important railway lines every rail was cut by explosives and miles of sleepers broken by a giant rail-mounted roter. The German sapper is a very methodical person.

Sixth Field Company was the first to move forward (8 November) and at [Serracapriola](#) left the main coastal highway for an inland secondary road that might be the Divisional supply route. By the time they reached the mountain-peak village of [Montefalcone](#) (13th), where [No. 1 Platoon](#) was to build a deviation through its shattered streets, the sappers had become used to seeing the rest of the convoy apparently moving in opposite directions on five levels below them. The platoon took

up its quarters in the Italian Mountain Police barracks, a two-storied building of forty rooms housing one dead donkey and three live policemen. The village was built on the end of a spur and the road followed the contours of the spur like a recumbent letter U, and was of course blown in the most awkward place to repair. Kiwi ingenuity, however, converted a major construction job into a trivial affair of a few hours.

It so happened that the two legs of the U were joined by a narrow, winding street of stone steps, flanked by the usual stone, multi-story buildings of the country. The grade was not steep as steps go, about one in four, and it was only a matter of blowing up a building or so to ease the corners, then using the resultant rubble to smooth out the steps and Jerry's work was quite undone.

Lieutenant Hermans, whose platoon was doing the job, wrote:

'To maintain peaceful relations, I called upon the Burgomaster who called together the equivalent of the town board, and over a nice drop of vino I explained what was going to take place and why in my meagre Italian and best sign language.... However to make things quite clear I took the Burgomaster along to see a jack hammer busily drilling a hole in the stone wall of one of the buildings and a sapper standing by with a plug of gelignite which was obviously intended to go into the hole. It didn't take him long to see that there were going to be lots of holes and a big bang so the evacuation took place expeditiously.'

The sappers worked to a background of distant thunder which the old hands knew for what it was. They were back in the war again. The deviation was finished the next day and took just eight working hours. The platoon then packed up in readiness to rejoin the Company near [Furci](#), where it was maintaining a crossing over the Fibrento stream and doing general road improvement.

During the rainy season in [Italy](#) the engineers had continually to impress on other units the necessity of getting water off the roads at the earliest possible moment by opening and keeping open the side drains. When drains were cleared early the roads lasted fairly well, but if clearance was delayed they broke up rapidly. Eventually, units camped along a road were made responsible for the maintenance of drains on their frontage.

'Road maintenance' and 'general road improvement' are terms that will be met frequently in the story of the Italian campaign. They are convenient words but very unrevealing. Major Duncan White lifts the curtain on maintaining the donkey-cart-wide secondary roads in south-east [Italy](#):

'The traffic was intense and it was difficult to keep the roads open, particularly at night, when heavy vehicle followed heavy vehicle along the same rut. As they bogged down following vehicles would attempt detours and in the morning there would be bogged down vehicles over a wide area. Winch trucks worked day and night to pull them through. We cut down many acres of trees for corduroy construction over the worst spots. Returning traffic tended to force heavy traffic off the narrow metalled portion of the road and shoulders collapsed. We investigated construction of lighter roads for return traffic and this was profitable but difficult to direct at nights.... Road making was a very difficult task during wet weather. Before the road work was well begun transport would begin to attempt its passage. Metal trucks had to compete with other traffic and turn round was slow. Heavy laden ammo and petrol trucks would follow each other in the same ruts. Armoured cars and Sherman tanks passed up to the front and then the squadrons they relieved would pass back again. The existing roads in [Italy](#) were thoroughly compacted by centuries of use but their narrow width made two way traffic difficult. Vehicles were frequently capsized or bogged on the unmetalled verges.'

Major White's mention of corduroy calls for a short explanation. It was the name given to a method of covering unmetalled lengths of road with timber, split roughly to size and so providing a platform for the passage of wheeled vehicles. His mention of tanks and the damage they caused to the roads was echoed by Major Currie:

'The tanks were dynamite on the macadam roads. They tore them to bits, particularly the shoulders, and quickly made a two way road into a one way one. At corners they delighted in skid turning by braking harder than was necessary on one track and moving on the other. They were fair cows.'

The sapper term for a capsize was 'to go for a Victory Roll'.

To return to [No. 1 Platoon](#), 6 Field Company. Sergeant Begbie's diary describes the route already followed by the Company:

'Moved off at 0800 with chains on all vehicles. We didn't have any for our own Dingo (my bus). Boy what a trip. Travelled about 20 miles and we could still throw a stone at [Montefalcone](#), the village we had just left. Cold miserable trip. Climbed thousands of feet. Pulled into an old roadhouse and brewed up.... another 15 miles in pitch darkness over a narrow mountain road (four hours) right up to our artillery. A lively duel was under way. He sent back a patrol to blow a bridge he had missed and our infantry had a clash with him. <sup>7</sup> They drove the Jerries off. He tried to bomb it and is now shelling it. Crash Crash Crash. He is at it again. We have to cross it at 0900 and go six miles further.'

Eighth Field Company took over the area on the 16th and 6 Field, with headquarters at [Casalanguida](#), spread along the road to [Atessa](#) and worked on several nasty road craters in addition to maintaining a very difficult deviation where the bridge over the Osento River had been blown. An unending line of supply trucks, plus the vehicles of 6 Brigade which went through on the 18th, kept the sappers and bulldozers of 5 Field Park Company, which had joined the column at [Bari](#), working in shifts around the clock.

It was near the Osento deviation on 17 November that the engineers suffered their first casualties in [Italy](#) when Lieutenant [Dahl](#) <sup>8</sup> (5 Field Park Company) was killed and two sappers of 8 Field Company were wounded, one fatally.

The Division had assumed responsibility for a sector occupied by [8 Indian Division](#), which was sidestepping to the right to thicken up the line and make room for a foundation member of Eighth Army. Nineteenth Indian Brigade, now under [General Freyberg](#)'s command, remained on the left flank to mask the entry of the new gladiators, and so continued to shepherd the enemy towards the [Sangro](#) while 6 Brigade deployed for a thrust across that river.

On the 19th 7 Field Company took over road maintenance from [Gissi](#) to [Atessa](#), 8 Field Company moved forward into the Osento River area and 6 Field Company closed up to 6 Brigade, checked road verges and filled craters. The enemy had retired beyond the [Sangro River](#) on the New Zealand axis of advance, and the intention was to follow him at the earliest possible moment. In furtherance of this intention Lieutenant [Hunter](#), <sup>9</sup> with a section from his platoon, went to look for a suitable crossing place for the support-arm vehicles. They followed a road along the

infantry FDLs until they came to a farm access track and did a mine-sweep to the riverbank.

'This was a slow business as we picked up an awful lot of rubbish with the detectors. I had the section partly as a covering party and we were lucky to spot a Jerry patrol before they spotted us—for a relatively large party we weren't heavily armed (only two Tommy guns) and we were spread out a bit. I felt like a hen with a flock of chickens trying to shut them all up at once and keep still. The next night I went down again with an NCO and 3 or 4 sappers. Got out on to the river bed and found a reasonably satisfactory spot for the bridge and then turned back to assess the earthworks necessary to get the bridging trucks in.'

The situation at that date was that the Eighth Army, on the east coast, had made better progress than the Fifth Army, on the west side of the [Apennines](#) which divide [Italy](#) as the Southern Alps would the [South Island](#) if they were more centrally situated.

The mainland of [Italy](#) lies north-west to south-east so that the battle line ran almost due north and south, with 78 Division on the Adriatic coast, [8 Indian Division](#) on its left, then [1 Canadian Division](#) to the south among the hills and, still farther south, 5 Division in touch with the right of Fifth Army. The intention was to capture [Ortona](#) on the coast and spread inland while [General Freyberg](#) sent his force straight up to [Chieti](#), thence inland to [Avezzano](#), which would create such a threat to [Rome](#) as might force an enemy retirement on the Fifth Army front.

We, looking back, know that it did not turn out that way, but that was the plan when 2 NZ Division began to square up to the valley of the [Sangro River](#).

The Division was well ahead of the Canadians on its left in the foothills, and in consequence had an open left flank and a belligerent enemy occupying the [Perano–Archi](#) ridge, which was roughly parallel to the New Zealand axis of advance. It was necessary to remove the menace before the Canadians would be able to do so, and 19 Indian Brigade supported by 19 Armoured Regiment cleared the enemy off the ridge and across the [Sangro](#).

Some description of the [Sangro](#) valley, the southern edge of the German Winter Line, may be useful at this point.

The New Zealand sector of the valley was some two miles wide, well wooded with olive and other trees and studded with farmhouses as, of course, are the hills behind and before. The Sangro, like so many New Zealand waterways, runs in a shingly bed up to a quarter of a mile in width, with the main water-course meandering about. Nearly all the flat land is on the south side of the river, which follows the grey bluffs of a rolling plateau and is subject to flash flooding after rain in the hills. A road on either side skirts the valley floor; the one on the far or enemy side leaves the main highway east of [Casoli](#), crosses the Aventino River and Route 84, turns north, then skirts the [Sangro](#) for about two miles and finally winds its way up to [Lanciano](#). It is generally referred to as the lateral road. The [Strada Sangritana](#) on the south side of the valley ran across the Divisional front, then climbed the [Archi](#) ridge and so moved off the New Zealand axis. A connecting road between the [Strada Sangritana](#) and Route 84 crosses both the [Sangro](#) and Aventino above their confluence.

Fifth Field Park Company moved forward in sections as its equipment was unloaded. By 17 November Bridging, Workshops and Field Stores Platoons were camped near [Gissi](#), with two dozers working forward under the direction of Major Currie and the [Mechanical Equipment Platoon](#) still waiting for plant at [Bari](#).

[Bridging Platoon](#) had handed in its obsolescent Small Box Girder set and Albion trucks at the RE dump at [Foggia](#) and collected thirteen trucks loaded with the new Bailey bridging components. It was really divisional first-aid equipment, because any extensive bridging operations would use more than thirteen truckloads of components. On demand, non-engineer transport would bring forward the required amount of bridging from the Corps Bridging Dump.

Three very important developments in military engineering during World War II were the exploitation of four-wheel-drive vehicles, the use of mechanical equipment, and Bailey bridging.



THE SANGRO FRONT: 2 NEW ZEALAND DIVISION'S AREA,  
NOVEMBER 1943 - JANUARY 1944

### **the sangro front: 2 new zealand division's area, november 1943 - january 1944**

The Bailey bridge was the most recent addition to sapper facilities, and could be assembled quickly and in various ways for differing loads: it could be used for orthodox fixed bridging, for floating bridging where anchored boats or pontoons form the piers, or for suspension bridging where a gorge is too deep to build midway supporting piers. It will be appreciated that whereas a civil bridge may take months to erect, the military counterpart, particularly in the battle areas, must be erected in a matter of hours, often at night under fire and without lights. Methods of construction must necessarily be simple and foundations elementary.

The panel is the basic member of a Bailey bridge and might be likened to a heavy steel farm gate 10 ft by 5 ft 1 in., strengthened by diagonal bracing. Panels are easily connected to form a continuous girder in multiples of ten feet. The strength of the girder may be increased by bolting together up to three connected panels side by side (known as trusses) and two panels on top of the trusses (known as storeys). The 'truss' and 'storey' is generally omitted in description, so that a 'single single' is the lightest combination possible and a 'triple triple' the heaviest. The British divisions generally built a 'single single' first and strengthened it later, but the New Zealand-built bridge was almost invariably made strong enough to carry a Sherman tank, for the paramount need of getting support arms, especially tanks, up to the infantry had been seared into the souls of the Kiwi sappers. The span lengths and strengths for a Class 30, or Sherman tank, bridge range from 50 feet of single-single to 200 feet of triple-triple.

The normal method of construction was to build sections on rollers on the home bank and push them forward. A light launching nose was first built and then the main bridge, for it is vital to have as much weight of bridge on the home bank as that being pushed over the river. The weight of the bridge proper thus balanced the launching nose, whose length depended on the gap to be crossed. When the span was completed the launching nose was dismantled and the bridge jacked down off the rollers to the base plates. After the ramps are positioned and the bridge decked, it is ready for traffic.

Many and varied were the uses devised for sections of Bailey bridging; lengths were laid flat across swampy areas too soft for corduroy, crib retaining walls were built with sections and demolished road elbows were countered by half-bridging, that is, erecting girders on one side and fitting the transoms into the bank on the other. But perhaps the most characteristic Kiwi improvisation was the building of strong pens in which to fatten the odd porker allegedly found wandering at large.

This is a convenient point at which to outline the system of supplying bridging in the field as practised in [Italy](#). The [Bridging Platoon](#) of 5 Field Park Company carried sufficient components to bridge an 80 ft gap. This was a ready-to-use supply and, as soon as it was used, was replaced from the Corps bridging dump. Where the situation demanded the provision of more bridging than the platoon could carry, the CRE drew his requirements directly from the Corps dump. In such a case the components, to avoid reloading, were carried to the bridge site in NZASC vehicles under the control of 5 Field Park Company.

To return to the [Sangro](#) valley. Sixth Brigade had taken over the right half of 19 Indian Brigade's sector during the night 19 - 20 November preparatory to a dash through the knee-high river the following night to secure a bridgehead in the Winterstellung. The Indians, by forcing the evacuation of [Archi](#) on the same day as 6 Brigade moved into position, had cleared the south bank of the [Sangro](#) as far as the Aventino River junction. The departing enemy left a trail of destruction behind him. Anybody with time on his hands to enjoy the spectacle could have watched several spans of the bridge over the [Sangro](#) erupt smoke and crumble into rubble. It is significant of the changed role of the engineers that a bulldozer driver was awarded an MM before the New Zealand infantry had fired a shot. A multiarch masonry bridge

over the 100-foot-wide Piranello stream at the bottom of the [Archi](#) ridge near the [Perano](#) railway station had been demolished, and it was urgent that a crossing be put in to get supplies forward to 19 Indian Brigade and to bring out the wounded.

Major Currie, who was acting as forward staff officer to the CRE, was told to take a bulldozer and get a track down the 12 ft high riverbanks and a road across the shingly bed. The dozer, operated by Sapper [Green](#),<sup>10</sup> was dozing the rubble of the masonry bridge into an Irishman's bridge when the dawn came and the enemy opened up from across the [Sangro](#) with a high-velocity 75-millimetre gun. It takes more than ordinary nerve to operate a noisy bulldozer under fire, for, like a mine detector operator, the driver cannot hear approaching shells and dive for cover. Green carried on until he was taken off the job before he was shot off, and Major Currie 'reced' for another crossing out of direct observation. This detour was later known as Currie's Deviation. All that day Green towed urgent traffic across the Piranello in spite of searching fire and then worked for six hours non-stop to complete the deviation.

Heavy rain all through the night of the 19th turned the knee-deep stream into a waist-high torrent through which infantry could not wade, and 6 Brigade's operation was postponed. It is therefore not necessary to traverse the sapper work that would have been involved, except to note that 8 Field Company handed over the Osento deviation to 7 Field Company and was spread along the road between [Atessa](#) and the [Sangro](#) valley.

As day followed day, with the river never low enough to wade, postponement followed postponement and plan followed plan. Eventually the whole Eighth Army plan was recast, giving the New Zealand Division the mission of forcing a bridgehead on a two-brigade front and seizing the road from [Castelfrentano](#) to [Guardiagrele](#), some two miles beyond the [Sangro](#).

Some idea of the solid pick-and-shovel work done by the engineer units to keep the roads open for traffic may be obtained from extracts from a diary kept by Lieutenant Veart of 7 Field Company—the conditions are applicable to all sapper units:

'20th. Raining heavily and road cut up badly. Darky [Clements](#)<sup>11</sup> forward

repairing culverts, remainder on road maintenance. Dave McCormick<sup>12</sup> attached so sent him away to obtain timber. River banked up and looked like we'd lose road but managed to put in temporary culvert and divert water. After tea we opened up road and worked until 0300 hrs and put in large culvert.

'21st. Roads very bad after rain. 120 tanks moved through and ripped roads to pieces.... Two [compressors] breaking up concrete from demolished arches and placing on roads. Worked for several hours after tea filling in ruts.

'22nd. Sprs Calder<sup>13</sup> and Redwood<sup>14</sup> [ sic] working 60 Ities on road drainage west of bridge. Ities from 6 to 60 but good workers on the roads. Solid line of traffic going through all day. Gen. Freyberg ordered a quad pushed over bank as it blocked the road. Road still bad from tank ruts.

'23rd. 5th Bde moved in all day. Div Provost taken over control of road from Gissi to bottom of hill. Road in bad state from Castilone to Atessa turn off. Freyberg up and down all day.

'24th. 28 Maori Bn worked on road all day. Solid line of transport passing through all day. No chance of working metal trucks.... Duncan<sup>15</sup> wants three tonners of corduroy sent forward tonight plus working party to stay sine die.... 5 Trucks and 100 men from A.A. [Anti-Aircraft Regiment] arrived today under command. Men finding it tough working all day and picquet every night. Must see Provosts. Total men today on Road. 1 full Bn. 80 A.T. [Anti-Tank Regiment], 100 A.A., 200 Ities, 40 Div Cav, 60 sappers, 14  $\frac{3}{4}$  miles, 1 man 20 yds.'

The Osento ford was a worry to many others besides the sappers who had to keep it open. Mile-long traffic jams upset the timetables of the supply services, the tempers of the drivers and the plans of the commanders; 21 Battalion had to camp in the riverbed overnight while it waited its turn to cross.

Major White was instructed to replace the demolished three-span concrete bridge with a Bailey as soon as the material arrived, and truckloads of components were worried through the almost stationary line of banked-up vehicles. No. 1 Platoon (Lieutenant Concher) started on the Company's first operational Bailey, 150 ft triple-single, at 6 p.m. on the 22nd and worked through the night. It was a night full of

trouble, for the sappers had to learn by trial and error; Company Headquarters turned out to help the weary men and the first vehicle passed across at three o'clock that afternoon.

It was not the end of the sappers' responsibility, however, for tanks still had to use the ford. The drivers viewed the track down into the rocky gully with distaste, and with a childlike faith in the capacity of the field engineers to work miracles, were quite ready to risk their necks driving a Class 30 load over a Class 12 bridge.

The previous day Headquarters 5 Field Park Company, Workshops and Field Stores Platoons had shifted farther along the [Atessa](#) road almost into the [Sangro](#) valley, and Mechanical Equipment had joined [Bridging Platoon](#) at [Gissi](#). The column, led by a road grader with a top speed of 15 miles per hour, had given the sappers plenty of time to admire the scenery. By the time they reached the hilltop village of [Gissi](#) they were sick of scenery.

If, during the Italian campaigns, little mention is made of 5 Field Park Company, it is because of the changed circumstances. In general a divisional field park company is not an operational unit in the sense that field companies are. In North Africa 5 Field Park Company had three sections, one of which, bridging, was rarely used for that purpose; in [Italy](#) it had a stores platoon, a workshops platoon, a mechanical equipment platoon and a bridging platoon, all of which were in constant employment.

The Stores Platoon was the agency for the collection, holding and delivery of engineer stores, not only to the field companies but to the Division as a whole. [Workshops Platoon](#) could manufacture almost anything and also assisted the Light Aid Detachment of the attached Electrical and Mechanical Engineers. The [Mechanical Equipment Platoon](#) was the custodian and operator of the earthmoving plant. The [Bridging Platoon](#) was a holding sub-unit and delivered the goods to the field companies for building.

It should be mentioned in passing that a divisional group of Canadian engineers with their CRE <sup>16</sup> and headquarters had been placed under command of CRE, 2 NZ Division, in order to gain some battle experience before joining their own people. They were employed on road work in the rear of the New Zealand sappers. Fresh

from England, they had been trained and disciplined to such an extent that Kiwi engineer officers could not be induced to go within a mile of their camp. To be saluted by working sappers was an unnerving experience.

Brigadier Hanson is interesting in this connection:

'The Canadians were quite punctilious about saluting and the Sappers always addressed their officers as "Sir" as compared with our sappers who called their junior officers Jack or Bill as the case might be, and the old soldier sappers often addressed me as "Boss". The New Zealand Engineers had really become a family and I do not think any of our officers would have had it differently. As for myself, I felt it was quite an honour to be freely accepted as the boss.'

The changed situation wherein [2 New Zealand Division](#) was to attack on double the frontage previously envisaged entailed the moving of the left flank to a point opposite the Aventino River junction where, in the triangle between that river and the [Sangro](#), the enemy had established himself after blowing up the [Archi](#) bridge. His eviction was essential to a successful crossing and 19 Indian Brigade, still under command of the Division, was asked to arrange it.

A party of sappers from 5 Field Park Company (Lieutenant [Mountain](#) <sup>17</sup>) lifted mines from the area and put four ropes over to help the infantry cross (22 - 23 November).

Only half the brigade was safely on the enemy side when the river flash-flooded and debris carried the ropes away so that the brigade was forced to fight with its back to the river. After dark another 5 Field Park Company party (Lieutenant [Cuthbertson](#) <sup>18</sup>) tried to get more ropes across but the water was too high. The CRE then told Captain Morgan to get a folding boat from Field Park and establish some means of crossing the river for the Indians.

'I went to Fd Park and woke the Sgt of Bridging Pl. He gathered up a party of about 20 and we set off with the FBE. We carried the boat on our shoulders along the lateral road until we got to the rear of the demolished ( [Archi](#)) bridge. We then found that a route had been established across the remnants of the bridge.'

Cuthbertson had in the meantime been joined by Lieutenant O'Leary. The pair

had made a 'recce' of the blown bridge and found that it was possible to cross the river by scrambling over the fallen masonry, so giving the brigade a supply line again. The folding boat was hidden from view on the side of the road and its bearers returned to their bivouacs. The enemy for his part decided to withdraw from the disputed triangle. [Mechanical Equipment Platoon](#) had by this time reported in to 5 Field Park Company headquarters and as soon as it was dark (24th) the dozers, commanded by Lieutenant Gowan, filled demolitions along the [Strada Sangritana](#). The noise seemed to upset the enemy, who repeatedly but unavailingly shelled the area as long as the work went on, which was nearly all night. The German gunners had, however, scored a minor point during the day. Field Stores area was given a thorough going over and a direct hit on a truck loaded with explosives wrecked three more vehicles. The drivers luckily were away at lunch, but Stores Platoon decided to move back somewhat. There is no sense in getting shot up when it is avoidable.

Prior to the issue of the final operation orders for crossing the [Sangro](#), work was done nightly on 6 Field Company's existing farm track and in forming another from the junction of the [Atessa](#) road and the [Strada Sangritana](#) to the proposed bridge site on the 5 Brigade front. This junction and the [Atessa](#) road were shelled nightly, to the annoyance of the truck drivers bringing in stores and to the personnel of CRE Tactical Headquarters situated in an old shed half a mile up the [Atessa](#) road. But for some reason the actual roadmaking towards the river was unmolested. Night after night, wet or fine, trucks brought up and dumped metal and corduroy while dozers roared and cleared and spread and generally advertised their presence to high heaven and enemy patrols. What the enemy thought about the new work he could see each morning is not on record.

There were to be two types of assault bridge—a Bailey and a folding-boat, for the upper site was not suitable for a Bailey of single-span construction nor were the sappers trained in Bailey pontoon bridging. They had had little enough practice with the new equipment; in fact, the most proficient were the cooks, batmen and office staff of Engineer Headquarters who, for practice, had put a couple of small Baileys down in daylight and in their own time.

Eighth Field Company, which was to build the Bailey, had two RE sappers attached, Lieutenant Franklin and Sergeant Falkingham, whose practical advice was of the greatest value to the comparatively inexperienced company. Aerial photos had

disclosed wheel tracks across the open ground between the lateral road and the north bank of the river, and the night before the attack Lieutenant Farnell and two sappers with an escort of a pair of infantry Tommy-guns crossed over; they spent five hours reconnoitring a route from the bridge site around some stretches of floodwater towards the tracks, which suggested the best going over some two hundred yards of swampy paddock between the riverbed and the lateral road. They were very close to the latter when an enemy patrol betrayed its presence by a liking for tobacco. A cigarette was lighted in the shelter of the tree-lined road and the sappers, with the agility of seals, slid into a water hole; they were practically deep-frozen before it was safe to withdraw.

Back at the river the actual width of water to be spanned had to be determined. The current ran against the home bank, which was hard shingle between three and four feet above the water level, but on the enemy side the bed shelved gently. The actual width of water was 110 feet, determined by Farnell standing as a sighting post, plus a little elementary geometry by those on the home bank. The maximum span for a Class 9 bridge, the lightest in weight and the quickest to build, is 90 feet. The tanks were not to use this bridge but were to cross further downstream, where a shingle bank divided the water into two smaller streams, but the problem of how to bridge a 110 ft gap with a 90 ft bridge remained. The shelving bank supplied the answer; Farnell reported that the water was quite shallow on the enemy side for about thirty feet, and the end result was some modifications that would have made the bridge inventor's hair stand on end. Incidentally, Farnell's conduct on this night was the forerunner of others that earned an MC.

Two rainless days had lowered the [Sangro](#) sufficiently for the infantry to wade across and the assault was finally fixed for the night 27 - 28 November. Eighth Field Company's timetable and organisation for the building of the first New Zealand assault Bailey bridge was, briefly:

6 p.m. Captain Armstrong with two bulldozers and Lieutenant [Whelan](#)<sup>19</sup> with two winch trucks to be in suitable spots along the access road ready to haul vehicles through known bad spots; point was given to this detail by showers earlier in the night.

7 p.m. The bridging column, twenty-two trucks, an unloading party and spare

drivers (Lieutenant 'Bailey George' O'Leary, 5 Field Park Company) to spread along the track in pairs at 50 yards' intervals, with the head of the column and wireless truck 500 yards from the bridge site.

1 a.m. The bridging party (Lieutenants Franklin, RE, Fisher<sup>20</sup> and 43 other ranks) to be dug in at the bridge site by 2 a.m. Lieutenants Farnell and King,<sup>21</sup> each with 16 sappers who were to light the track to the lateral road and to sweep for mines along 5 Brigade frontage respectively, to be at bridge site at the same time.

2.45 a.m. Barrage opens.

3.15 Preparation of bridge site commences.

3.30 Infantry on first objective.

3.45 King and Farnell parties cross river. Bridging trucks move forward and unload. Captain Armstrong to get two bulldozers across as soon as possible and work on approach track to lateral road.

The intention was to rest the end of the bridge proper in the shallow water and heavy planks were lashed to the bottom of the first bay to take the place of the usual footings. The bays of the launching nose were retained and decked over the remaining stretch of water to solid shingle. The result, ready for traffic at 7.30 a.m., less than four hours' work, was a rather rakish looking bridge with a decided grade.

There was no enemy interference until first light, when the area was shelled intermittently but the work went on. Why the bridge was suffered to stand unmolested is known only to the German gunners. Perhaps the peculiar angle of the structure suggested that it had in fact been demolished and that the traffic was passing through the river. And perhaps the British spotter planes and the New Zealand artillery had something to do with its continued existence.

To return to 6 Field Company and the night following Lieutenant Hunter's second 'recce' of the approach to the river crossing. After dark, Lieutenants Hunter, Hermans and Sergeant Begbie met a covering party from 24 Battalion and went down to the river to select the site for the bridge and make sure that vehicles would be able to get out of the riverbed on the far side.

The sappers, with an infantry runner, went upstream on their business, leaving the covering party to follow if required. A suitable site was soon located and the runner was sent back for the infantry party. Meanwhile the sappers, while sitting on the shingle, were 'cheered no end by seeing and hearing a Jerry patrol clamping over the stones on the far side of the water course'.

Two explosions shattered the night and when the covering party arrived it was less three killed and three wounded. The engineers, who invariably walked in single file and stepped high to avoid trip-wires, had gone safely through a minefield while infantry, used to working on a wider front, had had the misfortune to trip at least two mines.

The river was too high to wade but the length of the bridge required was determined. The sappers and their depleted escort returned along the shingle riverbed to avoid the mined area, and when it was necessary to leave its protection Sergeant Begbie went ahead and prodded a path with his bayonet.

Aerial photographs later cleared any doubts about the feasibility of getting trucks out of the riverbed.

The peculiar names bestowed on these two assault bridges, 'Heartbeat' for the Bailey and 'Lobe' for the folding-boat, are accounted for by the fact that the code-names for the assault over the [Sangro](#) were all of an anatomical nature. Possibly the staff officer responsible had access to the medical officers' library and drew his inspiration therefrom.

The following week, in addition to the nightly work on the access road to the river, was taken up with mine searching and timber cutting for corduroying. [Mechanical Equipment Platoon](#) was working a shingle pit about a mile from the river and had to operate a dragline in the dark and without lights. The dumper trucks when loaded were awkward to drive and more often than not slithered off the track and bogged down before reaching their destination.

The actual bridging work was the responsibility of [No. 1 Platoon](#) and the material was to be delivered by 5 Field Park under Major Askin's command. [No. 2 Platoon](#), which had completed all the preliminary work entrusted to it—locating the

route from the end of the access road to the bridge site and clearing mines from a space sufficient for the manoeuvring of trucks—was, less a mine-clearing party (Lieutenant [Skipage](#) <sup>22</sup>) for the lateral road, to remain close by the bridge site in reserve. [No. 3 Platoon](#) was to stand by in readiness to accompany another 5 Field Park truck column loaded with Bailey components across the folding-boat bridge. It was expected that the bridge that spanned the [Gogna](#) creek where it cut across the lateral road might be blown and would thus hold up, or even prevent, the tanks from getting to Route 84 and thence towards the fighting.

Sixth Field Company was dogged by misfortune almost from the start. The night was dark with rain clouds obscuring the moon and the track was slippery from earlier showers. The first bridging truck skidded off the road and had to be towed back again; then the leading dozer collided with a farm building that skirted the track. The dozer, like the other vehicles, was being driven throttled well back and in consequence the engine stalled. The sappers knew that the infantry were waiting not far away and they remembered the ear-piercing noise made by the starting motor of their bulldozers. For fear of bringing down fire on men whose task was dangerous enough as it was, the sappers tried to tow the stalled dozer into life but without success. It was decided to wait until zero hour.

The roar of the barrage, when it opened at 2.45 a.m., would have drowned the noise of every starting motor in [Italy](#). A track was soon formed into the gravel riverbed but the bridging trucks were quickly in trouble with patches of soft going.

At that period the Divisional bulldozers had not yet been fitted with towing winches, and an attempt to haul the leading truck through the soft going ended with the tow rope breaking and the dozer going through the shingle crust and bellying down. The trucks eventually got through under their own power, but the result was that the bridge-building did not start until 6.30 a.m.

The mine-searching party left before the bridge was finished and the rest of [No. 2 Platoon](#) was sent back to its area as there appeared to be no employment likely. A message that the infantry had captured the [Gogna](#) bridge intact but would like somebody to remove explosive charges sent Lieutenant Hunter and Corporal Tyler <sup>23</sup> across the river and up the hill through a sea of S-mines. They saw smoke shells bursting over the river before they crossed the brow of the hill, located the bridge

and, after checking for booby traps, removed the detonators and tipped the explosives down the gully.

The components of the folding-boat bridge were a shore bay, one trestle bay, one half floating bay, two full floating bays on rafts and one half floating landing bay. The landing bay was being floated into place when shells burst over the river a little upstream; then four ranging smoke shells formed a square above the bridge. The sappers carried on. Some were manoeuvring the landing bay into position, some were carrying deck panels out to the far end, others the shore transoms and still others were working on the far bank.

Lieutenant Hermans, directing operations, 'was standing at that end when there was an almighty bang behind me quickly followed by several more. I turned around to find men scattered everywhere—some on the bridge, some on the river bank, some in the river, some dead, some wounded, some not touched. The place was a shambles. I dashed back across the bridge and found that it had had a direct hit on the near shore span just as half a dozen men had been carrying the last sections over. They were all killed instantly and one or two who were carried out of the river were so badly wounded that they died within minutes.'

The wounded were attended to and those able to move were helped into whatever shelter could be found, for in addition to the shellbursts enemy planes were now spraying the area with bullets.

The Company wireless car had come down to the end of the track at daybreak and on its own initiative sent for an ambulance, so that when Hermans arrived to ask for medical aid the MO was already attending the walking cases. The ambulance orderlies, some 3 Platoon men, Lieutenant Hermans and Corporal 'Chick' [Goodwin](#),<sup>24</sup> who had already brought one man out, returned for the rest of the wounded.

The platoon commander remained at the bridge directing the stretcher bearers. It was two hours before the last of the casualties were away, and then, after a final search, Hermans found that one of the apparently dead sappers was still alive. A sapper whose name cannot be discovered had remained with Lieutenant Hermans and the pair improvised a stretcher with a couple of folding-boat oars, a length of rope and some great-coats. The bridge area was still under fire as they carried out

Sapper [Hume](#)<sup>25</sup> until a stretcher party from 3 Platoon took over. It was all in vain for [Hume](#) died before he could be attended to. Lieutenant Hermans and Corporal Goodwin were later decorated with the MC and MM respectively. With eleven killed or died of wounds and eight wounded, practically half the platoon became casualties in those few minutes.

The folding-boat bridge, under orders from Colonel Hanson, was abandoned for the time being, but [No. 3 Platoon](#) stood by and completed it after dark. The bellied bulldozer was also extricated.

The first fighting vehicles over the heartbeat bridge were the armoured cars of the Divisional Cavalry, which had the mission of protecting the right flank of the New Zealand advance.

'They tore the unmetalled track on the far side to pieces in no time. Many of them had to be towed through with the tractors and it was not long before the whole place was a bog and we were snigging every vehicle for a few hundred yards. There were only two tractors available and it was slow work.'<sup>26</sup>

The sappers' work in bridging the [Sangro](#) might have been nullified in the bog between road and river had not the CRE been waiting at heartbeat so that he could report to [General Freyberg](#) when traffic was moving forward. Immediately below the bridge was an island of shingle that split the water into two streams, with the north branch veering towards and so shortening the distance to the lateral road. Colonel Hanson marked a new track along the shingle riverbed and diverted the trucks carrying corduroy so that within a matter of hours there was a reasonable road from the bridge to the lateral road.

Seventh Field Company took over the maintenance of the assault bridge and access roads during the morning of 28 November while 8 Field Company went back to their billets for a rest. Major Marchbanks had already been informed that his company would build a more permanent structure, a 150 ft Bailey adjacent to the assault bridge. According to the book it should have been a triple-double, but after an examination of the site and calculations concerning the actual tensile strength of the materials involved, Colonel Hanson agreed that a double-double would take a load two tons heavier than a Sherman tank, which was the heaviest vehicle in 2 NZ

Division.

By working six-hour shifts the bridge was opened for traffic in thirteen hours, a total of 678 man hours. Finishing touches of white paint on the ribands, flexible duckboard nailed to the decking and several inspections by American planes with machine-gun accompaniment completed the structure, known officially as Bridge 6 and to the troops as tiki bridge.

It must be mentioned in a spirit of forgiveness that an occupational hazard to which Kiwi sappers grew accustomed was that of being shot up by American pilots. They did not seem to be strong on map-reading, and in a country of valleys and ridges identification from the air would be difficult even for experienced pilots.

Major Marchbanks, who was something of a perfectionist where bridges were concerned, was not quite satisfied, and while 7 Field Company and most of [Mechanical Equipment Platoon](#) were improving the approaches, gabions<sup>27</sup> made with rocks wrapped in coarse wire-netting found in the [Archi](#) railway goods sheds were placed in position to protect the abutments. The bridge was finally anchored with wire ropes.

Another bridge-building project had been assigned to 8 Field Company by this time (1 December) and the unit, less [No. 3 Platoon](#) completing the gabions, moved to the [Archi](#) railway station. It will be remembered that the enemy, after being thrown out of [Perano](#), had moved his vehicles across the [Sangro](#) and blown the bridge behind him. This structure, known as the [Archi](#) bridge, was to be rebuilt, for the road across connected with Route 84, which in turn was the main line of communication with the infantry now feeling towards the ridgetop town of [Castelfrentano](#).

The [Archi](#) bridge over the wandering [Sangro](#) consisted of fifteen spans of brick arch with concrete backing and rubble filling supporting a macadam roadway. Eight arch spans had been completely and five partly demolished and two were intact. The job was, shortly, to bulldoze a shingle roadway in place of the destroyed arches and to make use of the partly demolished spans where the charges on the crown of the arches had failed to do the job properly.

The preliminary work of searching the area for mines and assembling material

took up the 2nd, 3rd and 4th December, by which time the dozers had completed all but one span and 3 Platoon had returned after finishing the gabions at the tiki bridge.

Besides the [Archi](#) bridge there was another carrying Route 84 over the Aventino that had to be replaced before the supply route was complete. This job was given to the CRE of 5 Canadian Armoured Division, who detailed 10 Field Squadron to carry out the work. There were mines in plenty around the site and the Canadians obtained some good experience finding and lifting them, but not without paying a price in casualties.

The Canuck sappers had hard luck with the Aventino bridge. The gap was too great for a single span so a Bailey pier was built, but during the launching the end thrust partially collapsed the pier. They had a difficult job in salvaging the bridge and rebuilding the pier but successfully completed the project.

[No. 1 Platoon](#), 7 Field Company, will long remember the night of 4-5 December. They were camped on the south side of the river near tiki bridge, and Lieutenant [Prosser](#),<sup>28</sup> checking over his platoon before turning in, found ASC drivers standing around halted ammunition trucks. A flash flood had come down in the darkness, the water was within a foot of the decking, a 12 ft gap had been cut through the north approach and the gravel bank on which the north end of the bridge had been let down was in danger of being swept away.

I called Sgt [Dacey](#)<sup>29</sup> to turn out the Platoon and called HQ on RT asking Major White to call out all Coy transport and come to No. 1 lines. (I was speaking in clear and could not give any explanation.) Major White arrived with the transport which was put to work carting river boulders to the bridge. Fortunately there were some wire groynes close by. We carried these to the northern end of the bridge, formed a chain gang with the platoon while three sappers and myself went into the river with ropes tied under our armpits and as the boulders were passed to us we placed them in the groynes to turn the water away from the seat of the bridge. About 2300 hrs we had the seat safe from the waters and it was noticeable that the worst of the flood was over and the water receding. I posted guards and turned all hands in until daybreak.

'Sorry I cannot remember any of the blokes in particular, only as their turn came to get into the river there was never a murmur. One could only stay in for 15 to 20 minutes as the water was fresh off the snow. One incident I remember clearly concerned our popular Padre, John [Watson](#).<sup>30</sup> I noticed while in the water that the Padre had taken up a position in the chain gang. I could not let the boys know he was there owing to the darkness and the next thing I heard, as one of the lads passed a particularly heavy boulder to the Padre, he commented, "Cop this heavy bastard" and the Padre replied, "My word, it is heavy.'"

At daybreak the 12 ft gap was five feet deep with two feet of water running through it. The folding-boat bridge had been washed away and the other five bridges on the Eighth Army bridgehead were completely or partially destroyed. Lieutenant Prosser continues:

'We got a bulldozer to fill this gap so that we could build our ramp again for the bridge. However, whilst this was going on ... [the] CRE arrived and informed us that "Tiki" was the only bridge over the [Sangro](#)<sup>31</sup> and the Canadian and British axis bridges were washed away. Further, our Div "Arty" were down to a few rounds per gun and we must get some Ammo' trucks over urgently. We filled the gap, made a steep ramp and sent the trucks over to get well bogged in the new fill. However these were towed by our Dozer and we sort of got our Div moving ever so slowly. But soon there was a complete shambles. We were informed that there were trucks nose to tail for miles back as [General Freyberg](#) had given permission ... for the other Divs across the river to get equipment over to repair their bridges.'

The [Archi](#) bridge and another at Currie's deviation, a 50 ft single-single, were constructed against a background of alarms and excursions. There was a large expanse of high and broken country between the New Zealand left flank and [13 Corps](#), operating farther inland among the mountains proper, which was something of a no-man's land on account of the steeply rising foothills which inhibited any large-scale movement. It did not inhibit large-scale rumours, built from stories of refugees coming down from mountain villages with tales of terror. Typical of the situation is the following extract from 8 Field Company's war diary:

4 Dec. Late this afternoon reports of considerable party of Germans with 5 trucks laying waste villages SW of us. Took information to CRE Hq.... More reports

from civilians of party of 400 Germans laying waste villages SW and W of here.... The Italians in the village where we are living and surrounding villages are terrified and want protection but we can do nothing about it. Increased picquets and everyone ordered to be on alert.

5 Dec. We are handling a large number of refugees and escaped POWs. Residents from surrounding villages continue coming to us with reports of Germans burning and looting in surrounding villages S and W of us. This is a consequence of our being on the left flank of the [8 Army](#). While a party was clearing mines from a track to small quarry this morning one Sapper was killed by mine explosion. Two Italians, a man and a girl were killed and two Italians injured. At lunch time we caught two German soldiers in civilian clothes.

They were taken to [Divisional Headquarters](#) and turned out to be two German deserters.

This nuisance threat to the bridge-building sappers' peace of mind was removed when 2 Independent Parachute Brigade, placed under [General Freyberg's](#) command, was moved into the area on 5 December and commenced some active patrolling on its own account.

While 7 Field Company is repairing the flood damage, 8 Field Company working on the [Archi](#) bridge and 5 Field Park Company maintaining roads, we must again go back in time a few days to 6 Field Company.

The lobe bridge was not further molested, for the probable reason that the enemy holding the [Colle Barone](#) feature, from where they could observe the work, had not relished the sight of New Zealand infantry moving past their flank and had departed.

For the next two days the Company improved the lobe approaches and helped at heartbeat bridge. On 1 December it was ordered to cross the [Sangro](#) via heartbeat and make camp about three miles to the north between Route 84 and the adjacent railway line, about a mile below the [San Eusanio](#) turnoff, where tanks were waiting to probe through that village towards the [Melone](#) road junction en route for [Guardiagrele](#).

Only [No. 3 Platoon](#) got through the congestion of traffic at heartbeat bridge that night and bedded down at midnight; our infantry were on the crest of the ridge and closing in on [Castelfrentano](#), which town the enemy vacated before dawn.

The tanks referred to had been stopped by enemy fire; eight were out of action and shells were still coming in when engineer assistance was called for.

Lieutenant Gowan, who had been working with his dozers north of lobe bridge, and Lieutenant [Smith](#),<sup>32</sup> leaving his sappers to get what sleep the enemy permitted, went forward to evaluate the trouble.

'Lt Bob Smith and I went up the road to do a recce but did not get up to the forward tanks as by this time the enemy had the range and was continually mortaring the road. All the tank crews had taken shelter in their tanks and the infantry were in culverts in the road. We did eventually get up to the first tank and the demolition was not as serious as first expected and the tanks could get across when necessary. We were very pleased to receive this information as it was a pretty hot spot and we wasted no time in getting back to our waiting vehicle. I think I just shaded Bob Smith on the run home which was the fastest 200 yds which has ever been run.'

It was at this stage that Lieutenant Gowan received much needed help by the marching-in of Lieutenants Tassell and Faram, formerly of 21 Mechanical Equipment and 19 Army Troops Companies respectively.

Sixth Brigade had veered to the right and so away from Route 84 during the approach to [Castelfrentano](#), but when that town had been vacated so had the defences blocking Route 84, as far as the [Melone](#) village at the junction of the enemy's new defensive line [Guardiagrele- Orsogna- Ortona](#). Preparations were on foot to capitalise on the breaching of the [Winter Line](#) by a two-pronged drive, 6 Brigade direct for [Orsogna](#), key to the final position on the next ridge north, and 4 Armoured Brigade via the [Castelfrentano- Guardiagrele](#) road and the [San Eusanio](#) secondary road which junctioned one mile east of [Melone](#). [No. 3 Platoon](#) sent detachments of sappers with each column of tanks, which began to advance in the early morning of the 2nd.

The position on the left of [No. 3 Platoon](#) was obscure, which is another way of saying it was not known if Jerry had departed from the immediate vicinity or not. In actual fact 22 Battalion was taking care of the Divisional flank but the sappers had not been informed. Not far enough away was a farmhouse alleged to be occupied by night as an enemy forward post, and it was decided to welcome the garrison with booby traps. Ordinary mines with pull igniters and trip-wires were included, but the pièce de résistance was a Mills grenade with the pin out dropped into a jam tin which kept the lever down. The tin was pegged to the ground and a trip-wire attached to the grenade.

On their return from the operation the sappers reported that they had reached the house before the Germans and that they had been able to do a really good job. The outcome was not known until an Indian division which relieved 2 New Zealand Division was met again in another sector and reported that a daylight inspection of the farm revealed no dead enemy, two dead pigs, one dead cow and one wounded goat.

The rest of 6 Field Company crossed the [Sangro](#) that day. [No. 2 Platoon](#) joined [No. 3](#) on Route 84 while [No. 1](#) rested. The two tank columns, preceded by 22 (Motor) Battalion, fought their way as far as the junction in front of [Melone](#) and dug in for the night. There was another call for sappers, for the enemy had blown the road to [Melone](#) as he retreated in front of the advancing 22 Battalion. Smith and Gowan made another 'recce' and then went back for plant. The tanks had got across the demolitions but the commander was worried about his supply trucks. It was dark when the party returned, but a burning haystack supplied sufficient light to mark a track around the demolition.

The actual crater was something of a problem because the road was narrow and the ridge on which it ran was steep on the enemy side and sheer on the other.

An Italian who emerged from a nearby house showed where the German sappers had planted mines to protect their work. Collecting spoil to fill the blow in the road was not considered practicable under the circumstances, for as Lieutenant Gowan later remarked, 'the only thing we had to fill it with was the said Italian's house'.

Gowan makes light of the situation, but since 25 November he had been spelling and changing his machine operators and directing the repair of demolitions, during which period his driver had been killed and his White scout car wrecked. The final lines of his MC citation read:

'2 Lt Gowan showed no hesitation in pushing on with the repairs and deviations until as a result of his efforts support vehicles were able to move forward.'

The demolition was later filled by Lieutenant Faram by night without enemy interference and a burnt-out tank a couple of hundred yards farther along was pushed over the side so that the road was open right to the defensive position.

**No. 1 Platoon** was rested until the 3rd, when it was given the task of marking a large minefield that meandered across the Divisional front. Several infantry diaries mention mined areas and booby-trapped houses during the fighting for the Castelfrentano crest. The field was completely unmarked and there was no clue as to its direction or dimension, but an Italian farmer saved a lot of searching. To an inquiry by Lieutenant Hermans, part gesticulation and part Italian, 'He replied in quite good English with a very pronounced Yank accent. In between telling us what bastards the Tedeschi (Germans) were he told me the full story about the minefield and was able to lead me to the far end'.

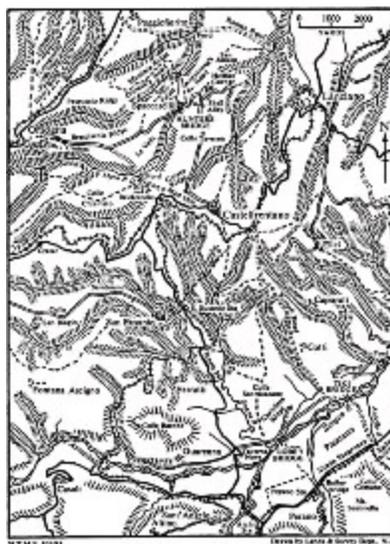
Sixth Brigade exploited towards **Orsogna** by the shortest route overland, which included a section of an old Roman road, while the support tanks took the longer secondary road across the **Corato** ridge to the **Lanciano- Orsogna** highway until they were halted by a blown bridge over the **Moro** stream. **No. 2 Platoon** moved up on to **Castelfrentano** and Lieutenant Hunter made a reconnaissance of the bridge site.

Neither the infantry attempt to bustle the Germans out of **Orsogna** on 3 December nor the main armoured attack along the road on the left flank succeeded. It is not the province of an engineer history to hold post-mortems on lost opportunities; 6 Field Company toiled by day and by night on the unending task of keeping roads, built for leisurely donkey-cart traffic, in reasonable shape for the use of vehicles of up to twenty tons in weight.

Lieutenant Hunter had reported that a Bailey was the only answer to the **Moro**

demolition. The Moro was only a small creek, but a small creek with deep and nearly vertical banks is a very efficient anti-tank ditch. Hunter's bridge, as the Bailey became widely known, was built by **No. 2 Platoon** during the night of 4 December, and the following day they were relieved of forward duty by **No. 1 Platoon**, who changed billets with them. The stage was now set for an infantry-armour attack on **Orsogna**, finally timed for the late afternoon of the 7th, the same day as the **Archi** bridge was opened to light traffic.

The New Zealand communications were then along the **Strada Sangritana**, across the **Sangro** by the **Archi** bridge on to Route 84. Six miles of comparatively safe going along Route 84 brought the supply line to the **Guardiagrele** junction and within easy range of the enemy guns in the **Orsogna** area. Route 84 turns right at the crossroads and for a mile to the Brickworks<sup>33</sup> there was cover from view, but German artillery observers looked straight into the next mile that ended at the outskirts of **Castelfrentano**. There was only one speed along that mile, the 'Mad Mile', and that was flat out. Traffic left Route 84 at the Castel-frentano end of the Mad Mile and followed a secondary road northwards over the **Corato** and Taverna hills for the couple of miles to Hellfire Corner, on the **Lanciano- Orsogna** road. There was, as the name suggests, little delay at this crossroads. Only essential traffic took the left-hand turn, then along Shell Alley, through **Spaccarelli** hamlet, across Hunter's bridge over the **Moro** at the foot of San Felice ridge to the infantry FDLs.



**roads and landmarks north of the sangro river**

Other convoys swung right at Hellfire Corner and returned via **Lanciano** to

## Castelfrentano.

'The day prior to the attack,' Lieutenant [Fraser](#),<sup>34</sup> second-in-command [No. 1 Platoon](#) wrote, 'we were checking over equipment and found we had no wire for pulling mines straight out to save time looking for booby traps underneath; you know, tie a good length of wire to the mine, get back into a convenient hole and pull. Outside the house we lived in a veritable maze of signals wire went down the road, both the old German stuff and our own. It was suggested that someone look for a broken end, follow it up and lop off a hundred feet. In due course Cpl Goodwin came in with the wire and about ten minutes later a Signals jeep from Brigade came along looking for a broken wire. They found the break but took a mighty long time to locate the other end. There was much muttering from the Sigs boys but we never said a word. It was the line from Brigade to a Battalion or Div. Hq or somewhere.'

The infantry-armour attack was entrusted to 24 Battalion which, supported by 18 Armoured Regiment, was to advance along the [Lanciano](#) road where it followed the hog-backed Brecciarola ridge into [Orsogna](#).

Fifth Brigade, which had no sappers under command, detailed 28 (Maori) Battalion to cut the [Orsogna- Ortona](#) road and there await the tanks coming through [Orsogna](#) to its support. The brigade's open flank was to be secured by 23 Battalion's occupying the lower part of the Sfasciata spur, which also joined the [Ortona](#) road farther to the right.

A D8 and a D6 were brought on to the San Felice ridge on the night of the 6th in readiness to assist the tanks if required, and were followed in the morning by a party sixteen strong from [No. 1 Platoon](#), 6 Field Company, which was to work with 24 Battalion.

More particularly, the sappers were to keep in touch with the supporting arms of 24 Battalion, which was attacking with two companies up, one in support and one in reserve. The infantry were dispersed among the tall grass and olive trees on each side of the ridge, while the road on the skyline was the only possible approach route for the tanks and probably the 5 Field Park dozers. The weight of the barrage, the concentration of artillery and bombing planes are the province of an infantry history, and it is sufficient to say that misty rainclouds neutralised the advantage of air

superiority. Lieutenant Hermans in command of the sappers took half his force with him and left the other half (Lieutenant Colin Fraser) in reserve at the start line.

An hour's standing barrage began to move at 2.30 p.m. and the sappers realised the difference between moving in orderly vehicle columns as in North Africa and crawling through tall grass along a bullet-spattered hillside in Italy. It was not long before the sappers lost touch with each other as well as with the supporting A Company, and eventually Lieutenant Hermans went forward with his runner to find somebody. In point of fact, the attack had gone badly and A Company had been ordered forward with B Squadron, 18 Armoured Regiment, following in support. C, the right forward company, had run into an area thickly sown with S-mines through which they could not pass, and Battalion Headquarters was calling for the sappers who should have been with A Company. The official history of 24 Battalion mentions this search: 'Meanwhile Aked<sup>35</sup> [OC C Company] had been receiving a somewhat puzzling wireless message from Battalion Headquarters, repeated again and again, "Are Hermans with you?" The only Hermans he knew of were out in front and very obviously hostile. Later, when the battle was over, he learned that the officer in charge of the engineers was named Hermans.'

By this time it was dusk and the sapper officer decided that the quickest way to get forward was to use the road. It was not long before he met the tanks, who were also looking for him very anxiously indeed. There was a demolition ahead 'and the bloody sappers were holding the bloody show up because there were mines in the demolition and the tankies didn't know how to deal with them'.

There were, in fact, two groups of three Tellers sitting pat on the road in front of the demolition, which, whether by accident or design, was close to a haystack that had been set on fire, so giving the enemy a useful aiming mark of which he availed himself freely. The Tellers were removed and a message sent back to Captain Armstrong to bring up a dozer to the demolition. Meanwhile most of the lost sappers had arrived and the cavity was searched for mines; none were found and the party carried on along the road sweeping. 'We felt awful naked just walking up the road like that but it was the only way to check the road for mines. We eventually came upon some infantry who were making good use of the shallow ditch along the side of the road and we joined them smartly.'

A Spandau nest ahead had effectively stopped the infantry and it was no place for engineers, so they retraced their steps to the Pink House, a stone building on the outskirts of the town which was being used as a combined Regimental Aid Post and Battalion Headquarters. Later in the night Lieutenant Hermans was wounded and evacuated.

While the infantry were fighting in the streets of Orsogna, Captain Armstrong was waiting with two dozers behind the rear troop of support armour. The D6 was hit dead centre on the motor and had to be pushed out of the way. Upon the receipt of Hermans' message the D8, operated by Sapper Griffiths,<sup>36</sup> was edged past the stationary tanks, accompanied by Captain Armstrong on foot, and began to bulldoze a track into the demolition and out the far side.

Technically the job was not a difficult one, but it required more than the average amount of nerve on the part of the operator as he was working an unprotected machine in the middle of a fierce conflict—and was perched about six feet above ground while everybody else, excluding his commander, was lying as flat as a pancake behind whatever cover could be found. Griffiths' subsequent MM was well merited, as was Captain Armstrong's MC for 'gallantry and inspiring leadership'.

Just as the job was finished the hydraulic hoses on the gear operating the blade were cut by a shell splinter and the machine had to be reversed, with the blade dragging along the road back to the start line, where camp was made for the rest of the night.

Even after the narrow road was opened by the dozer the tanks were not able to withstand the fire of enemy tanks hidden in the town and the infantry, deprived of armoured support, had to be withdrawn.

After 5 Brigade was convinced that our tanks could not get to the Maoris in time, and after enemy tanks had roamed through them in the night, they had been pulled back, so that the only gain was a footing by 23 Battalion on Sfasciata ridge. They had no support arms, but the part of the ridge remaining to the enemy was considered too soft for armour and they remained there although rather isolated.

So ended the second attempt to break the last link of the German Winter Line.

But there still remained the possibility that if our tanks could be got on to Sfasciata, which was fairly flat-topped, with easy access to the [Ortona](#) road, the fortress of [Orsogna](#) might be outflanked from higher ground to the northeast.

The pre-requisite to using Sfasciata was for the engineers to get tanks on to it. A 'recce' by Major Currie had established that there was a reasonable cart track from [Spaccarelli](#) village to a ford over the [Moro](#) about half a mile north of Hunter's bridge. Beyond the ford the track wound up the side of Sfasciata and thence along the top and so on to the [Ortona](#) road. It was considered that two dozers working all night could make the ford and approaches possible for tanks, and Major Askin was instructed to do so forthwith and also to haul 23 Battalion's anti-tank guns up the ridge before daylight (9th).

With machine guns and artillery drowning the noise of working machines, [Mechanical Equipment Platoon](#), now camped a mile east of Hellfire Corner, had all 23 Battalion's anti-tank guns up to the unit, plus a track for tanks ready by first light. And the next night saw 29 tanks and 16 Bren carriers safely hidden under olive trees in support of 23 Battalion.

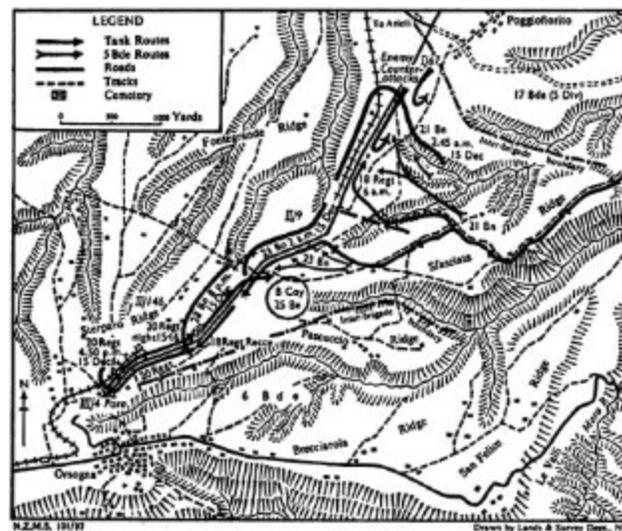
During the lull between the end of the second attempt on [Orsogna](#) and the beginning of the third, ultimately mounted on 15 December, the most active people in the Division were the sappers: 6 Field Company maintained the supply route between the [Sangro](#) and the [Moro](#) with gangs continually at work on the track from [Spaccarelli](#) to the ford, where two dozers were employed day and night, and on the steep pinch to the crest of Sfasciata; 8 Field Company was still employed in the [Sangro](#) bed, on the [Strada Sangritana](#) and the connecting road to Route 84; all 5 Field Park's heavy equipment was in constant use by the road repairers; Workshops were busy on the FBE salvaged from the flood, the dozers damaged in action and on plant maintenance; Bridging and Stores were equally busy.

On the night 13 - 14 December a party from Headquarters and Workshops assisted 6 Field Company to build a wooden Class 9 bridge over the [Moro](#) ford. This structure was then called Askin's bridge in honour of 5 Field Park Company's commander.

Seventh Field Company was given a new job, or rather the same job in a new

area; it was a period of reorganisation for Eighth Army and a new division was coming into the line on the right of the New Zealanders, for what was hoped to be the break-through. A reconnaissance was made of the tracks between [Castelfrentano](#), [Lanciano](#), [Mozzagroga](#) and the [Sangro](#) for a suitable supply route and the Company was given the responsibility of maintaining them until the new formation (5 Division) took over on 15 December.

The essence of Operation Florence, code-word for the third attack on [Orsogna](#), was for 5 Brigade (or rather 23 Battalion) to capture the rest of Sfasciata ridge and cut the [Ortona](#) road, so preventing rapid movement of enemy armour between [Orsogna](#) and the fighting nearer the coast. A successful operation would open the way to New Zealand tanks to get to the [Orsogna– Ortona](#) road and exploit towards [Orsogna](#). Twenty-first Battalion was on the right of the 23rd and, farther to the right, 17 Brigade of 5 Division was to conform and cover the New Zealand flank. The object of the tank exploitation was to get on to the high country behind or north of [Orsogna](#), block the western exit and then advance south-west to clear the [Melone](#) road fork; 4 Brigade was to stand by for an advance on [Guardiagrele](#) and 6 Brigade was to occupy [Orsogna](#) if the defence collapsed.



**operation florence: 5 brigade's attack, 15 december 1943**

The engineer task, to bring tanks up to 23 Battalion's start line, then 'recce' for and clear a route through captured enemy ground at the top of Sfasciata ridge and so on to the [Ortona](#) road, was assigned to [No. 1 Platoon](#), 7 Field Company (Lieutenant Prosser), which was withdrawn from 5 Division area before the rest of

the Company.

There were no air photos available and the infantry commanders objected to anybody poking around the FDLs and possibly making the enemy suspicious. The success of the night's work was thus placed in the hands of an unknown tank officer supposed to know something of the ground.

Prosser was advised by the CRE to keep his engineers down to a minimum and selected a party of fifteen, which included his second-in-command, Sergeant Dacey.

The barrage opened at 1 a.m. and the infantry of 23 Battalion moved off, closely followed by the sappers leading a first troop of tanks (Captain [Passmore](#)<sup>37</sup>). By the time they passed the start line the infantry were fighting straight ahead, and the question was whether to go to the right or to the left? It was raining and a full moon was obscured by heavy cloud. The squadron leader (Major [Deans](#)<sup>38</sup>) decided to keep to the left.

'We had to make a start and off we went but after 50' I asked the Tank RSM if the tanks could manage this ground and he assured me they could but Passmore went about 20x [yards] and bogged. We had now run into mines also and switched the route to the left and got good going.... We got three tanks onto this track.'

The track lead towards a farmhouse that had to be attended to by the leading tank before the sappers could precede their charges on to the main road to the support of 21 Battalion.

The sappers returned to find their second track blocked by an overturned tank and, as Lieutenant Prosser wrote, 'With Passmore troop blocking one track and an overturned tank blocking another, we were in a mess.'

Another track that led towards the right flank was chosen. 'However this direction was lousy with mines. We worked until first light and 100x away to our right was the main road but Jerry was giving this everything he had. I carried on trying to get a safe route forward but I was under observation and did not get much peace. I found a route suitable but it was mined. I asked Passmore if I cleared the mines visually would he give it a go. He agreed and with signal wire I pulled the mines away and at last we had a clear short route to the road.'

By this time a second squadron of tanks was ready to essay the climb, and with Prosser guiding from the leading tank and the guns supplying a smoke screen they made a successful ascent.

Lieutenant Prosser was awarded an MC for his work that night. The last paragraph in his descriptive letter quoted above ends: 'One ironical thing that amused me later (but not at the time). The second squadron of tanks which we put in during daylight had aerial photos of the ground which I had been guessing at all night.'

With daylight the tanks made better time. [No. 1 Platoon](#) sappers were relieved by [No. 2](#) on the track while the battle was still raging for possession of the newly won salient across the [Ortona](#) road. The main job then was to improve the track so that jeeps with ammunition could get forward and return with casualties. The fighting died down during the day, with the enemy still holding the town and the Division still holding its length of main road.

There was a lull for a week while plans were made for the fourth attempt to break through the [Winter Line](#) before the winter itself came to the aid of the defence.

On the Divisional front the position now was that the Askin bridge, the [Moro](#) ford and the track up to and across the Sfasciata ridge, instead of being only the supply line to 23 Battalion, was now the vital route to all the infantry and armour in the salient. The dozer at the [Moro](#) ford was the most important piece of mechanical equipment in 2 NZ Division, and enemy gunners saw to it that Hellfire Corner lived up to its name.

Major Duncan White reconnoitred a better road location than that chosen by chance in the rainy darkness. For the first thousand yards he followed the ridgetop, where the road would be partly screened by trees and partly in view of [Orsogna](#). Camouflage netting was strung along this portion to the evident annoyance of the German gunners.

The next mile had cover from view along the safe side of the ridge where it followed a local track, then a final steep grade for 200 yards brought the new road

on to the flat within 100 yards of the [Ortona—Orsogna](#) highway.

The road was soon known, and later officially noted on the maps, as Duncan's road and it joined Armstrong's road at the [Moro](#) ford.

A Class 30 Bailey was opened to traffic on 22 December alongside Askin's lighter structure and finally relieved the [Mechanical Equipment Platoon](#) of the dangerous task of hauling every vehicle too heavy for the wooden bridge through the ford. It was first called the Tikotiko bridge, a very salty Maori description of the locality, but owing to the possibility of its being confused with the tiki bridge, the name was altered to hongī.

The importance of this supply route may be gauged from the size of the working parties and the number of vehicles that reported daily. Even a troop of 5 Canadian Armoured Division engineers came to give a hand, with the result that Armstrong's road was metalled or corduroyed by the time hongī bridge was ready, and Duncan's road with eight dozers, twelve dumpers and thirty 3-ton trucks working on it was in fair shape.

Sixth Field Company was still based on [Castelfrentano](#); 5 Field Park Company had not moved, but [Mechanical Equipment Platoon](#) had built two Air OP landing grounds, one at [Taverna Nova](#) and one south-east of [Castelfrentano](#); 8 Field Company had moved over the [Sangro](#) and, with its headquarters at [San Eusanio](#) junction, had joined the other sapper units on road maintenance, but on the 20th had returned hastily to the [Archi](#) bridge upon reports that its stability was doubtful.

Inspection disclosed that one of the original piers that had been used to take the weight of the Bailey had crumbled. The Company worked in shifts around the clock, with 5 Field Park Company supplying light for the night shifts and the enemy gunners trying to hit the lights. The bridge was again open for traffic at 10 p.m. on the 23rd.

Yet another attempt to break the deadlock on the [Winter Line](#) and roll up the German defences was planned for the night of 24 - 25 December. The main task was entrusted to 5 Brigade, which was to capture two more ridges ahead of its present position as well as the ridge junction north of [Orsogna](#). The latter objective was essential to the fulfilment of the plan because only by that route could armour get

forward to support the mountaineering infantry. The Maori Battalion was set this task and therefore had to advance along the road that had been the axis for the tank attack a week earlier. It was expected that the enemy would not have omitted to mine the road so once again [No. 1 Platoon](#), 7 Field Company, was involved. Lieutenant Prosser, with nine sappers operating three detectors, was to advance along the road in rear of the Maoris but in advance of the support tanks. A covering party of twenty Maoris was to supply local protection.

The barrage opened at 4 a.m., and when it lifted the sappers began sweeping the road while the covering party moved half on each side of the road in fifty-yard bounds. The night was dark and foggy and it was not easy to maintain touch with the covering party. It was breaking day, the Maoris were somewhere ahead, no mines had been found and the tanks were starting to worry about being caught on the road. Luckily the fog was still thick and visibility about 30 yards. The tanks' commander decided to push on without having the road swept and try to find the [Maori Battalion](#) before the fog lifted.

A partly demolished roadside church offered shelter for the sappers and their covering party while the tanks disappeared into the fog. Almost immediately the leading tank went up on a mine, the column halted, and Prosser with a few of his men went forward to investigate.

'It was rather a grim show; a squadron of tanks nose to tail, 150 yards from the Jerry in daylight, luckily not very clear. We had no time to lift the mines as we were getting plenty of attention from M.Gs. I suggested we make a quick survey of the field at the right of the road. If clear of mines the tanks could cross to the railway track and take up a position there as the track was built up about four feet high and, if the Maoris were on their objective they could reach them by crossing the railway track.... I called the tanks over as the field appeared clear of mines. They crossed the field safely and took up positions along the railway track. One tank tried to pass the KO'd tank and suffered the same fate.'

The engineer party returned to 28 Battalion battle headquarters safely.

Christmas Day saw the opposing infantry consolidating a partly lost, or, according to the point of view, partly won final battle for the passage through the

Winter Line. It was stalemate on the Fontegrande ridge, with the FDLs facing each other across the [Arielli](#) valley. Jittery Ridge they called it.

For the sappers, as for the troops lucky enough to be in [Castelfrentano](#) and other billets with a roof over their heads, the cold and rain were endurable and did not distract from the demolition of a special Christmas Day menu.

Seventh Field Company, hard put to it to keep Duncan's road open with corduroy and gravel, dined under platoon arrangements. For 2 NZ Division Duncan's road was the most important stretch of highway in [Italy](#) for every jeep, truck and tank that had business on Jittery Ridge had to use it. [No. 1 Platoon](#) was welcomed back with enthusiasm on the 27th. Certainly they had been in the fighting, but it was contended that in between times they had lived softly and that some hard work would do them a power of good.

The metal from a new quarry opened on a hill across the [Moro](#) reached the top of the ridge on 28 December. Lieutenant Gowan was quarry manager, and he had a mechanical shovel and four dumpers as well as the four-wheel-drive trucks that had replaced the clumsy two-wheel-drive dumpers which were unable to handle the muddy conditions. Infantry working parties shovelled the metal out of the trucks. The first day of 1944 brought new trials to the road makers. Winter had formally arrived with a blizzard and snow a foot deep, with drifts four times that depth.

The war just stopped while shovels, dozers and graders restored the circulatory system of the Division. There followed a week's nightmare of bitter winds, snow flurries, drizzle and frosts.

Conditions were deplorable everywhere, but Duncan's road, the vital artery, was a mud bath. Batters subsided and culverts had to be enlarged; houses, in spite of blasphemous infantry who were short of shelter, were turned into road metal; truckload after truckload of corduroy was spread on the worst places.

A thaw on the night of the 7th, the same night that the last of the slush had been removed, softened the Duncan's road foundations sufficiently for eighteen tanks to ruin it utterly.

It is seldom that sappers are bereft of the power of expression but the churned-

up mixture of gravel, mud and corduroy that remained after the eighteenth tank had slithered past was greeted with a silence more eloquent than the choicest vituperation.

The following week was fine and sunny and Duncan's road was almost a road again when orders came to hand it over to 4 Indian Division. The Winter Line had been conceded to the enemy and Grand Strategy had decided to freeze the war on the east coast; 2 NZ Division was to pull out to rest, refit and train reinforcements ... at least that was the story told to the troops.

Engineer casualties (all ranks) in the [Sangro](#) and [Orsogna](#) operations from 12 November 1943 to 31 January 1944 were:

	Killed and Died of Wounds	Wounded	Total
5 Field Park Company	1	2	3
6 Field Company	14	27	41
7 Field Company	5	13	18
8 Field Company	2	14	16
	22	56	78

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<sup>1</sup> 2 Lt A. A. Begbie; born NZ 9 Mar 1914; PWD employee.

<sup>2</sup> The Hon. R. Semple, when Minister of Public Works, insisted on the provision of the latest mechanical equipment on all State undertakings.

<sup>3</sup> [Maj G. K. Armstrong](#), DSO, MC, m.i.d.; Dunedin; born NZ 4 Feb 1915; civil engineer; OC 27 Mech Equip Coy Jan-Jun 1945.

<sup>4</sup> [Sgt J. M. Young](#); [Hamilton](#); born NZ 27 May 1911; truck driver.

<sup>5</sup> Lt G. A. O'Leary, MC; [Wellington](#); born NZ 31 May 1919; electrician; wounded 22 Mar 1944.

<sup>6</sup> [Sgt S. F. Kerr](#), m.i.d.; [Rotorua](#); born [Opotiki](#), 30 Jan 1918; bridge builder.

<sup>7</sup> The charges had, of course, been drawn as soon as the bridge was in our hands. It was standard practice to search for demolition charges on every captured undemolished bridge. A squad of Divisional Cavalry was detailed to guard the area and keep intruders away.

<sup>8</sup> Lt F. M. Dahl; born NZ 10 Jan 1915; architect; killed in action 17 Nov 1943.

<sup>9</sup> Capt A. G. Hunter, MC, m.i.d.; born NZ 11 Sep 1918; civil engineer; wounded 6 Apr 1945.

<sup>10</sup> Spr R. N. Green, MM; born NZ 15 Oct 1906; tunneller.

<sup>11</sup> Sgt C. G. Clements; Matamata; born NZ 17 Sep 1909; farmer.

<sup>12</sup> 2 Lt D. McCormick, MC; Nelson; born Scotland, 3 Mar 1913; geologist and mining engineer.

<sup>13</sup> L-Sgt D. Calder; Motueka; born Motueka, 12 Jul 1918; carpenter.

<sup>14</sup> Cpl J. F. Redmond; Christchurch; born Christchurch, 27 Mar 1911; painter and paperhanger.

<sup>15</sup> Maj D. U. White.

<sup>16</sup> 5 Canadian Armoured Division. The units were 4 Field Park Squadron, 1 Field Squadron and 10 Field Squadron, Royal Canadian Engineers, commanded by Lt-Col J. D. Christian.

<sup>17</sup> Capt G. C. Mountain; born NZ 11 Jul 1906; draughtsman and surveyor; wounded 28 Nov 1943.

<sup>18</sup> Lt O. L. Cuthbertson; born NZ 21 May 1904; electrical engineer; wounded 19 Mar 1944.

<sup>19</sup> Lt E. L. R. Whelan, m.i.d.; Napier; born Auckland, 19 May 1905; builder; twice wounded.

<sup>20</sup> Maj W. E. Fisher; Wellington; born California, 27 Sep 1913; civil engineer.

<sup>21</sup> Capt A. L. King, ED and bar, m.i.d., Bronze Star (US); Auckland; born Auckland, 29 Dec 1914; engineer.

<sup>22</sup> Lt L. T. Skipage, MC; born Featherston, 25 Sep 1912; structural engineer.

<sup>23</sup> Not traced.

<sup>24</sup> Cpl C. R. Goodwin, MM; Marton; born Hunterville, 29 May 1911; labourer.

<sup>25</sup> Spr D. J. McM. Hume; born Scotland, 30 Apr 1922; baker's apprentice; killed in action 28 Nov 1943.

<sup>26</sup> Letter, Maj G. K. Armstrong.

<sup>27</sup> The modern gabion is a rectangular box of netting made from heavy-gauge wire and filled with stones or rock. Originally a gabion was a cylinder about the size of a 40-gallon drum, woven like a willow basket and used by sappers for revetting trenches, saps and gun emplacements.

<sup>28</sup> Capt E. G. Prosser, MC; Lower Hutt; born Melbourne, 7 Jul 1909; builder; wounded 22 Mar 1944.

<sup>29</sup> WO II F. S. Dacey, MM, m.i.d.; Takaka; born England, 7 Apr 1917; carpenter; wounded 2 Nov 1942.

<sup>30</sup> Rev. J. K. Watson, MC; Otorohanga; born England, 24 Mar 1911; Methodist minister; wounded 3 Jun 1944.

<sup>31</sup> The folding-boat bridge in 6 Bde area was recovered half a mile

downstream and sent to 5 Fd Pk Coy for repairs.

<sup>32</sup> Lt R. B. Smith, MM; Auckland; born NZ 15 Apr 1909; engineer; wounded 19 Mar 1944.

<sup>33</sup> The tall brickworks chimney, believed to be an enemy ranging mark, was dropped by a section of Bridging Platoon, using as explosives some German box mines lifted in the vicinity.

<sup>34</sup> Capt C. S. Fraser, m.i.d.; Hamilton; born Hamilton, 3 Dec 1920; engineering student.

<sup>35</sup> Lt-Col E. W. Aked, MC, m.i.d., Aristion Andrias (Gk); Tauranga; born England, 12 Feb 1911; shop assistant; CO 24 Bn Jun 1944; CO 210 British Liaison Unit with 3 Greek Bde in Italy and Greece, 1944-45.

<sup>36</sup> Spr H. R. Griffiths, MM; Westport; born Westport, 3 Mar 1917; lorry driver; wounded 29 May 1944.

<sup>37</sup> Maj C. S. Passmore, DSO, MC; born Auckland, 21 Jul 1917; bank clerk; wounded 14 Dec 1944.

<sup>38</sup> Maj H. H. Deans; Darfield; born Christchurch, 26 Jan 1917; shepherd.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 14 FORESTRY COMPANY IN ALGIERS

### *14 Forestry Company in Algiers*

The Forestry sappers were informed four days after sailing that their destination was [Algiers](#). [Algiers](#) was just a name to most of them but the dictionaries, both French and Italian, with which they were issued were real enough.

They disembarked on 25 August and marched to 'P' Reception Area, a camp outside the city, and passed a busy two days unloading and collecting their equipment.

Major Thomas reported to the Director of Works, Africa Force Headquarters, and was informed that the unit had been called to the [Mediterranean](#) at his request; that the intention had been for the unit to operate in [Italy](#); that [Sicily](#) was being considered and that the OC might be sent there to reconnoitre; that the timber position in North Africa was very acute; that the unit would therefore most likely be called on for the first few months to help alleviate it. The portable mills were living up to their names for they were still on the high seas somewhere, nobody knew quite where, and in the meantime the Company took over hygiene and anti-malaria duties in the camp, as well as providing 100 men daily for work on the docks while the Arab watersiders were on strike. In between times they explored [Algiers](#).

Major Thomas and Captain Tunncliffe left on 1 September to make an appraisal of the milling possibilities of Bugeaud forest, a national reserve under the Administration des Eaux et Forêts near [Bone](#), some 250 miles east of [Algiers](#) and about the same distance by road from [Tunis](#).

The Bugeaud forest consisted of 1000 cubic metres of oak and 300 cubic metres of maritime pine in lengths of from 7 to 14 metres containing approximately 10 cubic feet log measurement; two crawler tractors with winches and two 3-ton trucks would be needed for getting the logs out; the roads were of earth and were serviceable in fine weather; over-all there was nothing particularly difficult about the area except that, the logs being small and the terrain rough, there was a likelihood of delays at

the mill end.

Authority approved of the area being milled; equipment and baggage were loaded on the train for [Bone](#), which was reached on 11 September. The move to Bugeaud was completed the same day and work on the camp site and mills began immediately; a party accompanied by French forestry officials started to measure the standing timber.

Four tractors that were supposed to be awaiting the Company's arrival in [Algiers](#) had still not been located, but the CRE [Bone](#), under whose directions the sappers were working, made available a D7 tractor and driver from an RE formation. A start had been made with felling and it was now possible at least to bring the logs in to the roadside. A day or so later authority was received to draw a pick-up, a water cart and three three-tonners; one of the latter was converted for logging and the first load of logs was delivered to the mill on 20 September. No. 2 mill began cutting the next day but owing to teething troubles did not get into full production until the 27th, by which date No. 1 mill was also ready for work. The combined output was 10,092 board feet, and the first load of sawn timber was also delivered that day.

October was a month that went according to routine. Advice was received that a third mill was being shipped to [Bone](#) from the [United Kingdom](#) during the month, but the continued non-arrival of the tractors caused concern. Major Thomas took the matter up at a conference he attended in [Algiers](#) and it was agreed to cable the War Office, but he was warned that if in fact the tractors had arrived they had probably gone into the common pool, and that 14 Forestry Company was No. 7 on the priority list. Production for October, the first full working month, was 173,464 superficial feet of sawn timber and 292 tons of slabs.

The Company war diary for November contains little beyond predictions concerning the arrival of tractors and trucks, the taking on loan of substitutes, the delivery of types of equipment different from that expected, and stoppages because of rain. Finality was reached on 26 November when authority was received for the exchange of four standard narrow-track tractors, which had eventually turned up, for four standard track widegauge D4s. The unit thus lost its new plant but obtained a type more suitable for its operations.

Meanwhile Major Thomas had left for [Italy](#) early in the month to report on the timber situation there, both as regards sawn stocks and standing timber areas. In his absence Captain Tunncliffe, in company with the Deputy Assistant Director of Works (DADW for short), explored around for further pine stands and was assured that there was no possibility of the company following its commanding officer, at least not in the foreseeable future. Timber in [Algeria](#) was in such short supply and the shipping position so difficult that the Kiwis were to maintain production as long as the weather permitted the use of the unmetalled roads. Such was the position on 29 November; but on 1 December 14 NZ Forestry Company was warned to be equipped and ready to move to [Italy](#) on 4 December. It was clearly not possible to work the mills and pack them up at the same time, so cutting was continued while confirmation of the warning order was sought from the Assistant Director of Works, Headquarters Africa Force.

The reply, when it came, was that the instructions were to be carried out, but as there would be considerable delay before the move could take place, and in view of the acute shortage of timber, the mills should keep on cutting as long as possible.

To make the confusion a little more complete, the third portable mill arrived from England. The fine weather, contrary to expectations, continued to hold and the third mill was put down near the other two and given a trial run. The production records show that on 9 December half a million superficial feet of timber had been sawn by the Company in [Algiers](#).

Major Thomas's report on the timber situation in Allied-occupied [Italy](#) stated that in the [Calabria](#), where the Apennine Mountains spread like open fingers across the toe of [Italy](#), there were considerable areas of forest and a number of mills being worked by civilians, but there was urgent need for organisation and supervision. Farther north there was a large mill in the Bosco d'Umbra, situated on the [Gargano Peninsula](#), which could supply the immediate needs of Eighth Army if it was worked to capacity; there was also sufficient timber available to work another mill.

Major Thomas returned to North Africa on 18 December with instructions to send two detachments of one officer and twelve sappers to [Italy](#) immediately, one for organisation work in the [Calabria](#) and the other to speed up production in the Bosco d'Umbra.

Lieutenant [Sexton](#)<sup>39</sup> and party were detailed for [Calabria](#) and Captain Tunncliffe and party for the mill in the Bosco d'Umbra. Both were to move out on 20 December, which meant that three mills would have to be worked with twenty-four fewer men than had operated two; and at the same time they were crating up non-essential equipment and fitting winches to the tractors to cope with the hilly country and climatic conditions in which they were likely to be operating.

It was not until 30 January 1944 that orders were received to concentrate unit stores, equipment and transport at [Bone](#) on 2 February for movement overseas. Loading was completed on the 4th and a clearance obtained for ordnance, barracks and engineer stores with an ease out of all proportion to its value and discrepancies—for the consideration of one pint of rum. The sappers embarked on the 10th and the Company's last entry in its African war diary ends:

'Company cooks and fatigues took over all messing arrangements with unchecked rations, extremely inadequate cooking facilities and two hours to prepare the first meal.'

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<sup>39</sup> [Lt A. N. Sexton](#), MBE; [Auckland](#); born NZ; forester; Conservator of Forests, [Auckland](#).

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## CHAPTER 18 – CASSINO

## CHAPTER 18

### Cassino

The sappers most thankfully scraped the mud off their boots and, in accord with instructions, removed all New Zealand insignia from their vehicles and persons; the idea was to deceive the enemy Intelligence into assuming that 2 NZ Division was still on Jittery Ridge, instead of which it would be resting in reserve a hundred miles or so away.

The code-name for the move was Spadger and for a time the Division was known as Spadger Force. One American soldier was extremely puzzled, it is reported, because not in his atlas nor anywhere could he discover Spadgerland, where Spadger Force would have come from. Other Americans were puzzled too, about this time, to find that at the height of these security precautions, New Zealanders in felt hats and with engineer puggarees were to be seen in the streets of [Naples](#). All was explained satisfactorily, however, when it was discovered that these men were from 14 Forestry Company, passing through from [Algiers](#) to the [Calabria](#).

Sixth Brigade Group, which included 8 Field Company, was the first formation to depart from the [Sangro](#) area. The convoy moved off about midnight on 14 - 15 January, but did not maintain the movement order speed and density, so that there were periods of crawling in low gear followed by bursts of high speed, intermingled with long spells of standing still. The absence of enemy aircraft was the subject of thankful comment by drivers with long memories.

The men were told as they staged for the night on the [Lucera– San Severo](#) roadside that they were going for a rest and training spell all right, but that it would be taken on the western side of the mountains in reserve to the Anglo-American Fifth Army.

The sappers, and for that matter the whole Division, were to have another lesson in Italian geography, for the [Apennines](#) are not a continuous mass with odd passes like our own Southern Alps; rather they are thrown about in a series of short ranges, with the result that armies could fight there and be maintained by roads that penetrated for varying distances from both east and west. Rivers such as the [Volturno](#) and the [Sangro](#) of evil memory have their sources within a few miles of

each other; and yet, after twisting and looping, one flows east and the other west. The Manawatu is another example nearer home of a river that has its origin on the eastern side of a dividing range but discharges its waters on the west coast.

The next day's drive was across this tossed-up mass of high country via the [Foggia–Avellino–Naples](#) highway, a good asphalt road with tough up to one-in-five grades. This lateral, one of two connecting the Eighth and Fifth Armies, had been repaired by British engineers after the Germans, with adequate time, explosives and the thought that they were not likely to pass that way again, had done their worst.

The column passed through quite considerable towns flanked by little paddocks draped over rounded hills or hung on to steep hills, and rattled through cobble-paved villages—all out of bounds to *soldati*—even more impossibly situated than those on the [Sangro](#). There was snow on the higher peaks and long miles of road on the shady side of the passes that were as cold as Jittery Ridge, and there were innumerable unscheduled stops. From time to time legs were stretched, [Benghazi](#) burners produced and quick brews of tea organised.

To those musically inclined the names of the hamlets, villages and towns—half a million people inhabit the region—sounded like the libretto of an Italian opera: [Lucera](#), Troia, Ariano, Grottanciano, Pratoa, Avellino, Baiano Cicciano.

It was at Cicciano, on the road to [Cancello](#), that the sappers first saw [Vesuvius](#); loyal North Islanders said stoutly that it wasn't really much of a volcano—Ngauruhoe could outsmoke it, and in size, Ruapehu could lose it.

'We were in American territory by then,' Lieutenant Fraser remembers, 'and obviously they were not used to New Zealanders, for when one of their vehicles broke down, all aboard, including the driver, used to disappear in search of assistance. This occurred on that first night just down the road from us among some of the other formations of the Div. Next morning about all that was left of that particular vehicle was the chassis—somewhat of an exaggeration, but it was picked very clean much to the amazement of the Americans involved.'

In the morning the Group moved about 60 miles eastwards again, towards [Alife](#), the Divisional training area at the edge of the Matese Mountains and close to the [Volturno River](#). Eighth Field Company was detached near [Capua](#) and pushed on north

to [Sparanise](#), with a job to do for the Fifth Army.

[Sparanise](#) was the Fifth Army railhead and petrol supply point. The petrol was brought there by a pipeline and taken from there in tank lorries. Eighth Field Company was required to build a new access road to the railway yards, improve the existing roads and put down a 40 ft single-single and a 60 ft single-single Bailey bridge. The plant, four bulldozers, two graders and a shovel, was supplied by RE units and seventeen 2 ½-ton tip-trucks arrived on loan from 425 (American) Engineer Company.

The days were sunny, the nights not too cold, for the sappers were now shielded from the bitter north-east winds that come from [Russia](#) via the [Balkans](#); there were no technical problems and the job was nearly finished when 503 Field Company, RE, took over on the 22nd. Major Currie, at Fifth Army Engineer Headquarters, was warmly complimented on the speed with which the New Zealand sappers had worked. The Company left next morning and, after a couple of hours' drive, joined the Divisional Engineers group at the [Alife](#) training area, where bridging in all its aspects was being studied and practised.

The outstanding lesson of the [Sangro](#) fighting was that bridging and the rapid repair of roads would henceforth be the engineers' major role and that mine-lifting and detection must be at least partly the responsibility of the forward troops. <sup>1</sup> For the last week in January and the first in February, therefore, the sapper units came under the command of the CRE and did some routine work in mine gapping and booby trapping, but chiefly they carried out experiments with Bailey bridge components, bulldozers and transporters.

One such experiment was to assemble 60 feet of Bailey and mount it on heavy timber skids. The whole thing was then towed about by dozers to test its manoeuvrability, after which various methods of pushing the sections or hauling them over waterways were tried out. The climax to bridge improvisation was the building of 120 feet of single-single with the central panels on a tank transporter. It was found that a D6 could move the assembled bridge and transporter with ease, so the whole affair was pushed into the [Volturno](#), where the transporter acted as a pier.

On 6 February orders came to move.

A short account of the position on the front in western [Italy](#) by way of a background to the unfolding of the drama of [Cassino](#) is expedient at this point.

The Fifth Army had, like the Eighth, fought its way up to the southern edge of the [Winter Line](#) but, unlike the Eighth Army, did not propose to halt there for the winter.

The only practicable route to the north—and [Rome](#)—was through the [Liri](#) valley, a trough between the [Apennines](#) and the Aurunci coastal mountains. The entrance to the [Liri](#) is obstructed by a foreland of tangled high country jutting from the snowcapped [Cairo](#) massif in the [Apennines](#) and leaving but a seven-mile-wide opening—almost another [Tebaga Gap](#).

The extreme southern end of this mass of twisted ridges, some of it alpine in elevation, is the spot where St. Benedict chose to build his monastery, an edifice which during the wars of past centuries had been burnt, plundered or razed, but always rebuilt.

Lieutenant O'Reilly wrote in his diary:

'My first sight of the Abbey was from the OP on top of Mt Trocchio. It is an enormous square building of red and cream stone straddled squarely across the top of Monte [Cassino](#) with the battered town huddled at the foot of the mountain. Behind it towers snow capped Mt [Cairo](#). The monastery dominates not only [Cassino](#) and Mt Trocchio but the whole countryside around and from it one must be able to see miles down the [Liri](#) valley. It is extremely ancient, and in the way of ancient monasteries, extremely well sited for defence.'

The only practicable line of approach to the monastery was by way of a road which zigzagged for five miles down a very steep 1700 feet of hillside to the town of [Cassino](#) where, according to the guidebooks of the period, 5000 Italians lived.

A small valley, the source of the Rapido River, falls sharply to a marshy flat immediately east of [Cassino](#) and, quickly losing momentum, the Rapido merges south of the town into the River Gari. The Gari then crosses the mouth of the [Liri](#) valley and flows into the [Liri](#). Somewhat confusingly, the augmented waters of the [Liri](#) now become the Garigliano. It is not necessary to ponder the intricacies of Italian

river naming; it will be sufficient to remember that the traveller—or invader—must follow Route 6 through [Cassino](#) town and cross both the Rapido and Gari bridges if he would enter the [Liri](#) valley on wheels.

Geographically the three rivers are insignificant, but militarily the whole position, with some justification from history, had been considered by the Italian High Command to be practically impregnable.

While 8 Field Company was roading and bridging at the railhead, the British, American and French corps of the Fifth Army had made a three-pronged thrust at the [Winter Line](#), with the result that the French had made some progress in the mountains north of [Cassino](#), the Americans in the centre had been thrown back across the Rapido and the British in the south had been halted well short of their objective.

The day, 22 January, that 8 Field Company handed over its job to 503 Field Company, RE, a seaborne landing was made at [Anzio](#), between [Cassino](#) and [Rome](#). The German defences should have folded up but, instead, the beach-head was sealed off and, from our point of view, became a liability rather than an asset; instead of [Anzio](#) forcing a retirement from [Cassino](#), [Cassino](#) had to be reduced to take the pressure off [Anzio](#). But enough of the higher strategy.

The Americans, after taking over a part of the sector captured by the depleted Free French Corps, were making a wide wheeling movement around the monastery of [Montecassino](#) reminiscent of the New Zealand effort at [Orsogna](#). Unlike the New Zealand Division at [Orsogna](#), the Americans were not bombarding the hub of the wheel and the monks there, between devotions, had a bird's-eye view of the battle.

For the second time in [Italy](#) 2 NZ Division had been assigned a pursuit role in the advance on [Rome](#), but it was thought that a stronger exploiting force than a division was necessary; consequently, for the second time in the war, the [New Zealand Corps](#) came into being on 3 February by the addition, initially, of 4 Indian Division, an American tank task force and various artillery and other auxiliary units. Colonel Hanson became Chief Engineer of the Corps, as well as CRE of the Division.

In order to maintain their turning movement the Americans south of [Cassino](#) were withdrawn to reorganise and 5 Brigade occupied the area. On 6 February [New](#)

Zealand Corps began to deploy its components in front of [Cassino](#) in readiness for the push along the [Liri](#) valley that would follow the capture by the Americans of [Montecassino](#).

The Divisional Engineer concentration area was in the vicinity of the [Mignano](#) railway station, some 12 miles to the east of the battle line. Seventh Field Company detached four reconnaissance parties <sup>2</sup> to work with 4 Armoured Brigade, one with Brigade Headquarters (Lieutenant Veart) and the others to 18 Regiment (Lieutenant O'Reilly), 19 Regiment (Lieutenant McCormick) and 20 Regiment (Lieutenant [Crawford](#) <sup>3</sup>).

The rest of the group did routine training, experimented further with Bailey bridging, operated a metal quarry, improved access roads to the CCS or split timber for the corduroying jobs that appeared probable.

Daily until 11 February the Americans and Germans contested the hilltops, but the end came with the outfought Americans deprived of the vital strongpoints and with but a foothold in the northern outskirts of [Cassino](#) town. The New Zealand Corps was then given the task of eliminating [Montecassino](#) as a preliminary to its pursuit role, so that in effect it now had not only to kick the goal but to score the try first.

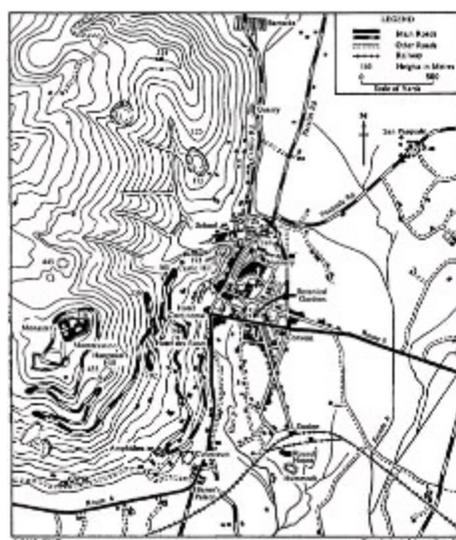
The essence of the Corps plan was a double thrust from north and south; [2 New Zealand Division](#) would capture the [Cassino](#) railway station, three-quarters of a mile south of the town, a group of houses at a road fork 300 yards to the north and a low hill (the Hummock) the same distance to the south of the station. It would then be possible to cover the bridging of the Gari and the passing of armour into the [Liri](#) valley.

The northern thrust was to be made by 4 Indian Division, which would complete the turning movement and the encirclement of [Montecassino](#) unfinished by the Americans.

Owing to the sodden condition of the terrain in front of [Cassino](#), it was clear that large quantities of corduroy would be needed and every available sapper was employed cutting, winching and loading the trucks from the timber stands in the

area. The main dump was behind [Monte Trocchio](#) <sup>4</sup> and could be worked in daylight, but a forward dump on the enemy side of the hill could be approached only after dark.

Sapper [Millar](#), <sup>5</sup> the 6 Field Company winch-truck driver, missed the turnoff to the forward dump and carried straight on until he was stopped by a demolished bridge. He realised where he was at the same time as a Jerry patrol realised he was there. Millar managed to make a safe getaway, but when the truck was recovered it was not in very good order. The Rapido River was confined by stopbanks north of [Cassino](#) and the enemy had strengthened his already formidable defences by blowing both the stopbanks and a reservoir, with the result that the marshy country had reverted to a near-swamp. It was still littered with American tanks that had bogged down during the crossing of the Rapido in that vicinity, and the only possible route for support arms into [Cassino](#) station was along the railway track, which was built up above flood level.



**cassino**

It was, of course, highly unlikely that the enemy had refrained from doing more than ripping up the railway line and [Mechanical Equipment Platoon](#) was instructed to assess the damage. Lieutenant Faram, accompanied by Lieutenant [Andrew](#) <sup>6</sup> from Headquarters Divisional Engineers, accordingly reported to 28 (Maori) Battalion at last light (10 February); they were to be provided with local protection, which in turn was to be preceded by a fighting patrol. In the end the local protection was dispensed with and the 'recce' officers had perforce to accompany the fighting patrol.

The Germans had removed all the rails except a double set about 50 feet long, still fastened to the sleepers just beyond the Maori FDLs. The patrol began by sweeping its way along the embankment, but because the steel dogs and fishplates lying around rendered the mine detectors ineffective, it was decided to take the risk of AP mines and watch out for Tellers. It was a night of drizzle with a watery moon and visibility of about sixty feet. The Maoris bumped an enemy patrol just inside the station yards and exchanged grenades. Lieutenant Fraser says:

'They threw a couple of grenades (one of which got Christie <sup>7</sup> in the hand)—we threw a couple back and took cover. I told Christie that we had better get back as we had all the information we required and there was no point in having a battle especially as Jerry no doubt had a M.G. on fixed lines pointing the way we had to go.'

They got back without further incident and Faram reported to the CRE's conference next morning that there were ten <sup>8</sup> demolitions in approximately half a mile of causeway and that two bridges would be needed. Colonel Hanson was called away during the conference, and when he returned it was with the information that four nights could be counted on to get as much done as possible before the attack. The obstructions were described and numbered from the home end and 8 Field Company was given the job of picking up mines, putting in culverts and making ready for Mechanical Equipment's dozers as far as the fifth demolition, a blown bridge across a canalised stream known as the [Little Rapido](#).

[No. 3 Platoon](#), 8 Field Company, left its area in good time but found Route 6 so congested by 4 Indian Division transport moving up to relieve the Americans that it took them three hours to drive ten miles, with a consequent late start. Multitudinous scraps of metal were detected by the minesweepers but no mines were located. Thirty-six hours of almost continuous rain had, however, so added to the flood waters that there was a heavy flow through each gap in the causeway. The first two obstructions, a fallen overhead bridge and a blown-up house across the track, were dozer jobs, but time permitted of only one culvert being built in No. 3 Demolition. The surplus material brought up by 5 Field Park vehicles was hidden in a convenient house.

Eighth Field Company did not work the following night (12 - 13 February) but Lieutenant Faram took a dozer and a few tipper trucks loaded with bricks to fill holes in the access road from Route 6 to the railway line and then to doze a track up to the first culvert. At this point German cunning won a trick, for the dozer had to move along the double length of rail already mentioned. Detectors could not detect them but there were four Tellers planted, one under each rail.

Lieutenant Faram remembers the incident:

'I got the dozer on to the part where the rails were in place and the first Teller went off and broke the track. Luckily Armstrong appeared on the scene (as he always did when there was anything doing) and he got another dozer up smartly. It was just passing the wrecked machine when another Teller went up and we had another wrecked machine on our hands—not too long to daylight and in full view of the Jerries if they remained there. We got another machine up and managed to pull the wrecks to the side of the cutting and cover them with nets and got out without attracting any mortars.'

The CRE advised at his Orders Group conference held on the 13th that the operation would probably be postponed an extra night, and that when the Indian attack went in 5 Brigade would seize the railway station. The sappers would follow up and get a Class 30 road into the station the same night if possible. It would depend on the light and the enemy interference and might have to be done in two nights. Demolition 5 ( [Little Rapido](#)) and Demolition 7 ( [Main Rapido](#)) would have to be bridged. Sixth Field Company would bridge the [Little Rapido](#) and 8 Field Company the [Main Rapido](#), with Major Marchbanks in command of the work. Seventh Field Company would be held in reserve and, when the tactical situation permitted, would bridge the Gari.



### **the maoris attack cassino railway station, 17 - 18 february 1944**

[Mechanical Equipment Platoon](#) took two more dozers up that night (13th - 14th) and filled the demolitions up to the [Little Rapido](#). The two damaged dozers were recovered the next night.

By this time 4 Indian Division had deployed and its commander, planning his operations in the very shadow of the prison-like monastery, had asked that it be destroyed by bombing. Much has been written about the merits and demerits of the proposal, which, when put into execution, converted the building, in the words of a German general, 'from a mousetrap into a fortress'. The bombing of the monastery, military necessity or wanton aggression according to the point of view, does not concern this history as it had no influence on the work of the New Zealand sappers. It is sufficient to say that on 15 February 250 bombers dropped 576 tons of high explosive on or about the monastery of [Montecassino](#) and left it a smoking ruin which the enemy proceeded to convert into a fortress.

Expedients for getting a bridge across the Rapido in the shortest possible time were discussed at the CRE Orders Group held on the 14th. Everything, of course, depended on the arrival of components at the right time and in the right order, along a track barely wide enough for two vehicles to pass. Lieutenant 'Bailey George' O'Leary was in command of the bridging train, and as the citation for his MC for this and other actions mentions, 'In the dark and on the narrow approach roads and raised railway embankment with numerous large craters to be avoided, the getting of the stores forward on time and in the correct order was no mean feat.'

'Bailey George' himself treats the whole thing very casually:

'The method of loading the vehicles so that they were received in the sequence needed at site was of course elementary. It also simplified the actual handling of the trucks on the railway embankment itself as there was never any need to have more than one or two vehicles at the site at the same time. Most of the vehicles were backed from the assembly point onto the site, the drivers being guided by myself and Sgts Stan Kerr and Phil [Newton](#).<sup>9</sup> We simply walked alongside the vehicle on the driver's side and he relied on our verbal instructions to keep the truck on the right path. Once the show started we found that there was more than enough noise to cancel out any shouting on our part.'

Seventh Field Company was told off to work that night on the approaches to Demolitions 3, 4, 5 and 6 (5 was the Little Rapido and 6 a blown culvert east of the [Main Rapido](#)). This order was changed at the following day's Orders Group and 8 Field Company was made responsible for the road to Demolition 7 inclusive, which meant that it would bridge both Rapidos. Sixth Field Company would, with the help of [Mechanical Equipment Platoon](#)'s dozers, carry on to the railway station.

Seventh Company corduroyed the track between Demolitions 3 and 4 that night while [Mechanical Equipment Platoon](#) 'recced' the main Rapido and found that, although the rubble from the demolition had partially blocked the [Little Rapido](#) and formed a deep pond or lake on the upstream side of the railway bank, the [Main Rapido](#) ran freely and had a fairly hard bottom. After a little work was done on the banks their dozers could cross before the bridge was built. Major March-banks took advantage of the information and decided to build the second Bailey on skids and haul it over the river with a dozer as practised at [Alife. No. 3 Platoon](#), in reserve for the projected operation, set about shaping the timber skids.

One more postponement and the 'show', as the sappers referred to any attack in which they were involved, was definitely 'on' for the night 17th - 18th. The Maori Battalion was going to attack on a two-company front, one to capture the Hummock and the other the railway station and the group of houses previously mentioned. They would form up on the left of the embankment and leave the engineers free to get on with the work of bridging and filling demolitions for the passage of the support weapons, especially the tanks.

The situation at that time was, from the sapper point of view, that four of the twelve demolitions had been made good, the approaches for a bridge across the fifth prepared, and there were two more in the railway marshalling yards that had not for obvious reasons been reconnoitred. Demolitions 5 to 7 inclusive could not be started until the Maoris had taken their objectives, the station itself and the strongpoints on each side. The position of these would then be not unlike the three petals of a clover leaf, with the embankment as the stem, and their capture would shield the working sappers from aimed fire.

The Maoris were to leave their start line forward of Demolition 8 at 9.30 p.m., and Major Marchbanks had planned for [No. 2 Platoon](#) (Lieutenant Fisher) to commence building the bridge at Demolition 5 at 7 p.m. and completing it half an hour before the assault went in. [No. 1 Platoon](#) (Captain Wallace) was to be standing by ready to move up to the [Main Rapido](#) and begin building at zero plus 60, that is at 10.30 p.m., when the Maoris were expected to have taken all their objectives.

The carefully and tightly timed programme aimed at getting the support arms up to the Maoris before daybreak was dependent on (1) early success by the Maoris; and (2) early completion of Demolition No. 5.

There was a hard frost and starlight, with a waning moon due to rise at 3 a.m. While the sappers were stamping their feet to keep warm, Major Marchbanks was tying up the details of the local protection to be given by a platoon of Maoris while the first bridge was being built. It was at this point that the project timings got a setback, for although there was not going to be any barrage, two batteries of American heavy and two regiments of medium guns were to deliver a ten-minute 'stonk' between 8.40 and 8.50 p.m. It was disturbing news, for as Marchbanks wrote:

'Lt-Col [Young](#) <sup>10</sup> [CO 28 Battalion] had orders to withdraw all men to Demolition 1 before the stonk. I discussed with him whether we could go on building the bridge, but he said his orders were quite definite. He also insisted on the withdrawal of our men while the Maoris were assembling at Dem 5 for the attack.'

Four truckloads of material were unloaded, the far bank seat was put in and three panels of bridging, plus one panel of launching nose, were assembled before

the 'stonk' fell on the Maori objectives. That delay and the time lost while the troops were clambering over Demolition 5 meant that the bridge, instead of being finished half an hour before the attack started, was still uncompleted when the sappers were again withdrawn until the success signal indicated that the objectives had been secured.

The actual building of the bridge took longer than had been expected and it is doubtful if it could have been finished in the time allowed. The site was just above water level and there was not enough room in the dozed down-approach to assemble the complete structure. This meant that it had to be partly built, then pushed forward while more panels were assembled, a circumstance which added materially to the time required. Had it been possible to get a dozer over first, the bridge could have been dragged across as was done at Demolition 7.

Sixth Field Company, less [No. 1 Platoon](#), was to move from Demolition 1 at 10.15 p.m. and start lifting mines and reinstating demolitions from the western bank of the Rapido into the railway station.

The two company commanders waited anxiously for the success signal, and when none came by 10.15 p.m. they decided to carry on without it. Sappers were called forward by runner as required, the bridge was launched, the rollers removed and the decking finished by 11.15 p.m., but the first dozer to cross pulled off the ramp, which effectively stopped further traffic until it was repaired.

To make matters worse, the next dozer over again damaged the ramp so that the bridge was not ready for traffic until 1.15 a.m.

Twenty-five sappers were already breaking down the banks of the [Main Rapido](#) for the dozers to cross as soon as they had filled Demolition 6 between the two bridge sites—a gap 30 feet wide and seven deep. The bridge party, as instructed, arrived on the site at 11.30 p.m., but the trucks with the bridging components could not cross Demolition 6 until 2 a.m. The bridge, built on runners, was pulled across the Rapido and ready for traffic at 5 a.m.—over four hours behind the estimated time for completion. Actually the delay was not as serious as it would appear because 6 Field Company, working beyond the bridges, had not lost much time.

Major Goodsir's dispositions were:

Captain Allen and Lieutenant [Martin](#),<sup>11</sup> with three sections of [No. 3 Platoon](#), to search for and lift mines.

Lieutenant [Higginson](#)<sup>12</sup> and Lieutenant Skipage, with [No. 2 Platoon](#) and a section from No. 3, to assist the mechanical plant where necessary.

Sixth Field Company was thus involved in making good five demolitions between the Rapido and the railway station. Demolition 8 was a damaged culvert 30 feet wide by 7 feet deep; No. 9 a blown-up subway; No. 10 was a huge gap 80 feet long by 10 deep, the largest demolition of all; Nos. 11 and 12 were inside the station yards and known only through aerial photographs.

It was quite apparent to the sappers from the flares, the yells and the firing that the Maoris had not got their objectives. The minelifting party found that the 8 Field Company bridge-builders were working on the assumption that there were no mines; the embankment, the debris in the river and the bypass were thoroughly checked, but there were in fact no mines and the sweepers swept on. It was now about midnight and the position was that two dozers had crossed the [Little Rapido](#) and were working on Demolition 6 while Higginson's party was starting on Demolition 8, where a track had to be formed around one side of the obstacle so that a dozer could work from each end. The minesweepers, led by Sappers [Beal](#)<sup>13</sup> and [Hughes](#),<sup>14</sup> who were accepting the risks of trip-wired anti-personnel concrete mines or the wooden Schu mines while concentrating on the tank-stopping Tellers, were up level with the fighting infantry at the entrance to the station yards. The determination and example of these two sappers were recognised in the next list of awards by MMs.

The two dozers that had crossed the [Little Rapido](#) and damaged the bridge in doing so were working on Demolitions 8 and 9 by 1 a.m., and an hour later the Maoris had cleared the railway station but not the Hummock nor the group of houses situated on either flank of their objective; and the first dozer had got up to Demolition 10. The minelifting party was sheltering in this demolition while Lieutenant Martin worked his way and marked a track through the belt of wire and booby traps to the uninspected Demolition 11. On his way back he noticed a group of Maoris stranded in a field of mines and took time off to clear a way out for them. He was awarded an MC for his coolness and devotion to duty.

Up to this time it is doubtful if the enemy had been aware of the work the sappers were doing, but with the rising of the moon at 3 a.m. fire from the Hummock and concentrations from more distant mortars were directed into the railway yards. The sappers were forced back into the shelter of the demolition every time they began clearing a dozer track to Demolition 11.

With the Rapido bridge ready for traffic, Captain Allen was requested to make another effort to get the track opened between Demolitions 10 and 11 because support arms had to be got through to the battling Maoris, still with only one of their three objectives captured. Captain Allen and two sappers were killed within minutes of exposing themselves, and Major Goodsir, considering that the conditions were impossible for unarmed men doing specialist work of this sort, ordered a withdrawal. By 6 a.m. all the engineers and the four dozers were back at Demolition 1; it was full daylight and smoke was being put down by the artillery, no doubt welcome enough to the station garrison but too late for 6 Field Company.

Major Goodsir's opinion that working conditions were impossible was confirmed by Major Marchbanks and so reported to the CRE. After the smoke was put down the CRE asked if the job could now be completed. An urgent message brought Second-Lieutenant J. Brown and the rest of [No. 3 Platoon](#), 8 Field Company, to Demolition 1 at the double. Brown was instructed to 'recce' from Demolition 10 to 12 and took Sergeant Cottrell with him for company. They left about 8 a.m. under cover of the smoke and got safely to their destination, where they saw the work that had been done both in the demolition and on the wire in front of it.

The pair stepped warily through the wire obstruction. It was on pickets about two feet from the ground, criss-crossed and liberally sprinkled with AP mines. Demolition 12 was five chains inside the shunting yards and some distance beyond the point where the rails branched into the marshalling loops. It also was protected by wire and mines.

The smoke was thinning but a safe return was made to Demolition 1, where a lifting party was selected to finish the gapping. They were halted at Demolition 3 by a line of shells bursting along the track, and after waiting for some time for more smoke or less fire, neither of which occurred, Lieutenant Brown brought his party back to the starting point, as nothing more could be done until after dark.

Fifth Field Park Company's diary put the matter very succinctly:

'Dozers shifted back to vicinity No. 1 demolition at daybreak. Personnel returned to camp. No casualties during the night. Party under Sergt Church stood by during the day to commence work on Nos. 11 and 12 demolitions if conditions allowed. They did not.'

The Maoris were told to hold what they had gained until nightfall. Major White was instructed to clear Demolitions 11 and 12 that night and moved his [No. 3 Platoon](#) up to CRE Tactical Headquarters during the afternoon, but the party was recalled when the enemy counter-attacked and forced the Maoris to vacate the station. The Indian attack in the hills half a mile above gained some ground but did not make any significant advance. It was another round to the enemy. [Mechanical Equipment Platoon](#) (Lieutenant Gowan) retrieved the four working and two damaged dozers, noted that the causeway between Demolitions 3 and 10 was still being systematically mortared and returned thankfully to the tasks, with the rest of 5 Field Park Company, of opening up a metal quarry and doing maintenance work on its equipment.

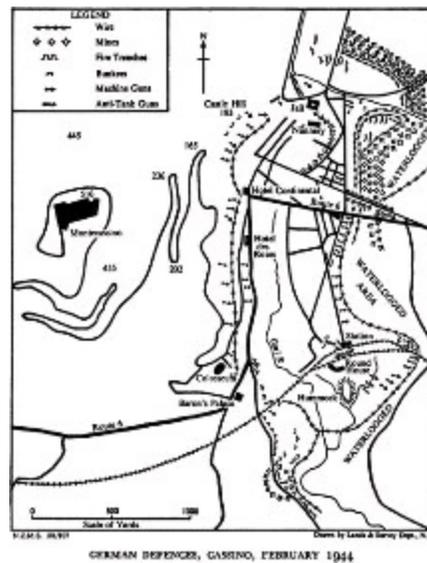
But the position at [Anzio](#) remained critical, almost desperate, so further action was essential; the alternative of trying to break out at [Anzio](#) was to try again to break in at [Cassino](#) and [New Zealand Corps](#) was instructed to carry on.

The new plan was to attack [Cassino](#) town from the north with the New Zealanders and to guard their flank with Indians moving across the eastern face of [Montecassino](#) preparatory to assaulting the monastery by a possible route via [Castle Hill](#), an outcrop that in earlier days had been equipped with a castle for the precise purpose of defeating such a move. The ruins of the castle were still there, but on this occasion a massive air support was to be provided.

The town of [Cassino](#) was a mile long from north to south by about half that distance wide, with a dense built-up area probably half a mile square in the south-western corner, where Route 6 turns at right angles between the Gari River and the steep side of [Montecassino](#). The attack on the town and the slopes above it (code-name Dickens) was to be carried out by 6 New Zealand and 5 Indian Brigades, with 4 New Zealand Armoured Brigade in support; the rest of [2 New Zealand Division](#) was

to be used if necessary while 78 Division, newly arrived to join [New Zealand Corps](#), plus an American tank force, were to exploit the break-through.

The assault was set down for 24 February but the weather deteriorated into almost incessant rain, and it was not until three weeks later that [Cassino](#) was first flattened by 500 bombers, then pulverised by 600 guns, before 25 Battalion moved down the Caruso road into the churned-up mess of masonry that had once been the town. It was a busy three weeks for the sappers of 7 Field Company, which had been in reserve during the Maori attack on the railway station.



**german defences, cassino, february 1944**

The Company moved to the north of Route 6 on 23 February and made camp on the Pasquale road, near 6 Brigade Headquarters on the eastern side of the Rapido valley. Above, the Michele road sidled along the ridge, and two miles away due west stood the military barracks which the Americans had wrested from its German garrison and later used as a ration dump. It was still full of rations and nocturnal visitors came away with cigarettes, coffee and Yankee 'K' rations, but the biscuits were inedible. The area was the usual Italian scene of casas (as the troops had learnt to call the houses) nestling at each crossroad, small fields, some ploughed and some in grass, olive groves, grapevine stumps and small plantations. The livestock was kept indoors or had been driven into the hills before the tide of war had engulfed the little valley.

It was the area of the American Upper Rapido bridgehead, and three roads

connecting sundry ridgetop villages with [Cassino](#) entered the north end of the town within a couple of hundred yards of each other. From west to east there were, first, Caruso road that passed the barracks about a mile out of the town and followed fairly closely the bank of the Rapido, then Parallel road, some 200 yards on the east side of the river, and Pasquale road, which also skirts the river for nearly a quarter of a mile before it joins Parallel road. Two bridges had carried the roads into different parts of [Cassino](#). Finally the Rapido riverbed, owing to the blowing of the stopbanks, was almost dry for some distance between the barracks and the town.

Because of the proximity of the enemy and his commanding position, it was all night work for the sappers while they waited for the rain to stop and the battle to start.

The tanks were to use the Caruso and Parallel roads into [Cassino](#) and it was 7 Field Company's responsibility to see that there were no hidden traps, such as double Tellers dug in under the road verges and just waiting for the weight of a tank to explode them.

The most important job, however, was to make a crossing for tanks through the Rapido in place of the demolished bridge that had carried Parallel road into [Cassino](#). The site was within easy mortar range and the work had to be done without the watchful enemy knowing what was going on. The method adopted and successfully carried through was, in the dark of the night and ever so quietly, to pave the Rapido bed with pieces of masonry from the blown bridge, taking the greatest of care to see that no part of the crossing showed above water.

It was also necessary to lay a series of charges in the banks of the river and in a concrete wall on the far side of the proposed ford so that, at the appropriate time, the explosions would present the tanks with an easy passage into and over the river.

Sergeant Dacey had charge of this job and was awarded an immediate MM for its successful conclusion. Part of his citation reads:

'This was a particularly difficult and dangerous task. The area was covered by fixed line firing from Point 193 and frequent heavy mortar concentrations were put down. Considerable excavations were necessary and large quantities of gelignite had to be carried and placed in the wet holes. Sgt Dacey fully realised the danger

involved in handling so much gelignite under fire but he went cheerfully and calmly about his work.'

The crossing was paved, the far bank mined and nothing remained but to fire the demolition charges, whereupon the tanks would roar into [Cassino](#). To anticipate the event, what actually happened was that the preliminary bombing so damaged the road and ford site that no tanks crossed the Rapido into [Cassino](#) as planned. The only way into the town was by the road west of the river, as will be seen in due course.

Some 150 yards south of the bridge in the scattered outskirts of [Cassino](#) stood the town gaol, shared at that time by the infantry of both sides and the limit of our penetration. The road leading to the gaol and the square in front of it were searched for mines, and often the sappers on their side of the gaol could hear the Germans at work on the other side. Neither party called down trouble on the other.

The probable effects of an avalanche of over three tons of exploding bombs per estimated man of the German garrison were debated at conferences that were daily held at varying levels of command. It was generally conceded that the infantry and armour would cross a mausoleum, though under a certain amount of fire from the positions built deeply into the side of [Montecassino](#). The sappers were not so sanguine about the ease with which the tanks would cross the chaos of rubble.

'I was under no illusions,' Major White wrote later, 'about the difficulties of the engineer task in making a path for tanks after heavy bombing. At Brigade Conferences I used to reiterate that we could expect a direct hit on a road at an average distance of 100 yards and that each bomb hole in alluvial ground would require a bridge say 40 feet long and that some of the near misses would also take the whole of the road. However we were going to have the attack anyway and such gloomy predictions were of little use, so Brigadier [Parkinson](#)<sup>15</sup> didn't encourage me.'

Eighth Field Company spent the time on odd jobs that came along and also practised, in the light of its experience on the railway causeway, in building varying lengths of Bailey in confined spaces and in experimenting with methods of dealing with low wire obstacles such as were encountered in the [Cassino](#) railway yards.

Sixth Field Company activities were largely concerned with the railway track. The rails and sleepers had been lifted from a point some miles east, past [Mignano](#) and up to the western end of [Monte Trocchio](#), and the railway turned into a road. The advantages of continuing the easily formed road and bypassing [Cassino](#) were apparent and the Company spent many arduous hours continuing this work, sweeping for mines which were found in profusion, and clearing away the rails and sleepers. It was at this time that Major Goodsir went to hospital and Captain Loudon assumed command, with Captain [McGregor](#), <sup>16</sup> recently returned from the Middle East Staff College, as his second-in-command.

Another small but very important job done by 6 Field Company was the Cavendish road.

In February the Indians had built a jeep track from [Cairo](#) village around the sides of [Monte Castellone](#) to the Colle Maiola bastion of the line. It was called Cavendish road—after the CRE 4 Indian Division—and ended at Madras Circus. Originally a peasants' foot track, it had been used by 4 Indian Division as a supply route—the only possible route to the troops in the forward sectors—and until the jeep track was built all supplies were carried by porters along its breathtaking grades.

Cavendish road was a fearsome thing, a mile long, and rose 820 feet with a grade of one-in-four on the final 400 yards. The idea was born of widening Cavendish into a tank track, for beyond Madras Circus the country appeared to be tankable as far as the German strongpoint at [Masseria Albaneta](#) ( [Albaneta Farm](#)) which so far had resisted all American and Indian infantry attacks.



**the hills north-west of cassino, showing cavendish road and route of tank attack**

Colonel Hanson, Major Currie and other senior sapper officers 'recced' the job and conferred with the CRE 4 Indian Division. Since tanks might push down the retaining walls of the existing track, it was decided to widen it from eight feet of cut-and-fill to twelve feet of solid cut. It was further decided to make a new alignment near the head of the track about 150 yards long in order to avoid a hairpin bend.

The first part of the track required little work while much of the remainder, consisting of earth and gravel or shale and boulders, could be bulldozed; but there were stretches with intermittent rock outcrops and three stretches of solid limestone.

There were three Indian field companies, three dozers and four Morris compressors available for the work—reminiscent of [Western Desert](#) days when the Railway Construction sappers had the assistance of Indian field companies while building the Desert Extension railway. A Kiwi force commanded by Captain Hornig, 5 Field Park Company, consisting of [No. 2 Platoon](#), 6 Field Company (Lieutenant Higginson), two D6 dozers, two Worthington trailer compressors and crews to operate them, was detailed to help the Indians.

The sappers moved to a more convenient bivouac area near the barracks on the night of 2 - 3 March, by which time the track had been widened to allow the trailer compressors to reach the rock outcrops where the New Zealanders were to do the blasting.

The assignment was both dangerous and spectacular, for the whole area was

within easy enemy range, while the bivvies were so close to the Indian guns that sleep was impossible while they were in action. Enemy posts looked straight into parts of Cavendish road which, like Duncan's road at [Orsogna](#), was shielded from view by camouflage netting, a precaution that seemed to annoy the would-be spectators.

On the exposed sections dozing had to be done at night, and operating without lights on such steep country was in itself a highly dangerous occupation.

There were thirty Indian casualties during the eight days it took to blast the road to its required width, but Captain Hornig, killed two days after the start of the job, was the only New Zealand casualty. Lieutenant Higginson took over command.

Blasting by borehole charges did not start properly until the 6th because it was found that, until a solid face was reached, it was quicker to use picks, crowbars, jacks and hand-placed charges. The Indians working with [No. 2 Platoon](#) just loved to be given some explosives and fuse and shown a small blasting job. Picks and shovels were used to remove earth, loose stone and shale; crowbars to unseat boulders up to three feet in diameter; jacks for bigger rocks.

Once a solid face was reached two or more lines of holes were bored at 4 ft intervals; each line was fused separately and timed so that the lowest exploded first and blew out a space to receive the debris from above. The bulldozers would then come in to push rubble over the side while the Indians would finish off the job. This work was completed on the 10th, when men and machines returned to their units after last light.

Nothing, not even Italian winter rains, lasts for ever, and eventually the airfields dried out sufficiently for the bombing planes to get off grass runways. Operation Dickens, after a three-weeks' lag, was to open on 15 March with bombers from as far away as England pulping the stone houses and built-in enemy strongpoints before flying on to Egypt to refuel. It was Julius Caesar country, for his friend Mark Antony had owned a villa near [Cassino](#) where he held some of his livelier revels; but there was no seer to warn the [New Zealand Corps](#) to 'beware the Ides of March'.

The tasks for the sappers on the opening day of Operation Dickens were:

7 Field Company (Major White) would clear routes through [Cassino](#) from the north.

8 Field Company (Major Marchbanks) would open up the railway route into the [Cassino](#) station after it had been captured and then be ready to bridge the Gari.

5 Field Park Company (Major Askin) would detail two dozers to work with each field company ( [Mechanical Equipment Platoon](#)), a party to go forward with corduroy ( [Workshops Platoon](#)) and a reserve minelifting party (Stores Platoon).

6 Field Company (Major Louden) was in reserve.

An American task force of tanks had a part in the further development of Operation Dickens, and it was probably because Treadways could be quickly and easily built over a wet gap, if vehicles could get to the water's edge, that an American Tread-way Bridging Unit was attached to 6 Field Company. Treadway components were carried on large Brockway trucks which were fitted with three driving axles, each with dual wheels.

Treadway bridging differs from all other types of floating bridging in that it does not have a solid decking. The bridge consists of three main components, the pneumatic float, a float saddle and individual steel treadways, which can be used by tanks or wheeled vehicles. In construction, the floats are inflated and placed in the water, then the saddles are placed on the floats and secured with straps, and the treadways, each 25 feet long, rest parallel on the edge of the water gap and the float saddles, thus forming the decking. A boom on the end of the truck is used to place these, for each treadway weighs about 2350 Ib. Each float weighs about 850 Ib and is 33 ft long by 8 ft 3 in. wide, and a complete saddle weighs about 2200 Ib. The Kiwi sappers never handled this [US Army](#) equipment but after a demonstration were impressed with its possibilities in certain circumstances.

Operation Dickens finally opened at 8.30 a.m. on the 15th, the Ides of March, and this is what the engineers saw from vantage points, again quoting from Lieutenant O'Reilly's diary:

'Operation Dickens started at breakfast time. For four hours great squadrons of Fortresses, Liberators and Lancasters and mediums paraded grandly over us while

high above, just specks, we could see the high cover of Spitfires and Lightnings. On [Cassino's](#) 1 Sq mile they unloaded 1400 tons and on adjacent targets another 1000 tons. It was awe-inspiring the way these great squadrons in tight formation appeared as by clockwork from the south, wheeled over [Cairo](#), unloaded and majestically turned for home. There must have been bombs falling on the town every minute of the 4 Hours—someone counted 700 of the “heavies” alone. One or two squadrons unloaded on our side of the bomb line also—these bloody Yanks again.'

As soon as the bombers departed the gunners took over and the infantry followed the barrage with the intention of clearing all [Cassino](#) north of Route 6 within two hours, whereupon Phase II would be put into operation. Phase II consisted of clearing the town south of Route 6 and capturing the railway station, while at the same time 4 Indian Division occupied selected spots below the monastery in preparation for the final assault after nightfall.

Whether the Indian attack failed or succeeded, American and New Zealand armoured task forces would push along Route 6 and outflank [Montecassino](#) from the south. Simultaneously another tank force would, via Cavendish road, debouch from Madras Circus and complete the isolation of the monastery.

B Squadron, 19 Armoured Regiment, followed 25 Battalion into [Cassino](#) and the official history of the regiment describes the sequel:

'The advance was made along two roads running south from the barracks area into [Cassino](#). Two troops of tanks moved on each route, but in the first few minutes it was found that all the preliminary route reconnoitring by the engineers, infantry and armour during the long wait outside the town was now of no use. The two troops on the parallel (the eastern) route were forced to retrace their tracks, while radio reports from the leading tanks on caruso route indicated that, while they had reached the northern outskirts of [Cassino](#), further progress was impossible. The heavy bombing had completely wrecked all roads to the objective. Huge craters and debris from demolished buildings made the going impossible, and the tanks were halted halfway between the jail and Route 6.

'To add to the already serious situation, several sorties of bombing Kittyhawks

attacked the area in which the leading tanks were working. Some of them could now move neither forwards nor backwards.

'The bridgelaying tank with B Squadron was called up, but the craters left by the heavy bombs on the rain-sodden routes were so large that they could not be spanned with this equipment. It was evident that bulldozer assistance from the engineers would be required before any reasonable progress through the town could be expected. All hope of a swift armoured break-through had now gone.'

All hope of a swift infantry break-through had also gone for 25 Battalion discovered that the supposed graveyard had come dramatically to life; II Battalion, 3 Parachute Regiment, which was expected to have been killed, buried alive or shellshocked, fought back, emphatic evidence of the safety of rubble-covered cellars and the quality of their construction. And there were enough of the enemy to break up the cohesion of the attack and slow down the rate of advance until, like the tanks, it also stopped.

Major White had detailed [No. 3 Platoon](#) (Lieutenant [Budge](#) <sup>17</sup>) to carry out any necessary road work in [Cassino](#). They were to enter the town by way of a crossing where Pasquale road first joins the Rapido, and would be met there by Lieutenant Faram with dozers.

The road had, however, been hit with bombs meant for the town and the sappers worked on filling craters until Faram appeared. He had parked one dozer with spare drivers in a sheltered spot and had taken the other to the rendezvous with [No. 3 Platoon](#).

'I took one dozer forward,' writes Lieutenant Faram, 'after the bombing and went down the Pasquale Rd. Our job was to fill holes and cross the Rapido about 200 yds E of the Gaol and then doze a track through [Cassino](#) to Route 6 and so on to [Rome](#) or bust. We got to the north bank of the Rapido and a couple of Yankee Lightnings had a go at us first with MGs and then flipped over and dropped a couple of bombs which dropped into the mud on both sides of the road and fortunately exploded straight up without doing us any harm.'

In spite of the mistaken American efforts and purposeful German mortaring, the dozer driver, Sapper Allan [Morgan](#), <sup>18</sup> got his machine across the Rapido and behind

the shelter of a stone wall.

**No. 3 Platoon** had to take what shelter it could while Lieutenant Budge and two men made a 'recce' into the town 'and could only report that conditions in **Cassino** were such that the movement of tanks would be very restricted on account of the number of bomb craters.'

Major White, asked repeatedly by the tanks for sapper assistance which Budge was apparently unable to supply, went up to assess the situation. A sniper's bullet which creased the back of his neck confirmed the impression he had obtained from Lieutenant Budge that bulldozing was not practicable. Now joined by Lieutenant Faram, the pair 'recced' forward past the infantry and up to the first tank, which was lying on its side, a magnet for mortars.

They eventually got back to Company Headquarters, leaving the dozer behind the cover it had found. Major White wrote:

'Messages from the 19 Regt continued to come through, urgently requesting sapper assistance. Lieut Budge reported that he was pinned down by aimed fire, and that engineer work was not possible. Smoke laid by the tanks did not stop the fire which was fairly close range, and the accuracy of which was creditable after what had hit the defence a short time before. I had confidence in Lieut Budge, and knew he would get on with the job if possible. Major **Leeks**,<sup>19</sup> commander of C Squadron, was wounded when trying to recce, and Captain **McInnes**<sup>20</sup> who took over from him was almost immediately wounded in the same way. Thereafter I think that the crews remained inside their tanks. They, no doubt, felt that we had let them down, but our task was beyond us. So the long afternoon wore on and the firing never ceased.'

With the assault halted in the ruins of **Cassino** the capture of the railway station had not eventuated, and 8 Field Company had not been sent to make good the railway-road into the objective. The lateral between Route 6 and Demolition 1 had however received, as had the Pasquale road, some of the bombs meant for the Germans in **Cassino**, with the result that there was a crater 40 feet in diameter and 14 feet deep that required filling if the road was to serve its purpose again.

**No. 1 Platoon** collected 50 feet of Bailey bridging from 5 Field Park Company

and, with the assistance of a D6 and a D8 (Lieutenant Gowan) from [Mechanical Equipment Platoon](#), safely bridged the gap.

It was a tricky job of bridging in a confined space. The oneway road was built up about six feet above the swampy ground over which it passed and there was thus no room for vehicles to pass. The job was done in the following manner—the D8 dozer went down the track used by the Maoris from Route 6 and so to the far side of the crater. The bridge was assembled farther back on the road and towed by the D6 to the site, where ramps were put on the bridge; the D6 then passed back over the bridge and the ramps were removed. The D8 on the far side then towed the bridge into position. The ramps were replaced, the D8 crossed and everybody went home.

Sapper work in [Cassino](#) during the night 15th - 16th, while the infantry stumbled among the ruins towards roughly allocated sectors, was confined to 7 Field Company. Major White and Lieutenant Budge, accompanied by Lieutenant Prosser who had been into [Cassino](#) almost every night during the waiting period, 'recced' for a track through the horrible jumble towards Route 6, but the upheaval, the pitch blackness of the night, and finally the heavy rain which turned rubble into mud and bomb holes into ponds defeated them.

Lieutenant Prosser writes:

'I had been going into [Cassino](#) every night for five weeks and could not orient myself at all that night. There was absolutely nothing where we could get a bearing, couldn't even find the Jail. After climbing in and out of bomb craters for hours we had to return to the tanks informing them that the going was hopeless.'

Lieutenant McCormick, out on reconnaissance the same night for 19 Armoured Regiment, described [Cassino](#) thus:

'It was a Hell of a mess, some of the craters being 60' and more across and they were as well distributed as the craters on the moon.'

The only positive results that night were obtained by the attached 48 US Engineer Battalion on the eastern approach to [Cassino](#). One company got a Bailey across the Rapido where the Route 6 structure had been destroyed, and the other lifted mines along the highway as far as the convent on Route 6 at the corner of the

road leading to the railway station. This convent, which became a landmark, was half a mile west of the Rapido and 400 yards past the point where a side road makes a V with Route 6, and which for clarity is called the north fork. Besides picking up mines, the American engineers filled three road craters between the bridge and the fork, a meritorious performance considering the conditions and the indiscriminating enemy fire which cost four casualties. Their orders suggested that they would clear the road right through [Cassino](#), in which case they would have needed the friendly co-operation of the enemy. The orders had been predicted on the success of the infantry, which was to have been in possession of the whole town instead of the outer fringes.

Lieutenant Whelan with fourteen sappers, who had reported to [Maori Battalion](#) headquarters for any work that might be required to get the Maoris back into the [Cassino](#) railway station again, had endured the enemy's intention of making tolerably certain with mortars that the railway station was not again attacked along the axis of the causeway. The sapper officer, with Sergeant [Heley](#) <sup>21</sup> and a Maori escort, tried at dawn to 'recce' the bridge over the [Little Rapido](#) but could not get close enough because of the rain of mortar shells. Lieutenant Whelan and a Maori were wounded but not put out of action.

Captain Morgan (7 Field Company) tried again from the north in daylight for a route to get the tanks on to Route 6, but one of his two sapper escorts was killed by a sniper's bullet and he later reported that it was not possible to work by day in [Cassino](#). Major White confirmed this opinion after a flight in a spotter plane in the hope of being able to find from the air a possible route that could not be located from the ground.

The infantry, both New Zealand troops in the town and the British and Indians on the eastern face of the hill above them, made local attacks against limited objectives, but the enemy held the upper hand and, in the words of the New Zealand official history of the period, 'the 16th was a day of endurance rather than of achievement'. The only real achievement was the arrival of three tanks which entered the battle by way of the American-built bridge over the Rapido on Route 6. Shortly before noon Lieutenant McCormick was informed that his reconnaissance group was to accompany No.1 Troop of A Squadron, 19 Armoured Regiment, into [Cassino](#).

The group left [San Pasquale](#) forthwith and parked the scout car at a convenient distance from the Rapido bridge. McCormick instructed the wireless operator to listen in on the tank wavelength for instructions and the working sappers to remain with the car while he and Sergeant 'Digby' Clements went up on foot to locate the tanks' troop commander, Lieutenant 'Strat' [Morrin](#).<sup>22</sup> He was found at the head of his troop near the fork of Route 6, at the end of the road repaired by the American sappers, and was halted by a demolition. The two officers made a 'recce' forward on foot, decided that a scissors tank<sup>23</sup> could bridge the gap and returned owing to a sniper's attention, as McCormick later said, 'with extreme rapidity' to the shelter of Morrin's tank. Sergeant Clements availed himself equally smartly of the shelter offered by a ditch. A troop of scissors tanks under command for the operation was called by radio and one was ordered forward from where they were waiting, a mile or so from the Rapido bridge.

The scissors tank duly arrived and its bridge was put down across the bomb crater, but through some damage to the mechanism the tank was unable to disengage; while it recovered its burden another scissors asked for urgently came up and successfully put down its bridge. Morrin's tank crossed, and as he had been told to get in touch with the infantry as soon as possible, he again left on foot towards movement he had seen from his turret and which proved to be men of C Company, 26 Battalion. He was told that a nest of snipers firing from the convent about fifty yards away was troubling them. It was probably the same nest that had troubled the tank commander a little earlier, but a couple of tank shells led to the occupation of the convent by a party of infantry.

The building was the largest in that part of the town, a solid structure with a good basement and with most of its roof and walls still standing. This basement, mistakenly but widely known as the crypt, in due course became an RAP, a Signals Headquarters and a Battle Headquarters for the units fighting in [Cassino](#).

If ever a project was conceived under an unlucky star it was the bridging of that bomb hole in Route 6. The number of crossings built by the sappers at night, destroyed by day and rebuilt by night, would make tedious reading, so the history of this bridge, codenamed selby, is told at some length.

The scissors bridge, although put down successfully, had tilted in the soft footing with the weight of Lieutenant Morrin's vehicle and no other tank had been able to use it. This was rectified by two tanks maintaining tension on tow ropes while Sergeant Clements and Lieutenant McCormick put stones and masonry under the wobbly end. They were covered by smoke from phosphorus grenades thrown from the tank by Morrin, for [Montecassino](#) was so close and so high above them that, as a sapper put it, 'they could look down your neck to see if you were wearing a collar stud'.

Another crater, too large for a scissors, was the next obstacle and it was decided to risk the muddy going and make a detour. There were no mine detectors handy and, in any case, with all the metal splinters lying around and more arriving at frequent intervals, they would have been of little use, so the sapper officer walked ahead of the leading tank.

Two made a safe detour but the third, over-anxious to reach the road, cut a corner and got stuck; the second tank went back to tow it out and found a mine that the American sappers had missed, with the result that it also was halted with a blown track.

The only other engineer activity that afternoon was along the railway embankment. Lieutenant Whelan, with Corporal [Wilson](#)<sup>24</sup> clearing away mines, accompanied a Maori patrol sent to test an impression that the station might have been evacuated. The impression was quite illusory and Whelan was severely wounded. Wilson carried on through a mined area until the patrol had to take cover, then he crawled forward to obtain particulars of any further mines on the track. As soon as the patrol returned Sergeant Heley went out alone and made a close inspection of the track and of the bridges over the two Rapidos. Both NCOs were later awarded MMs for these and other actions. Lieutenant Brown arrived after dark to take command of the detachment.

The smoke-intensified darkness of the night (16th - 17th) covered the deployments for the revitalising of the battle and a victory bid. The Indians were to capture [Monastery Hill](#), while the New Zealanders were to complete the clearance of [Cassino](#) and then capture the railway station. [No. 1 Platoon](#), 6 Field Company, was ordered to stand by for work in [Cassino](#), and about midnight moved off with the

Treadway truck and en route picked up Lieutenant Tassell with a couple of dozers. The job was first to give any assistance required by the Americans in putting down their Treadway over the demolition near the convent that Lieutenant Morrin had bypassed, and then to prepare the approaches for a bridgelaying tank to span another bomb hole. It happened to be a job where the sappers had little to do. The Treadway's truck was turned around at a suitable place and backed up towards the crater, no mean feat on a dark night, but en route the vehicle ran on to the road verge and found a mine which blew away one of the rear wheels. Undeterred, the Yankee driver carried on and successfully launched his bridge, for which the sappers had prepared approaches. He then drove off with one axle trailing, but the sparks it raised and the noise it made were heartily cursed by the men still on the site. The bridgelaying tank then moved up to its crater and also successfully put down its bridge, where- upon it was possible to drive up Route 6 as far as the convent corner. There was no enemy interference and the sappers drove thankfully away.

Meanwhile Lieutenant McCormick's 'recce' party had been called up through the tank wireless network and occupied themselves with filling some small craters and searching for mines in the shelter of the convent. McCormick 'recced' around until nightfall, when the sappers curled up in the convent until disturbed by infantry movement in the early morning.

The attempt to clear the south-western corner of [Cassino](#), where scattered strongpoints on rising ground were the core of the German defence, was only partly successful, but the overrunning of the Botanical Gardens, an open area of some five acres to which the tanks had found a road, gave room enough to launch the southward drive against the railway station. Twenty-sixth Battalion, scattered in the town, was to assemble at the convent and follow the tanks down the road to the objective, but for doubtlessly good reasons the smoke had been stopped and the infantry near the Gardens had to run the gauntlet of snipers and mortar crews on the hillside.

The men were shot down as they ran from cover to cover. The New Zealand official history, [Italy](#), Volume I, contains a description by one who survived that day:

'One after another they dropped. The wounded crawled to shell holes, others paused to help, only to be hit themselves. Other wounded stumbled, half-crawled

towards shelter only to be laid low by another bullet.... The wounded were lying everywhere. Mortar bombs were bursting amongst them.'

McCormick, watching from the convent, remembered the phosphorus grenades that had shielded him the previous day. He raced to the nearest tank, filled his pockets with grenades, and as his MC citation records, 'with a total disregard of the danger to himself, laid a smoke screen and then signalled the infantry forward. With a second wave of infantry he repeated the performance. It was undoubtedly due to his initiative, devotion to duty and qualities of leadership that the position was restored and the advance continued to a successful conclusion.'

It was the only successful conclusion of the day, for the Indian attack could not be initiated until [Cassino](#) was cleared and the vital corner was still held by the enemy at nightfall.

The second capture of the railway station was the signal for 6 Field Company to make a start with the clearing and repairing of the railway embankment road into the station yard, and so provide another route into [Cassino](#) in case the Route 6 bridge should be destroyed, a not improbable event considering the amount of metal it attracted. In passing, the attached American engineers made a start that night, by corduroying the approaches, with an alternative bridge about 150 yards north of the other one.

Lieutenant [Menzies](#),<sup>25</sup> who had been maintaining liaison by means of a wireless truck stationed at 28 Battalion headquarters, passed on a message to Lieutenant Brown that he was to take his party and sweep a 16 ft lane from the [Main Rapido](#) bridge to Demolition 10, also to prepare a walking track with Bangalores and jelly rope<sup>26</sup> as far as Demolition 12. The rest of [No. 3 Platoon](#) arrived before the work was finished and widened the lane from the river to the station yards to 24 feet, in addition to building a culvert with railway sleepers in Demolition 12. Lieutenant Gowan brought one of his dozers along and graded down the sides of Demolitions 11 and 12. The operator, Sapper [Hermon](#),<sup>27</sup> unable to take shelter from incoming mortar shells, carried on until the work was completed. For this and other good work he was awarded an MM.

Meanwhile [Bridging Platoon](#) (Lieutenant O'Leary) was dodging craters on the

narrow embankment with components for repairing the bridge over the [Little Rapido](#) and replacing the [Main Rapido](#) bridge which had been shot to pieces. [No. 2 Platoon](#) did both bridges, and at the end of ten hours' work the road into the station was ready for traffic.

While this work was going ahead, 6 Field Company, under instructions to clear Route 6 as far west as possible, improved the track the tanks had found up to the junction with the main road to the station, about 150 yards west of the convent and opposite the Botanical Gardens. Seventh Field Company, optimistically instructed to clear a path from the north through [Cassino](#) to Route 6, completed the Pasquale road, inclusive of the ford over the Rapido, but it was still not possible to operate mechanical equipment until the enemy was removed from the hillside above.

The 18th was a day of stubborn attacks against equally stubborn defence and ended with the possibility of German counterattacks. Such an attack was in fact mounted against the railway station but did not gather any momentum, for this time the supporting arms were there to assist the infantry.

Plans were made for a concerted Maori, Indian and tank attack during the night of the 18th - 19th to end the four-day battle. Briefly, the Maoris were to attack the last remaining opposition on Route 6 on the west side of the Gari. At dawn two battalions of 5 Indian Brigade were to climb the hillside and assault the monastery, while at the same time American, Indian and New Zealand tanks were to attack from the end of Cavendish road.

Sixth Field Company's tasks for the night were to put down three bridges, one across a troublesome shallow wet crater near the Route 6 fork and two others to replace the scissors and Treadway bridges. Only the first was built, for the bridgelaying tank was unable to lift its scissors bridge—the traffic had pushed it too deeply into the mud—and the last Treadway gap was not attempted. The other sapper unit employed that night was 48 US Engineer Battalion, which built the alternative Bailey for which the corduroying had been done the previous night. They had about an hour's work left when enemy fire forced them off the job. Now that there was another way into the town via the railway embankment, it was not important to persevere under fire with this structure and they were withdrawn.

The Maori night attack was only partially successful, like the earlier efforts to clear the south-western corner of [Cassino](#); the Indians in consequence could not get going and the tank venture in the hills came to an untimely end, defeated partly by the terrain, partly by the enemy strongpoints, and mostly by the absence of infantry to complete the work.

[New Zealand Corps](#) was not prepared to admit defeat, but for the second time in [Italy](#) the pursuit role was dropped by force of circumstances. It was decided to narrow the Divisional front and commit 5 Brigade to the attack. The deployment was to take place that night (19th - 20th), with 5 Brigade responsible for the town north of Route 6 and 6 Brigade for the remainder.

Engineer intentions were to improve the three entrances into [Cassino](#), north, east and south, while the Americans completed the alternative Rapido crossing they were working on the previous night. The main job of cleaning up behind the Maoris, who had made some progress, did not eventuate.

Major Askin took a mixed party of 5 Field Park and [No. 2 Platoon](#) of 6 Field Company (Lieutenant Higginson) into [Cassino](#), but while making a reconnaissance of the job in company with Lieutenant Cuthbertson both were wounded. Major Askin was able to carry on and decided that there was too much enemy interference and tank traffic to make work possible. Sapper [Thornton](#),<sup>28</sup> who was with a section covering the two officers, wrote:

'After tea our section went out to some point just in front of [Cassino](#) as a covering party to 2 Engr Recce Offrs. They were both hit and we returned about 9.30 p.m. wondering why they didn't wait for us. Not sorry though. Far from healthy there what with tanks changing over, infantry battalions being relieved, and at least four working parties of sappers with Jerry aware of it all and doing his best to dissuade such goings on.'

The enemy had again defied every effort to dislodge him. The engineers stood by in case they were needed, but they stood by in vain. At Corps level orders were being framed with the intention of sealing the German garrison off from reinforcements; at higher levels questions were being asked and answered as to why all the fighting was being done at one point only. In England it seemed that quite a

large section of the [Winter Line](#) was being left in peace. The sappers, except for routine patching by night of road damage that the enemy contrived by day, were not called upon for important assignments until the 22nd.

The selby scissors bridge, in spite of being shored up nightly, was in a bad way; the enemy pestered it regularly at midnight and the sappers made their arrangements accordingly, but the structure was going from bad to worse. Finally it was decided to put down the stronger structure of a Bailey and take the scissors away; [No. 1 Platoon](#), 7 Field Company, which had for several nights been doing what it could to selby, was given the job.

The platoon was to meet the bridging trucks, plus five trucks of metal for the approaches, at dusk at the Rapido bridge but found on arrival that 8 Field Company was replacing the decking and a wait of an hour and a half ensued. Lieutenant Prosser went forward to see what fresh damage had been done to selby during the day and found that a tank had tried to cross the bridge and had ended up in the hole, leaving insufficient room to put down the Bailey. The only thing left, seeing that the tank was unable to move and unlikely to be recovered that night, was to send for a Treadway as its over-all measurements were several feet narrower than a Bailey.

The Bailey bridge-train was sent back and Prosser was returning to his truck to send a signal to Company Headquarters for the Treadway unit when he met Lieutenant O'Leary, who told him that he was holding a Treadway bridge unit handy in case it was wanted by 8 Field Company. There seemed to be no objection to using the Treadway on the new location, so while one officer went for the bridge the other had his metal trucks parked along the north fork by the time the American sappers arrived.

The Treadway was almost ready for launching when Major White arrived to see how the work was progressing. There was now only half an hour before the enemy's nightly strafe and there was two hours' work ahead. It was decided to send two sections back to where the usual hot-box of tea was waiting, to get the Americans away as soon as possible, and to warn the remaining section to remove itself for half an hour when the first incoming shell was heard.

Before they heard it the first shell exploded, wounding the three officers, three Americans and five sappers; three more were killed instantly. Sergeant Dacey and Padre Watson, who seldom missed a night when sappers were out on forward tasks, attended to the wounded and a metal truck, emptied of its load, was turned into a combined ambulance and hearse.

Sergeant Davis <sup>29</sup> carried the job through. His DCM citation ends:

'Despite heavy and accurate fire he held his men together and calmly went about giving directions and assistance until the bridge was completed and the road open to tanks. Throughout the operations in [Cassino](#) L/Sgt Davis has cheerfully undertaken the most hazardous engineer tasks and his steadiness and devotion to duty have been an example and inspiration to his men.'

This day, 23 March, was the day of decision. It was agreed that both 4 Indian and 2 New Zealand Divisions were no longer effective attacking forces and that [Cassino](#) would perforce stay unconquered until the spring offensive was launched. [New Zealand Corps](#) was to be dissolved on the 26th, by which date a considerable reorganisation and redeployment of the five Army Corps across the Italian battlefield would be under action. For the time being the Kiwis would hold the [Cassino](#) sector in a defensive role.

The German mortar crews took violent exception to the new work at Selby, and by nightfall there was evident need for another bridge. Seventh Field Company started building a 50 ft Bailey above the other two structures that night and completed it the following night.

The Bailey lasted for five days, when it also was written off, and [No. 1 Platoon](#) of 8 Field Company was given the job of pulling it out of the way and filling the hole, leaving the other two bridges under the debris. The sappers were driven off the site four times by night-firing mortars before the wreck was ready for towing out. Another deluge of mortar bombs caught a carrying party from 22 Battalion on the bridge and there were several casualties, three fatal. Two sappers carrying a wounded infantryman were killed, three others wounded and the bridge, thrown on its side, had to be left there. The work was abandoned for the night as there were alternative roads for wheeled traffic into the town.

[Mechanical Equipment Platoon](#) completed the job the next night with a D6 working at half-throttle to keep down the noise.

It is appropriate at this point to mention that often when a sapper party got through a bridge-mending job without casualties, it was not always their good luck alone that saved them. Engineer Headquarters used various expedients to deceive the enemy about the time the sappers would be working; sometimes they would start at dusk and sometimes in just enough time to finish before dawn. Smoke was used in different ways—sometimes to cover an actual job—and on other occasions smoke would be laid on every bridge site except the one to be worked on. An alternative was to smoke a site, then wait until the German gunners had tried all their tricks—such as not firing until some time after the smoke was laid, or sending over concentrations at intervals. It was a battle of wits to keep the roads open and a battle we did not always win.

From 23 March, when the decision was taken to accept defeat for the time being, until 10 April, when the New Zealand tenure of [Cassino](#) was terminated, sapper work was of a routine nature, the routine being to replace bridges and fill holes in the roads as fast as the enemy damaged the one and cratered the other.

Although the Division had adopted a static role, there was nothing static about the casualty lists.

Seventh Field Company lost a succession of commanders, the first of course being Major White, wounded at Selby bridge on the night 22nd - 23rd. Captain Morgan took over until Major Clark arrived on the 26th; within forty-eight hours they were both wounded on reconnaissance and Lieutenant Budge then commanded temporarily. The officers seconded to 4 Armoured Brigade returned on the 29th and the next day Major Lindell, back from New Zealand after being wounded in North Africa, assumed command with Captain Andrew as his second-in-command.

In 6 Field Company Major Loudon was evacuated sick on the 23rd and Captain Wallace, promoted major, was given command. Lieutenant Higginson was killed in command of a working party and three sappers wounded, one fatally.

April opened with a week of beautiful spring weather, but even more

exhilarating than the warmth in the air was the information that the Division was leaving [Cassino](#).

Sapper casualties in all ranks under that forbidding hill were 13 killed and 36 wounded.

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<sup>1</sup> It was a lesson which, in spite of many illustrations by sapper demonstrators, was indifferently assimilated by forward formations. A sapper officer remarked feelingly to the writer, 'Usually if the forward troops found you picking up mines they would sheer off smartly.'

The CRE also wrote in this connection: 'All too frequently in the Italian campaign sometimes the Infantry, but more especially the Armour, would not look at a mine and if the ground was even remotely likely to be mined they just sat tight until engineers arrived and either tested the ground or removed any mines. This was not really a role for engineers who had much heavier tasks to do and tasks which other arms could not do.'

<sup>2</sup> An engineer 'recce' party at that period usually consisted of an officer, a sergeant, two working sappers, a driver and a wireless operator.

<sup>3</sup> [Capt L. G. Crawford](#); born NZ 23 Jan 1917; draughtsman, NZR.

<sup>4</sup> An isolated hill about two miles east of the FDLs. It was the scene of bitter fighting between Germans and Americans prior to the occupation of the Rapido river line.

<sup>5</sup> [Spr J. G. Millar](#); born NZ 4 Feb 1919; electrical wireman.

<sup>6</sup> [Capt J. A. Andrew](#), m.i.d.; [Rotorua](#); born [Napier](#), 9 Nov 1903; civil engineer.

<sup>7</sup> [Lt B. G. Christy](#) of 28 (Maori) Battalion commanded the patrol.

<sup>8</sup> Two more were later located in the station yard.

<sup>9</sup> L-Sgt P. C. Newton; Taipuha; born Rawene, 27 Feb 1915; agricultural contractor.

<sup>10</sup> Lt-Col R. R. T. Young, DSO; Richmond, England; born Wellington, 25 Jun 1902; oil company executive; CO School of Instruction Feb-Apr 1943; CO 28 (Maori) Bn Dec 1943-Jul 1944, Aug-Nov 1944; wounded 26 Dec 1943.

<sup>11</sup> Capt S. M. F. Martin, MC; Newcastle, Aust.; born Thames, 20 Jun 1918; mining student.

<sup>12</sup> 2 Lt T. J. Higginson, MM; born NZ 17 Nov 1917; sheep farmer; died of wounds 30 Mar 1944.

<sup>13</sup> Spr L. R. Beal, MM; Invercargill; born Invercargill, 8 Mar 1919; builder.

<sup>14</sup> Sgt A. F. Hughes, MM; born NZ 10 Dec 1913; railway surfaceman.

<sup>15</sup> Maj-Gen G. B. Parkinson, CBE, DSO and bar, m.i.d., Legion of Merit (US); Christchurch; born Wellington, 5 Nov 1896; Regular soldier; NZ Fd Arty 1917-19; CO 4 Fd Regt Jan 1940-Aug 1941; comd 1 NZ Army Tank Bde and 7 Inf Bde Gp (in NZ) 1941-42; 6 Bde Apr 1943-Jun 1944; GOC 2 NZ Div 3-27 Mar 1944; CRA 2 NZ Div Jun-Aug 1944; comd 6 Bde Aug 1944-Jun 1945; QMG, Army HQ, Jan-Sep 1946; NZ Military Liaison Officer, London, 1946-49; Commander, Southern Military District, 1949-51.

<sup>16</sup> Capt G. McGregor; Wellington; born Masterton, 15 Aug 1909; civil engineer; wounded 16 Apr 1945.

<sup>17</sup> Capt I. G. Budge, m.i.d.; Auckland; born Scotland, 26 Sep 1919; civil engineer's assistant.

<sup>18</sup> S-Sgt A. E. Morgan, m.i.d.; Lower Hutt; born NZ 9 Apr 1917; diesel operator.

<sup>19</sup> Maj L. Leeks; Melbourne; born Wanganui, 22 Nov 1914; insurance clerk;

twice wounded.

<sup>20</sup> [Capt D. McInnes](#); born Dunedin, 6 Oct 1918; audit clerk; wounded 15 Mar 1944; died of wounds 31 Jul 1944.

<sup>21</sup> [Sgt H. A. Heley](#), MM; born NZ 2 Sep 1904; farmhand.

<sup>22</sup> [Capt T. G. S. Morrin](#), MC; [Dannevirke](#); born [Wanganui](#), 26 Aug 1917; stock agent; twice wounded.

<sup>23</sup> A scissors bridge is a two-piece folding bridge (hence its name) carried and launched from a tank, primarily to get armour over gaps of up to 30 feet. It is hinged on the front of the carrying tank (usually a Valentine) with a folding hinge at the other end. Hydraulic or screw gear lifts the bridge, extends it and lowers it into position, without the operators having to leave the shelter of the tank.

<sup>24</sup> [Sgt A. A. Wilson](#), MM; born NZ 10 Jun 1918; blacksmith.

<sup>25</sup> [Capt G. S. Menzies](#), MC, m.i.d.; born England, 16 Jan 1920; engineering student.

<sup>26</sup> Jelly rope was gelignite threaded on primer cord at about 6-inch spacings. When detonated it would blow or destroy all mines in very close proximity, thus making a safe path about two feet wide for foot traffic.

<sup>27</sup> [Spr R. A. Hermon](#), MM; born Patea, 20 May 1919; labourer; died [Dannevirke](#), 8 Jan 1946.

<sup>28</sup> [L-Sgt G. G. Thornton](#); [Wellington](#); born [Kaponga](#), 17 Jul 1922; architectural cadet.

<sup>29</sup> 2 Lt [L. A. W. Davis](#), DCM; [Auckland](#); born [Wellington](#), 3 Oct 1912; civil servant.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## CHAPTER 19 – 14 FORESTRY COMPANY IN ITALY

## CHAPTER 19

### 14 Forestry Company in Italy

The two detachments which, after fitting farewells, left Bugeaud on 20 December 1943, en route to [Italy](#) to organise the supply of timber for the Eighth Army, discovered that the importance of their mission was not fully realised by the people controlling the movements of troops. The transit staff at Phillipville did not expect them, in fact had never heard of them, and most certainly had made no arrangements to embark them. Phones were rung and signals were sent but no action ensued. On the 24th a three-tonner from the Company arrived with turkeys, pork, peas and beer, which, supplementing the camp fare, produced a successful Christmas dinner. It was their share of the Company canteen operations whereby wine, purchased in bulk, was retailed to thirsty sappers at a profit.

The detachments finally sailed on the 27th, landed at [Taranto](#) on 30 December, and marched into Transit Camp 199. Their arrival created some interest for they had come from a district noted for its briars, and pipe-smoking Kiwis were sporting very ornate samples of the pipe maker's art.

Captain Tunncliffe and Lieutenant Sexton celebrated New Year's Day by hitch-hiking to New Zealand Advanced Base at Goia, where their arrival was news and where they were received with open arms. Steps were taken to get the wanderers transferred there, but before it could be arranged Captain Tunncliffe received instructions to move his section to the [Gargano Peninsula](#), some 120 miles north of [Bari](#).

Transport was supplied by Advanced Base and, via [Bari](#), [Barletta](#), [Foggia](#) and [Manfredonia](#), the party arrived on 3 January at the Mandrione sawmill, about five miles from the coastal town of Vieste. Lieutenant Sexton and party were transferred to Goia the same day. The Tunncliffe section settled into a mill building, made themselves comfortable and studied the methods of cutting timber as practised in [Italy](#). They were somewhat 'rocked' to see that no gauges were used by the civilian workers and that all widths were cut by eye. The mill was State-owned and had been requisitioned upon the departure of the occupying enemy. It was the only log-sawing plant in the area and was fitted with both vertical frame and band saws for

breaking down; in addition, there were five smaller saws for recutting the broken-down logs into the required sizes. Timber was normally brought in by light railway, which extended some 18 miles into the Bosco d'Umbra hills, and the average production was 16,000 super, feet daily. Ten-ton trucks were also used as the railway was frequently snowbound in winter and it was easier to clear the roads of drifts than to dig the log trains out. The Kiwi sappers had early experience of Italian snow, for the day after their arrival at Mandrione the ration truck got stuck in a drift and the entire party had to dig it out.

Until the arrival of the New Zealanders the plant had been run under the direction of a British RE sergeant who was very keen but not very conversant with milling. Italian civilians, plus a section of an Italian pioneer unit, provided the labour and worked two nine-hour shifts.

January the 5th was pay-day at Mandrione. Over one hundred Italian civilian workers, all it seemed with complaints about short pay, incorrect time sheets and illegal deductions, argued vehemently with the civilian clerks. It was a scene never to be forgotten but not to be endured, and a system was evolved whereby workers had to pass a ticket box on entering and leaving the mill. A numbered metal disc for identification and pay purposes had to be lifted and deposited daily at the ticket box, where a sapper was always on duty, for the clerks were not above removing a relative's or friend's disc on days when he was absent. Complaints were reduced to a minimum by insisting on a deposit before they were heard. If they were successful the deposit was returned, otherwise the canteen fund benefited.

All timber was going by road and rail to the [Sangro](#) area. Sixty-two trucks, an all-time record for the mill, were loaded on 12 January. It was midnight when the last vehicle pulled out.

The number of NCOs for this work was inadequate and in many cases the rank held was little indication of professional capacity, for some sappers had owned or operated their own mills before enlistment. Lance-Corporal Cann's <sup>1</sup> elevation to bush boss was an early example of a sapper doing an officer's job. Joined later by Sapper Leith, <sup>2</sup> he went to live in the Umbra forest and supervised the extraction of logs by bullock team, 10-ton Mack truck and narrow-gauge railway.

January passed with the New Zealanders learning a little Italian and tallying and loading trucks and wagons. There were minor incidents—the night shift cut through a steel dog and ruined the saw; Canadian truck drivers waiting for their loads got drunk and started a fight; parties out shooting deer in the forest got lost and had to be found; there were delays because of power restrictions of up to twelve hours, and sappers not already conversant learnt the art of possessing their souls in patience. The civilian ration scale was not sufficient for men doing heavy manual work and, after much arguing with Authority, permission was obtained for the millhands to be rationed on a higher scale. That could be one of the reasons why the Kiwi bushmen got on so well with the local population.

The job for Lieutenant Sexton's party, when its instructions arrived, was to ensure that timber cut or being cut on the eastern littoral of the Calabrian peninsula was placed under control.



FORESTRY AREAS IN CALABRIA, SOUTHERN ITALY  
forestry areas in calabria, southern italy

The rapid advance from the Straits of Messina towards the airfields of [Foggia](#) had taken the Eighth Army through [Calabria](#), a province of many mountains and poor roads but with the richest timber area in [Italy](#). For administration [Calabria](#) had been divided into three—two zones controlled respectively by the [United States](#) and British forces, and a Free Area from which both armies had the right to purchase timber should the supplies in their own zones prove inadequate. The British zone, with headquarters in the seaport town of [Crotone](#), covered 14,000 square miles, and the thirteen sappers did not have thirteen words of Italian among them.

The South Party, the official name for Sexton's detachment, after being turned back by snowdrifts on the inland route, arrived at [Crotone](#) via the coast road on 11 January. A short background to the port and its people may be of interest.

[Crotone](#), a small seaport with a population of thirty-odd thousand, had been a Greek colony some two and a half thousand years ago, and was later overrun by Romans and Arabs. The local dialect is a mixture of all three tongues.

On arrival, the New Zealand bushmen held a council among themselves to consider their position, summed up by Lieutenant Sexton:

'The way we looked at it was this. We were a small detachment of Kiwis in a population of several million. We had little or no communication except by road; we were 165 miles from the nearest Allied unit; we were going to take over a long established industry which was generally of a very high efficiency. After a bit of talk with the boys we decided that the only way to run it was to try and do things as though we were at home. We decided to think in metric tons and to learn the language as quickly as we could, on the principle that it was easier for 13 to learn than 7 or 8 million.'

While the sappers settled into their billets and assimilated the local geography, Lieutenant Sexton with a six-inch 'Sempre Legname' sign, meaning 'Timber Only', on his windscreen toured [Calabria](#) from end to end, inspecting mills and getting a grasp of local forestry conditions. The significance of 'Sempre Legname', which indicated that the newcomers were not interested in black marketing, palm greasing, wine, signoras or song, but just timber, was gradually appreciated by the population.

The forests of [Calabria](#) are not worked in winter so that enough logs had to be cut in eight months to provide a full year's milling, and of course January is the depth of the Italian winter.

At that date the Calabrians had not recovered from the effects of being overrun by the Eighth Army and the administration of a rather scratch team of [Allied Military Government](#) officials. Rations were insufficient for those doing hard manual labour and there was a black market of impressive dimensions. Many mills were idle and others were filling black-market orders.

The New Zealanders assumed responsibility for the area on 17 January 1944, when a start was made in getting some system into the chaos by taking over from two rather overwhelmed RE sappers the consigning out of all timber by rail, road or sea, and supervising the unloading of wagons and trucks at the delivery point in the station yards. An interpreter was installed in the [Crotone](#) Timber Office and the staff began to acquire a knowledge of Italian forestry terms and to distinguish between *travi* (a beam tapered with the tree) and a *travi uso fiume* (a beam sawn or chopped without a taper). Soon they tossed about such words as *tavola* (board), and *traverse per ferrovia* (sleepers) with careless abandon. Even the official signboard was in Italian— *Ufficio di Legname*—surmounted by a silver fern and the letters NZ.

The system of accounting was, shortly:

In the first instance release vouchers detailing the amount and specifications of the timber required and the name of the consignee were received from the office of the Directorate of Works. The measurements, which were in inches, feet and tons, were converted into metric equivalents and a *Bullettino di Comando* made out showing the amount and size of timber required, the point to which it had to be delivered and the price per metre cube (hereinafter written M3). Timber, supported by a tally sheet (AF G990), excepting that loaded at outlying stations on the State railway, was transported to [Crotone](#) station or port by the millers. When the account was rendered one copy of the *bullettino* was attached, the bill was checked in the office, signed by the OC as Inspecting Officer, forwarded to the Director of Works, thence to the Paymaster.

[Crotone](#) railway station was a serious bottleneck. The Calabro Luciana and the Val di Neto, two private lines, joined the State line in the marshalling yards, but no bomb damage with the exception of that to the main line had been made good; as a consequence it was difficult to transfer loads from branch to main-line trucks, and timber that arrived by road transport had often to be carried up to a hundred yards between lorry and wagon. Often the branch lines were not working through lack of fuel or lubricants. In spite of all obstructions, 1600 tons of timber were not only despatched but accounted for by the end of January. Lieutenant Sexton ended a memorable month by having his jeep stolen.

The first part of February in the Umbra forest area is best indicated by items

from Captain Tunncliffe's diary:

Tuesday 1. Several trucks in for timber. To [Foggia](#) to try and get material in salvage dump etc.... At night five Yank lorries took timber from station, was I mad. Saw Security Capt. in Vieste about it.

Thursday 3. Mill and bush a normal day. Ack ack Major in from Manfredonia on scrounge. Several slab lorries in for wood.

Wednesday 9. Mill idle. No power. Very cold and heavy rain part of day, snow in forest. Logs coming in in spite of that. Light on from 4 p.m. to 9.30 p.m.

[Captain Tunncliffe went to [Naples](#) on the 11th, returning the following day after a conference with the Director of Works at which the decision was announced that the New Zealanders would assume responsibility for the bush work as well as the sawmill.]

Tuesday 15. Ruggere the contractor in and informed we were taking over bush work as from 16th Feb. Signed inventory of all administration gear and material taken over. Self feeling a bit fluey.

Thursday 17. Mill working. Many power breaks. Pay workmen during day. Major Thomas arrived in and Coy is at Base.

The main body of the Company had disembarked at [Taranto](#) on 15 February and had been taken the same day by New Zealand transport to Goia. While the vehicles were being unloaded, Major Thomas reported to No. 2 Works District at [Bari](#) and was instructed to get his men and plant as soon as possible to [San Menaio](#), on the coast about five miles from the Mandrione mill. He then went on to Mandrione, where he and Captain Tunncliffe decided to put down two portable mills for the time being in the pine stands at [San Menaio](#) belonging to the Commune of [Vico](#). The third was to go to Mandrione and help production there until the worst of the winter was over, when all three mills would be moved into the Umbra forest. At that date the Umbra forest was under nine inches of snow.

The Company, moving partly by road and partly by rail, arrived at [San Menaio](#) on 20 February and thoroughly approved the billets that had been obtained for them.

They were, in fact, living in a seaside rest camp originally provided for the sons of good Fascists but at the moment temporarily without light or water.

All three mills had a trial run on the 24th while arrangements were being finalised with representatives of Corpo Reale della Foreste, which body administered the [Vico](#) communal forest, and with the Podesta of [Vico](#), who apparently owned it on behalf of the community, to make a selective cutting and to mark the required trees. Arrangements were also made with the same authorities to take over a number of logs already felled by a civilian contractor.

1944 was a leap year, and Captain Tunncliffe celebrated 29 February by handling a strike of bullock drivers who were trying out the new bush bosses in the Umbra forest. He threatened to requisition both the bullocks and their owners, whereupon the strike collapsed and men and bullocks started work again in the morning.

The supply of rail wagons to send out timber from [Crotone](#) was for some time left to the Sexton detachment itself to arrange, for almost none came into the area. This was done by collecting some 900 wagons from bombed-out railway stations and sending them out loaded with timber. How the supply of wagons was put on a firm basis is related by Lieutenant Sexton:

'We'd been sending out strings of signals about the non supply of railway trucks. Railways in that area were under the Yanks and so one bright day when [Bernie Farrell](#) <sup>3</sup> was hard at it trying to boss a lot of civilians and Italian soldiers, a big shiny railcar pulled into the station and a lot of American Brass got out. One of them came over to Bernie and said, "Who's in charge?" Bernie said he was and the American said, "Come on over, the boss wants to talk to you." When they got over to the party, the American general turned to Bernie and said, "Boy, I came down to see about railway trucks but I have been watching this job of yours and I have decided you have far too many men moving the timber around. You're wasting time." Bernie is a fairly hot tempered Irishman and he said, "If you knew as much about your bloody business as I know about mine we would not have to be yelling for railway trucks." The American General said, "Maybe you've got something there."—and that was the end of the truck shortage. General Lucius Clay knew his job all right.'

Petrol supplies were also in a chaotic condition and were remedied by arranging for a civilian distributing organisation <sup>4</sup> to supply petrol, diesel fuel, and lubricants to [Crotone](#) in the charge of one of their officials. It was stored in a walled yard and issued at a controlled price to authorised firms.

Road transport was also in bad shape. There were civilian trucks that could be requisitioned if tyres could be procured, but Ordnance would not supply tyres for civilian trucks. The Military Liaison Officer attached to the Italian 5 Army Corps at Catanzaro arranged for a company of Italians with trucks and a battalion of sappers to help in loading and unloading timber.

The availability of mill maintenance stores was another problem. Nearly all the manufacturing centres in [Italy](#) were still occupied by the enemy and most lines were not to be had from civilian sources—they had gone into the black market. Indents on Ordnance on behalf of the millers were not very fruitful for, like lorry tyres, bandsaws, belting, emery wheels, files, etc., were either not held in stock or were in short supply.

A search of premises in [Crotone](#) suspected of hoarding sawmill supplies unearthed a large quantity of files, saws, hacksaw blades and the like. The haul was reported and a suggestion made that it be acquired by requisition or purchase. Ordnance people appeared like magic and, typically, the find was taken out of the area never to return. Sea transport from [Crotone](#) began with a weekly schooner service to [Bari](#) and [Naples](#) and by the middle of February one 10,000-ton Liberty ship per week was being loaded by Italian labour, supervised by Sappers [McQuaker](#) <sup>5</sup> and [Mitchell](#). <sup>6</sup> Eventually a naval port officer (RN) dealt with ship clearances.

The problem of extra rations for forest workers was not as easily solved as at [Mandrione](#), and indeed was not fully solved for some time and the workers remained underfed.

The picture that emerged concerning the mills was that most of them were closed owing to the uncertainty of their future. It was necessary to reassure the owners that their supplies of standing timber would not be drawn on and that they would not be left after the war with sawmills and no logs. To this end a system of area requisition was initiated by the detachment and later expanded by the unit

when it moved from the Umbra forest.

The principles were:

'We wanted the Forest Service to help us so we didn't requisition State forest. We wanted the workmen and the small communities to help us so we didn't requisition the forest belonging to the Communes. We had no particular friendship for the absentee landlords who mostly had fairly lengthy titles and were on the other side of the line so we requisitioned their timber and everybody was happier—except the absentee landlords.' Such is a brief review of the main problems tackled by one Kiwi officer and twelve sappers around [Crotone](#) until the situation altered in April.

Gaining the confidence of the mill owners was a gradual process, but the Sempre Legname sign on the jeep windscreen helped, as did the offer of extra areas from which to provide the Allied requirements for the following season. Other difficulties were that Italian milling practice differs widely from New Zealand; for instance, scantling is unheard of in a country of stone buildings and all timber is cut to certain lengths and no other. When, as often happened, unusual sizes and lengths were wanted, it was necessary to bargain for a price, and here the interpreter was no help for instead of asking the price he said, 'How much do you want? He offered so much up the road.' Thereafter the detachment used its own version of the Italian language.

As soon as proficiency in the language was gained some mills were induced to begin working again by suggesting that if the owner produced such and such a piece of equipment from the cellar of such and such a building, or retrieved a truck from its described hiding place, the mill would work more efficiently. In a country of divided political thinking information was not difficult to acquire. The motto Sempre Legname began to be believed.

Before leaving the South Detachment for the moment, it should be mentioned that the first two unusual orders were for the supply of timber for making 10,000 pairs of wooden clogs for workers in the Giovanessa steelworks and the cutting and marking of lengths to replace the swing bridge connecting the inner and outer harbours at [Taranto](#).

Conditions in the Umbra forest were normal for the first three weeks of March;

all the mills were cutting and the output of the Mandrione plant had been lifted considerably, for a diesel generator had made the mill independent of the irregular power supply.

Its acquisition is wrapped in mystery, for it was being held by the authorities for use when [Rome](#) was captured; either Major Thomas possessed hitherto undisclosed powers of eloquence or timber was needed very urgently indeed. But whatever induced the Army to part with the plant, its installation was a major operation for it weighed over nine tons. The generator and a breast bench made up from scrap material lifted production to as much as 30,000 feet per day, partly through the constant supply of power and partly because the breast bench converted into useful timber the side cuts and large slabs remaining after the production, in varying lengths, of bridge stringers and other unusual sizes.

It will be remembered that on 23 March Allied Headquarters had accepted the fact that [Cassino](#) was not to be taken until a new offensive could be mounted in the spring. There is little doubt that the connection between the winding up of the [Cassino](#) battles and orders to reconnoitre for a suitable area for a portable mill nearer the scene of active operations is a close one.

Captain Tunncliffe left (20 March 1944) via [Vasto](#) for the [Agnone](#) district, between the headwaters of the Trigno and [Sangro](#) rivers in the western [Apennines](#), with instructions to look over bush areas. His report was that the oak and spruce stands near [Pescolanciano](#), some 30 miles north-east by road from [Cassino](#), offered the best prospects. During the last week of the month two mills were moved from [San Menaio](#) into the Umbra forest near [Vico](#) and began cutting timber from the smaller trees. The third mill did not shift until 9 April, by which time the total production at [San Menaio](#) totalled 28,674 cubic feet.

Major Thomas received a signal from Movement Control, 151 District, on 5 April instructing him to have one section with a sawmill in readiness to proceed to a forward area. Thereafter things moved rapidly; another signal the following day asked for the earliest date the section could start; still another sent Captain Tunncliffe post-haste to report to CE Eighth Army to settle the location and other details of the transfer to [Pescolanciano](#). During his absence the plant was packed up and loaded on a 10-ton truck, with the date of departure finally fixed for the 10th.

CE Eighth Army instructed Captain Tunncliffe that:

The section would come under command [10 Corps](#).

The mill should commence cutting with all possible speed.

The first block would be a small oak stand at [Pescolanciano](#).

The timber would be carted out by [10 Corps](#) transport.

Tenth Corps would erect an access bridge to a stand of [Norway](#) spruce before the oak was cut out.

The mill site had been chosen by the second-in-command and checked for mines by [10 Corps](#) sappers when No. 2 Section (Lieutenant L. J. McKenzie), the mill and a D4 tractor arrived on the evening of the 10th. Tents were pitched and the mill set up, bushmen felling trees and the mill producing sawn timber by midday on the 13th. At the end of April No. 2 Section had produced 60,000 super. feet of oak and had orders on hand for three months' cutting, mostly sizes suitable for bridging work.

April continued to be a month of movement for 14 Forestry Company. Major Thomas had been called to [Naples](#) and he returned on the 13th with the information that the Company would in due course be posted to [Calabria](#), and that it would be replaced at Mandrione and Umbra by a composite English/Italian forestry company. A week later a message from the Director of Works confirmed that Company Headquarters at least would move down to [Crotone](#) by 1 May; this was amplified a couple of days later by instructions to move the Company forthwith to [Crotone](#). As there was not sufficient transport available to do so without double-banking, it was decided to leave No. 3 Section and mill in production at Umbra forest for the time being.

Company Headquarters and No. 1 Section departed on 26 April and was camped at 30 Rest and Recreation Camp at [Crotone](#) the following afternoon.

Before the arrival of the Company, Captain Tunncliffe had been seeking an area in which to place its mills where suitable lengths of 10 in. by 10 in. bridging timber might be readily obtained. This was located at [Lago Ampollino](#), a lake some 50 miles

inland from [Crotone](#) and 4000 feet above sea level.

No. 1 Section—Lieutenant J. T. Pasco and 43 other ranks—left for [Lago Ampollino](#) on 28 April and was cutting pine a week later. In the event No. 3 Section's mill did not move at all but was handed over to the English/Italian Forestry Company, together with the Umbra forest area, on 7 May and the section joined the others at [Crotone](#). Production at Umbra from 30 March to 7 May 1944 was 19,352 cubic feet.

The sappers, one officer and 43 men, stayed in their mountain retreat for ten weeks, working a double six-hour shift. The felling in this instance was done by civilian workers under the direction of forestry officials, who also served other mills in the area. Each shift cut about 7000 super. feet in 14 ft lengths of 10 in. by 10 in., which was taken by 10-ton Mack trucks down the 50-odd miles of tortuous roads and very steep grades to [Crotone](#). The slab wood was taken by New Zealand Advanced Base for camp firing.

The three-hour trip to [Crotone](#) was not without incident apart from the hazards of the road; bullock-drawn carts were common and were generally met at the sharpest bends, and often the drivers left the driving to the bullocks while they slept in the sun. At the site it was not long before water was laid on by means of a wooden sluice and a hot shower improvised; a pinewood recreation hut was built to house the radio and a small library, where a fire in the open fireplace added a homely touch. Punts and canoes of varying design provided the means for trolling and fishing for the plentiful trout that inhabited [Lago Ampollino](#). Although isolated, the men were not uncomfortable. Over 35,000 cubic feet of timber was produced by this section by the time it ceased cutting on 17 July.

The main body of the Company remained at the rest and recreation camp until billets were arranged in [Crotone](#). Billets were the affair of Hirings and Claims, Allied Control Mission, situated at Catanzaro, but its idea of billets did not quite coincide with those of 14 Forestry Company. Major Thomas had been granted the power to requisition anything, and in terms thereof the Albergo Grande was taken over for the sappers. It was a three-storied hotel containing fifty bedrooms and the action created quite a stir in the town. Hirings and Claims, faced with a fait accompli, acquiesced and the sappers moved in on the last day of April, which was a Sunday

and a good day for moving.

The South Detachment had raised the output from the British zone from 1500 tons to 8000 per month, a noteworthy performance but quite insufficient for the requirements of the Director of Works. The job given to 14 Forestry Company was to raise the despatch figure as much as possible, with a target of 24,000 tons monthly, to bring all the existing Italian mills into production and to arrange for sufficient logs to meet a twelve-months' programme. It will be apparent that the tasks involved in the project were far removed from the customary duties of a forestry company which were, by and large, to cut down trees and saw them into suitable sizes of timber.



Millers were invited to apply for cutting rights over an area extensive enough to ensure twelve months' work, and the State Forest Service was instructed, through the Prefect of Reggio Calabria, to allot areas on request and at a price fixed by the OC 14 Forestry Company. All trees were to be marked and felled according to the forestry laws of the country and no person was to obtain a monopoly over timber in any area.

But if the forest owner was confined to a price, so also was the miller, which brings us to the interesting case of the mill owned by the Societa Forestali del Mezzogiorno d'Italia, hereafter spoken of as the So. Fo. Me mill. It was one of the largest in Italy, employing about 500 hands. Like most of the others it had stopped work and had found a variety of reasons for not starting again. The fact was that the management, with extensive stocks of cut timber and logs in the yards, provided by men who were paid at the lowest rates in the district, was hopeful of black-market prices. It announced that it could not possibly work within the price offered,

whereupon a requisition order was served and a guard placed on the mill. Within a matter of hours the management discovered that it could carry on after all and asked to be permitted to operate on its own account. The policy was not to requisition mills if it could be avoided, and so the request was granted subject to the raising of the wages of all the employees to the ruling rates. It is probable that the Company was even less popular with the management than before, but the So. Fo. Me. mill began, as instructed, to produce by 8 May. News of the requisitioning spread and had a salutary effect in persuading other recalcitrant owners to bow to necessity. Some attempts to slow down production by giving unpaid holidays for Saints' feast days were met by instructions that feast days were off for the duration, unless permission was previously asked and obtained.

With adequate stands of timber available to the millers at a price at which they could operate their plants, the question of manpower and rations for both man and beast had to be dealt with.

The civilian ration at the time was meagre, its basis being 200 grammes of bread and 150 grammes of flour daily, a quantity insufficient for a man doing heavy work. The only supplementary ration available was one issued to forest workers on the direction of the Corpo Reale della Foreste of 73 grammes and that was not given to all entitled workers. On the other hand some firms had persuaded the civilian rationing authority, the Alimentationze, to give their workers as much as an extra 150 grammes daily. Nobody was getting sufficient rations but some were getting more than others, and the low rates of pay precluded the workers buying on the black market, which had ample food available—at a price.

There was the Army midday ration scheme, but the South Detachment had been unable to operate it because of insufficient transport to collect and insufficient personnel to supervise, as the meal was to be prepared and eaten under army supervision. If the industry was to be revived, extra rations just had to be supplied, and after much hammering at the rationing authorities the scheme was modified for the Calabrian timber industry. It cut right across the Army scheme and was operated as follows:

Issues were made in bulk fortnightly to mill owners, who rendered certificates showing the number of man-hours worked, hence the number of rations issued. The

certificate served both as a basis of payment and for keeping a check on the ration stock at each mill.

Methods were also devised of persuading the millers to pay for the extra ration themselves so that the workers incurred no extra cost. In all some fifty-four organisations were involved, benefiting 2500 workers. The food position was further improved by the publication of an Army directive dated 25 May authorising the issue of an 'A' supplementary ration card to heavy manual workers employed exclusively for the benefit of the Allied forces.

The last obstacle to the delivery of the timber after the mills were functioning was transport. The vehicles at the disposal of the Company were not sufficient to bring the timber to the railheads, and after much worrying of the Director of Works, ten Italian 10-ton trucks were made available. Their tyres were worn out, and after much more worrying 160 tyres were issued, enough to put the extra trucks on the road and maintain those already in service.

Steps were then taken to locate all the auto treni (a truck and trailer carrying 20-ton loads) in the area and the owners were offered the choice of working for the Company or being requisitioned. Only one had to be requisitioned. The peak number of vehicles was 51 Italian Army lorries, 28 civilian auto treni and 7 unit lorries.

The privately owned narrow-gauge lines already mentioned were also short of rolling stock, and as long as sawn timber existed in mill yards they were forbidden to carry firewood or other goods which were not the concern of 14 Company. Because of the extremely slow and cumbersome arrangements between the State and the Calabro Luciana lines, the latter was requested to provide a loading loop, and when the management failed to act the unit's tractors and dozers proceeded to do the necessary levelling. Apprehensive of being requisitioned, the company then 'got cracking' and installed the loop. In addition to these measures a detachment of thirteen sappers was stationed at a mill near the Rossano station which had a full yard, and with a unit 3-ton truck cleared the stocks themselves. Some 1700 tons of timber were moved in the two months the detachment was at this mill.

The measures so briefly sketched were not implemented with a stroke of a pen or the signing of a memorandum; there was much hard and long travelling,

particularly for the second-in-command, who was the technical expert on milling and in charge of production. In all, 5 officers and 12 NCOs were on timber control and 2 officers and 10 NCOs on unit administration; the sappers were spread in parties over the whole area, loading wagons, issuing rations, supervising working parties, watching mill stocks; and on duties around the dock and railway marshalling yards, etc.

The result was that for May the despatches were lifted from the April figure (8272 tons) to 12,413 tons and for June to 13,045 tons. These figures will be better appreciated when it is remembered that before the war the New Zealand output of sawn timber per month averaged about 40,000 tons, so that one part-company of sappers was supervising nearly one-third of the total New Zealand output.

It is convenient at this point to leave [Crotone](#) and return to No. 2 Section serving with [10 Corps](#) in the foothills north of [Cassino](#).

May opened for Lieutenant McKenzie's detachment with the discovery that 5 Field Park Company was at [Montaquila](#),<sup>7</sup> some 14 miles away to the south, and that 14 Forestry Company was much farther away than it had been. Its whereabouts were in fact quite unknown, and the sudden stoppage of mail added to the sense of being cut off from the world they knew.

Extracts from the detachment's war diary of the period give some idea of the work of the forward sawmill:

May 1. Routine operations as usual with bush and mill. SORE rang up to ask if I would take six REs for a tree felling course. TPM<sup>8</sup> sent to 14th Hq and arrived back in the evening.

May 2. RO as usual. Rang Stores Officer [10 Corps](#) to send three trucks to collect their timber. L/Cpl [Johnson](#)<sup>9</sup> exchanged [YMCA](#) chest of books at [YMCA](#) (NZ) Hq.

May 3. RO's. Despatched six trucks timber for [8 Army](#). 6 REs started tree felling course. Transport took D6 with Hyster and left D7.

May 4. Bushmen finished felling oak trees. Four lorries collected timber for Army.... All hands anxious re mail, no word from OC of whereabouts of Company HQ.

L/C Barrett <sup>10</sup> fully extended breaking in tractor drivers. Six so far.

May 5. Mill working. Bushmen started to fell spruce timber. Arranged with Mob. Dental Unit (NZ) to send men for dental repairs. OC 5 Field Pk Co said he would be pleased to have as many men as possible from this section visit his location on Sunday.

Twenty Forestry sappers set out on Sunday, 7 May, to find 5 Field Park Company and meet friends and workmates. The Field Companies were camped not far from [Montaquila](#), and henceforth seldom a day passed without the sawmill receiving a visitor from the Division.

The oak stand was cut out on the 11th with a total of 132,000 super. feet and the plant was moved to a spot conveniently near the spruce trees referred to in the detachment diary. The opportunity was taken to overhaul the mill before starting on the spruce, but speculation about the meaning of the continuous rolls of thunder that began the night the mill cut out was the chief subject of conversation. The men knew, now that the battle had begun, that they had heard the opening barrage of the spring offensive which would see the Polish flag flying on [Montecassino](#) and the whole German Army reeling backwards.

Cutting began on the 15th, with priority given to 9 in. × 9 in. and 9 in. × 4 in. sizes, but there were complications. The section was working the spruce block before it had been requisitioned, and they found four Italian pitsaw teams and four sets of oxen in the area supposedly reserved for Eighth Army.

They also found that trees marked the previous day had been felled by the Italians and moved to the roadside in readiness for the pitsaw gangs. Lieutenant McKenzie had to be quite firm to the culprits—when he found them—about the matter of timber pirating. The whole affair was eventually thrashed out between the ten owners involved and [10 Corps](#) which needed the timber.

The reputation of the Kiwi foresters must have been considerable and their mana high, for two Signals officers appeared on the 18th and hopefully suggested that the party might provide a small matter of 30,000 telegraph poles. There was not that number of trees in the area, let alone trees of suitable length for telegraph

poles.

The signallers departed, but they managed to stick the detachment with an order through Eighth Army for 400 telegraph poles, to be supplied at the rate of 100 a week. The breaking of the letter drought on the 20th by the delivery through 5 Field Park Company transport of a mail that averaged ten letters a man, and the farming out to Italian contractors of the telephone pole order ended an eventful month.

Tenth Corps disappeared like defaulting tenants on 2 June, and after some days of waiting for orders Lieutenant McKenzie was told that his detachment was not under command of the Corps any more but was to take instructions from CE Works. There did not seem to be the same urgency about timber supplies and half the party spent a day in [Naples](#) sightseeing. A message from L of C [Venafrò](#) that they were moving forward and would not be able to cart any more timber decided McKenzie that he would have to get some orders from somewhere. The CE Works for the area washed his hands of the detachment by saying it was only under him for administration and that Eighth Army would have to make arrangements about the timber. [Rome](#) had fallen to the Fifth Army by this time and CE Works could not say just where Headquarters Eighth Army was, except, guardedly, that it was three hours away in travelling time. The CE Branch was eventually located and McKenzie was soothed with assurances that the Canadians would soon be along to take his timber and that a message had been sent to the OC 14 Forestry Company about someone making another forward reconnaissance. Canadian RASC trucks did arrive before the mill was quite blocked up with timber; Major Thomas also arrived on 21 June with a portable radio and the detachment was able to follow the advance through [Italy](#) by way of the [BBC](#) broadcasts.

The OC's appearance followed the instructions to reconnoitre forward for suitable timber, and the two officers left on the 22nd in the Major's car and stopped the night with 5 Field Park Company, now located at [Fontana Liri](#) north of [Cassino](#).

[Divisional Headquarters](#) was looking for firewood for the New Zealand Forces Club recently opened in [Rome](#), so word was sent that all the firewood needed or likely to be needed could be got from the slab heap at [Pescolanciano](#) and that 5 Field Park Company knew how to get there.

The pair went on through [Rome](#) towards [Avezzano](#), where the enemy was fending off a threat to [Florence](#), but no suitable timber was seen. Major Thomas left for the south on the 25th after arranging that Lieutenant McKenzie would stay on and continue the search as the CE was anxious to get the mill forward again. He was provided with a jeep and set off with three days' rations. He roamed far and wide until stopped by shellbursts, but saw little timber worth putting a mill into, and that mostly in small plantations around country houses or in avenues leading to the houses, or rather mansions. McKenzie reported there was a week's cutting in a pine stand near [Perugia](#) which was, in general, the most suitable place for the mill, and was told that arrangements would be made to shift the plant there as soon as possible. He returned to [Pescolanciano](#) on the 29th and all hands prepared for a quick move. Transport arrived for the tractor and mill on 3 July. Timber cut at [Pescolanciano](#) between 12 April and 2 July 1944 was 41,177 cubic feet.

The production of timber in the British Area was still insufficient and recourse was had to the Free Area. A compact group of mills was known to exist at [Serra San Bruno](#), but although the Army reserved the right to purchase in the Free Area, it could not enforce sales or prevent civilians from buying as long as the price regulations were observed.

A reconnaissance in the area disclosed a large mill standing idle, also a dozen smaller plants working flat out and selling their products on the black market.

There were difficulties in getting the big mill, the Societa La Foresta, into action; the owner was from the north and on bad terms with the Corpo Reale della Foreste, who refused to allocate him suitable forest areas; the black market had so raised living costs and the price of bullock fodder that labour was scarce and haulage prices prohibitive. The black market therefore had to be broken before either La Foresta could start or the other mills would come under contract. This was the way of it.

All trees had to be marked before felling, and the Corpo Reale della Foreste was instructed that no more trees would be marked except on orders from the OC 14 Forestry Company. It was pure bluff for the Company had no authority whatever in the Free Area. The hint was then dropped that if the millers decided to cut for the Army the prohibition on marking trees would be revoked.

Haulage contractors remained obdurate on price, so bullock transport was avoided by instructing that the mill be allotted an area suitable for exploitation by tractors. Three tractors with the necessary staff appeared, to the amusement of the bullock owners, because the country was very precipitous. It was even thought possible that, through the intercession of the patron saint of haulage contractors, the drivers might break their necks. The tractors did not fail and the drivers' necks remained unbroken; one by one the small mills agreed to supply the Army if the price of haulage could be reduced; the bullock contractors discovered that they could work at a price less than the 110 lire per metre cube being paid for the tractors, which were then withdrawn. The black market was broken but the tractors were kept at [Serra San Bruno](#)—just in case. The net result was that the July output went up over 1100 tons to a total of 14,152 tons.

While the Company was wrecking the black market in timber in [Calabria](#), steps were already being taken to remove the sappers to another theatre. The Prime Minister of New Zealand, the Rt. Hon. Peter Fraser, had been touring the New Zealand sector meeting the troops and evading any direct questions about the next furlough draft. It is a way politicians have, but as a matter of fact the matter had already been decided and involved the balance of the 4th Reinforcements. Fourteenth Forestry Company would have had 44 all ranks left if furlough had been available on the same basis as for the Division.

The Prime Minister's words did not match his actions, for he wrote to the War Office suggesting that it was time 14 Forestry Company returned to its homeland as soon as the matter could conveniently be arranged. It was convenient to the War Office to release the Company as from 15 August.

On 1 July Major Thomas left en route to New Zealand and Captain Tunncliffe, promoted major, took command. First warning of a changeover came by TPM in the first week of July, but it was thought to be merely to another job somewhere else.

Major Tunncliffe's August diary notes unfold the news:

Thursday 6 TPM arrived re change over. Major Holland arrived to recce area and prepare to take over from us at a later date.

Sunday 9 Major Holland going over transport details and general discussions re layout of work.

Monday 17 Had TPM to report to HQ [2 NZEF](#).

Tuesday 19 Found we were to go home being relieved about Aug 15.

Sunday 23 British officers and personnel arrived to take over our job at month end.

Thursday 27 Just waiting for news and clearing up. New gang getting used to ropes. Very hot. Had swim.

On the day that Major Tunncliffe got his first faint inkling that the Company was likely to move to another area (6 July) the North Detachment had spent three days sitting in the sun waiting for transport to move them to the new forward area.

During this pleasant period the transport, a Mack 10-ton truck and trailer, had covered 600 miles looking for them and returned with a nil report. The sappers continued sitting in the sun until they were found and delivered on the 11th to the new location, where the party that had left earlier had prepared the camp and got the mill in readiness.

The mill began cutting on 13 July with priority given to sizes 9 in. × 9 in. and 9 in. × 4 in. The stand was cut out on the 20th, <sup>11</sup> and Lieutenant McKenzie was instructed to look for more timber (39,500 super. feet).

Before doing so he arranged [Rome](#) leave for the section. They had not had any leave for twelve months, and the suggestion was that they should take a look at [Rome](#) while he looked for timber. It was arranged that way. He returned from his reconnaissance, which took him as near the front line as the enemy would permit, on the 25th to find an RE Don R with a letter from Major Tunncliffe saying that the Company was to return to New Zealand. The timber 'recce' did not seem important after that.

One last dip into the detachment diary:

'26 July. Called on 11 CE to find particulars regarding move to NZ Advanced

Base. He did not know about our move, and rang Army to find all particulars and they confirmed it. Said they would let me know as soon as Movement Orders arrived. Capt Greenhow, CE Branch 8th Army, wasn't clear regarding leaving mill and equipment. Showed him patch of timber I had found and the place I was going to put mill. He said that quantity of timber cut by mobile mill had astounded CE Branch 8th Army. Capt Greenhow wished us all the best for the future. Mill ready to hand over. Everyone keen to move.'

The Company concentrated at Advanced Base on 3 August en route for New Zealand. For the last of the New Zealand Forestry Group the war was over. They went on to Egypt, where they joined the Taupo furlough draft and sailed for New Zealand on 28 September 1944.

Sawn Timber produced by 14 Forestry Company, nze, in  
North Africa and [Italy](#)  
[Africa](#)

Bugeaud	21/9/1943 to 31/1/1944	63,623 cubic feet
	<a href="#">Italy</a>	
<a href="#">San Menaio</a>	21/1/1944 to 9/4/1944	28,674 cubic feet
Umbra	30/3/1944 to 7/5/1944	19,352 cubic feet
<a href="#">Pescolanciano</a>	12/4/1944 to 2/7/1944	41,177 cubic feet
<a href="#">Lago Ampollino</a>	8/5/1944 to 17/7/1944	35,084 cubic feet
<a href="#">Perugia</a>	11/7/1944 to 20/7/1944	3,407 cubic feet
Total		127,694 cubic feet

Sawn Timber produced and despatched by Italian Mills  
with Assistance and Supervision of 14 Forestry  
Company, NZE

Mandrione	3/1/1944 to 7/5/1944	150,078 cubic feet
<a href="#">Calabria</a>	17/1/1944 to 31/7/1944	3,340,736 cubic feet

#### Conversion Table

	Dimensions	Foot Super.	Foot Board	Foot Haakon Dahl	Foot Hoppus	Foot Cubic	Metric Cubic	Ton Cubic
Foot Super.	12? × 12? × 1?	1	1	.785	.0655	.083	.0024	.002
Foot Board	12? × 12? × 1?	1	1	.785	.0655	.083	.0024	.002

Cubic Foot Hoppus	¼ G2	15.3	15.3	12	1	1.273	.036	.032
Cubic Foot	12? × 12? × 12?	12	12	9.42	.785	1	0.283	.025
Cubic Metre	1M × 1M × 1M	424	424	333	27.7	35.31	1	.88
Cubic Ton	4' × 10' × 1'	480	480	378	31.4	40	1.1	1

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<sup>1</sup> L-Cpl L. H. Cann, m.i.d.; Whangarei; born NZ 16 Aug 1902; bushman.

<sup>2</sup> Spr A. Leith; Motueka; born Arrowtown, 9 Jan 1909; sawmill hand.

<sup>3</sup> Sgt B. P. Farrell; Lower Hutt; born Auckland, 14 Feb 1914; millhand.

<sup>4</sup> Agenzia Generale Italiana di Petrolio.

<sup>5</sup> Spr A. McQuaker; born Glasgow, 18 Jan 1912; forestry employee.

<sup>6</sup> Cpl R. W. Mitchell; Lower Hutt; born NZ 23 Feb 1917; bushman.

<sup>7</sup> On 12 April, two days after the arrival of No. 2 Section, 14 Forestry Coy, 5 Fd Pk Coy, as described in the following chapter, moved to Montaquila.

<sup>8</sup> Teleprinter message.

<sup>9</sup> L-Cpl R. Johnson; Alexandra; born NZ 17 May 1918; truck driver.

<sup>10</sup> L-Cpl R. G. Barrett; born Dannevirke, 7 Apr 1912; bushman.

<sup>11</sup> The last production returns were sent to HQ 14 Forestry Coy on 17 July and show the production as at that date on the final returns. The table is therefore not completely accurate.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## CHAPTER 20 – ADVANCE TO FLORENCE

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## [SECTION]

The alteration of the boundary between the Fifth and Eighth Armies and reorganisation for the spring offensive entailed a series of intricate moves before the Division could be withdrawn from [Cassino](#). On 5 April 6 Field Company followed the [San Pietro](#) track to a staging area near [Venafrò](#) on Route 85, which highway connects with the important communications centre of [Isernia](#); 5 Field Park Company arrived a couple of days later and the two units played a little football and managed some sightseeing as far afield as [Naples](#). Both moved another ten miles into the foothills to [Montaquila](#) on the upper reaches of the [Volturno](#) (11 and 12 April) and pitched their bivvies in a stand of oak trees.

All [Mechanical Equipment Platoon](#)'s plant commenced work with 6 Field Company on improving a five-mile-long diversion—the Kohi bypass—on a track from [Montaquila](#) to [Filignano](#). Known as the Jeep Track, merely a courtesy title, it wound from [Filignano](#) south to the junction of the [Pozzilli-Casale-Acqua-fondata](#) road. It was one jeep wide with a few passing places, partly metalled, but mostly soft going strewn with heavy boulders, and with grades of one-in-four. After rain it was a very careful driver who got through without being bogged.

Sappers not working on the Kohi bypass maintained another supply route past the fairy castle village of Colli Volturno towards [Cerasuolo](#), which was also connected by road to [Filignano](#).

Eighth Field Company did its last road and bridge repair job in [Cassino](#) on the night 6–7 April and left four days later for [Filignano](#), where it relieved a Polish field company until it moved again to [Montaquila](#) (19th). A number of odd jobs followed, the most important being the improvement of mule tracks in rear of 6 Brigade, then perched under the peak of [Monte Croce](#) astride the [Cardito-San Biago](#) road. Finally, on 25 April, 8 Field Company departed for [Capua](#) on a course of instruction on floating Bailey bridges at Eighth Army Bridging School.

Seventh Field Company stayed in its area until the 14th when, less a 'recce' party (Lieutenant O'Reilly) attached to 4 Armoured Brigade, which was staying in the

Cassino area for the time being, it also moved to [Filignano](#), where it joined 6 Field Company on the Kohi bypass and worked on a twenty-chain detour around a steep rocky bluff. Nearly all the available resources of the Divisional Engineers were employed on the Jeep Track, and included for a period some 150 men from Divisional Cavalry, who pulled down the age-old revetment walls the Italian peasants had built to hold the cultivated terraces in place. After the grim days and grimmer nights in [Cassino](#) this road work in the mild spring sunshine was a very pleasant change, and such was the keenness of the men that the whole road was a two-way metalled highway by the end of the month.

The CRE and staff, together with the rest of [Divisional Headquarters](#), had by this time settled in at [Casale](#), two miles east of [Acquafondata](#), and on 15 April [General Freyberg](#) assumed command of the Divisional front of the 'Apennine' sector north of [Cassino](#).

The New Zealanders were now back in Eighth Army as part of [10 Corps](#), into which the 14 Forestry Company detachment had marched five days earlier. It is therefore possible that the Field Companies used timber cut by Lieutenant McKenzie's bushmen at [Pescolanciano](#). Incidentally, 2 NZ Division was a fairly cosmopolitan formation at this time for reorganisation was still going on, and [General Freyberg](#) had 6 Brigade holding his right, 11 Canadian Brigade his centre and 28 British Brigade his left; 4 Armoured Brigade was still in [Cassino](#) and 5 Brigade was near [Isernia](#), in reserve.

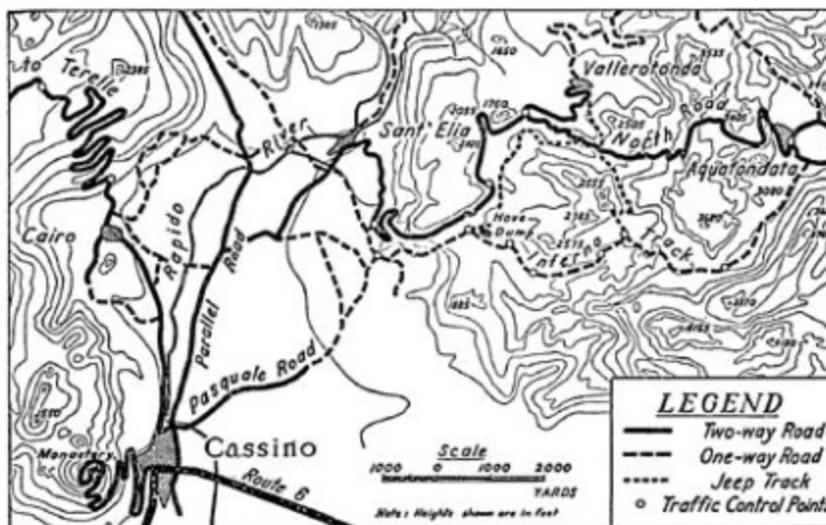
Engineer command on the day the Division became operational again was:

CRE	<a href="#">Lt-Col J. N. Anderson</a>
5 Field Park Company	<a href="#">Maj K. F. Jones</a>
6 Field Company	<a href="#">Maj J. B. Wallace</a>
7 Field Company	<a href="#">Maj G. A. Lindell</a>
8 Field Company	<a href="#">Maj D. S. G. Marchbanks</a>

Major Anderson (promoted lieutenant-colonel) had rejoined Engineer Headquarters after his recent return from New Zealand and had relieved Colonel Hanson, about to go home on furlough; Majors Currie, Askin, and Captain Armstrong were also on the point of departing on furlough. Lieutenant Faram took command of [Mechanical Equipment Platoon](#) from Captain Armstrong.

Communications posed something of a problem because, although the Field Companies were to maintain the Divisional area, they had no responsibility for main supply routes. And at one point the Divisional supply line crossed the neighbouring Polish communications.

The New Zealand road system could be said to start at [Acquafondata](#), which was the limit of safe daylight travel. Westward of the town, sheltering in the hollow of an ancient volcano, two routes, one on the north and one on the south side of a ridge running down into the Rapido valley, formed a rough ellipse. Before they met they dropped 2000 feet. The south route, imaginatively called the [Inferno Track](#), was fairly well hidden from enemy view by lengths of camouflage material, and windscreens were covered with sacks to prevent an inadvertent helio message, but it was really only a jeep route and seldom used by anything else—at least to begin with.



NEW ZEALAND SUPPLY ROUTES NORTH OF CASSINO  
new zealand supply routes north of cassino

It was the prosaically christened [North Road](#) that should have had the colourful title. This was the main New Zealand supply route and sidled down into the Rapido valley under the eyes of the enemy, not much more than a mile away at the nearest point. Sapper and other drivers were supposed to know when the German guns were loaded by looking down their barrels. The grades were reasonable, but hairpin bends that could not be negotiated on one lock averaged two per mile.

From Hove Dump at the junction of the two routes, the road dropped several

more hundred feet to the Rapido ford at Sant' Elia, crossed a small flat and then climbed 2300 feet—the Terelle Terror Track—to mulehead, where, as the name implies, mule trains took over from the wheeled vehicles.

No. 3 Platoon, 6 Field Company, left the Cerasuolo road work (19th), crossed the Rapido at the Sant' Elia ford, and camped in a lying-up area at the foot of the steep and rock-strewn Colle Belvedere. Their task was to improve the almost vertical climbing track that was the axis of a British formation holding that sector, now relieved by 5 Brigade. This track writhed and wriggled up the ridge until it met the Terelle Terror Track near mulehead and would have been a good preparatory school for mountaineers. Ten days later, when 6 Brigade took over, the track had been graded where possible, and where not possible steps had been cut and whitewashed. A start had also been made on Hongi's Track, a half-mile deviation on the Terelle road. It is doubtful if Hongi, intent on getting his canoes to the waters of Lake Rotorua, would have considered it a suitable locality in which to carve a track.

For the sappers the month of April was pleasant enough. It was springtime in the Apennines and skylarks by day and nightingales at night filled the air with their song. The men from New Zealand, where the seasons are told off by the calendar, saw the annual miracle of bare boughs being clothed with foliage in a matter of days, of blackened vine stems bursting into leaf, of wild flowers blooming in the grass.

Early May followed much the same pattern; 5 Field Park Company's Bridging, Stores and Workshops Platoons were engaged in routine duties. The Company opened a quarry and supplied Mechanical Equipment Platoon with metal for widening the Jeep Track to take three-tonners. A new activity for the Company was the operation of an anti-malaria squad under the command of Lieutenant Mountain. The squad passed many thankless hours waging war on the anopheles mosquito in and around the houses of the Italians in the neighbourhood who, in the words of the Company war diary, 'have accepted the unavoidable disturbances with resignation rather than enthusiasm'.

There was limited leave to Bari and adequate leave to Naples. Bridging Platoon, with time on its hands, took a load of Bailey panels and decking and erected a stage for the use of concert parties. It was christened El Djem after the gigantic ruins in

North Africa, where no doubt similar relaxations were offered to bored Roman legionaries. A matter of general gratification throughout the sapper units was the award to Padre Watson of the Military Cross. Few padres were more popular and few spent more time in dangerous places with their flocks. He made it a practice to go out with bridge repair teams because he felt it his duty to be where casualties were likely, and where he invariably became a working sapper. This was well known at Engineer Headquarters, where the Padre was often given in-correct information so that he would get a night's sleep, but he was seldom deceived. The CRE, who valued his services, is responsible for the following anecdote:

'What a cheerful sapper and grand morale builder he was. One night when the Padre was acting as just a plain sapper he put his finger into a panel pin hole to find out if the panel being added was in the right position for the pin to be inserted. Someone without knowing this gave the panel a push to drive it into position and the top of the Padre's finger was very neatly sheared off. It is regretted that he did not live fully up to the reputation of a real sapper for not one word of blasphemy passed his lips.'

Other awards published about the same time were DSOs to Majors White, Currie and Marchbanks; MCs to Captain Morgan and Lieutenant O'Leary; United States Bronze Star to Lieutenant A. L. King and MM to Sapper R. A. Hermon.

The relief by 12 South African Motor Brigade of 11 Canadian Brigade holding the right of the Belvedere massif resulted in the relief of Canadian sapper units by 7 Field Company and its attachment to the Springboks, who came forward via the newly finished Jeep Track.

The relevant portion of 7 Field Company's operation order reads:

Intention.

7 Fd Coy will relieve 1 Cdn Fd Sqn and 14 Fd Rce on night 4/5 May 44.

Tasks.

- (a) Manning four water points in St Elia- [Portella](#) area.
- (b) Maintenance of

(1) North road and adjacent tracks.

(2) Bde in St. Elia area.

No. 3 PI will be responsible for W.Ps <sup>1</sup> and maintenance of roads in St. Elia area.

No. 1 will be responsible for maintenance of North Rd and adjacent tracks.

No. 2 PI will remain in reserve at Coy Hq. [Halfway between [Acquafondata](#) and [Hove Dump](#) on a jeep track connecting North and Inferno roads.]

Maintenance of the [North Road](#) had to be done after dark. The hairpin bends and narrow stretches were marked with white tape on stakes to give the convoy drivers on moonless nights as much help as was possible to prevent them going over the side of the road. The trucks invariably removed the tapes, and after the return trip from the bottom of the hill sappers had to replace them for the following night's traffic.

The water-point details also had their moments; one was located at a well near a casa at Sant' Elia, and being in full view of the enemy was patronised at night only. One afternoon a Polish water cart arrived which caused the sappers on duty some concern, especially as the Poles had brought smoke to use if they were shelled. Major Lindell called on the Polish CRE and suggested that it would be nice if he collected water strictly after dark, but he did not seem impressed. A suitably phrased noticeboard was thought to be the answer and one about three feet by two was smartly built. Lieutenant [Flood](#) <sup>2</sup> took it to the Polish Headquarters to have the necessary Polish lettering applied, but he arrived back with an empty board—it was not big enough to get all the words on it.

Eighth Field Company finished its course at the Bridging School and felt that there was little about building bridges on floating piers that it did not know. It camped on the Kohi bypass and the sappers divided their time between maintaining the road and preparing a reach of the upper [Volturno](#) for the continuation of assault bridging experiments.

Fifth Field Park's and 6 Field Company's work and locations were virtually unchanged during this period.

The barrage announcing the spring offensive opened at 11 p.m. on 11 May and

there was fierce fighting from [Cassino](#) to the western seaboard. The New Zealand infantry, perched on hills and ridgetops, could hear much, but owing to the smoke in the valley could see little of what was going on. The sappers went about their tasks as if there was no spring offensive; in particular, 8 Field Company remained engrossed with its assault bridging experiments. It built 100 feet of single-single Bailey on a tank transporter and launched it into the [Volturno](#), pulled it out and, with another team, launched it again. In the middle of these operations Major Hamilton arrived to take command from Major Marchbanks, who had been recalled to New Zealand to work on post-war development plans for the Wellington Harbour Board.

The battle was still raging around [Montecassino](#) on the 17th, but it was not the sappers' war and preparations were pushed ahead for a Divisional Engineer sports meeting. The Polish flag was flying over the ruins of the monastery on the 18th; by the 24th infantry patrols, like melting snow in the spring, began to trickle down the mountainsides. The same afternoon 5 Field Park Company was At Home to all Divisional Engineers at El Djem on the occasion of the sappers' sports meeting. The YM supplied tea and, by means of a loudspeaker, an afternoon of music.

A convincing win was registered by 5 Field Park Company with 51 points against 7 Field Company's next best total of 38 points. The Field Park diarist was suitably modest. 'It should in fairness be stated that this Company has a greater number of men to draw upon than the other competing units.'

The enemy air force marked its disapproval of the social gathering with one of its rare appearances the following evening, when it dropped some canisters of APs between Workshops' and Company Headquarters' lines. Luckily the greater part of the unit was away at a movie show and there were only two casualties. Nevertheless many bivvies were holed, and the strictures in routine orders regarding inefficient blackouts were not really necessary.

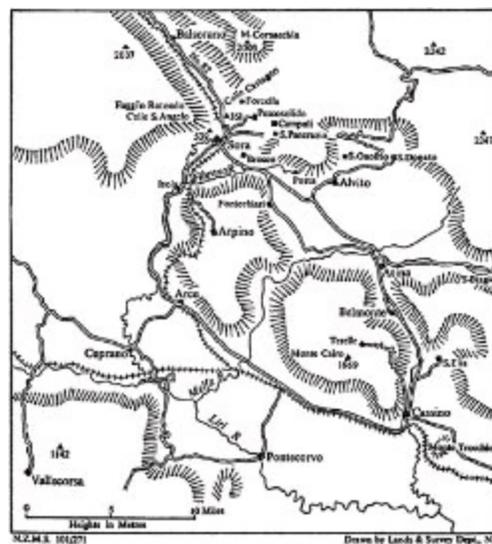
The Fifth Army linked up with the [Anzio](#) beach-head—from which the long contained British and American forces had already broken out—on 25 May and Canadian and French troops penetrated the [Liri](#) valley by capturing [Pontecorvo](#), an important point in the German defences; in the [Apennines](#) the indications were that the enemy was preparing, if indeed he had not already done so, to abandon his position in front of 2 NZ Division. Patrols established that [Terelle](#) was in fact

evacuated and after dark 5 Brigade was feeling down the mountainside towards the valley below.

Headquarters Divisional Engineers' war diary gives a nonchalant indication of the pent-up energies that were being released:

'26 May. CRE visits G1, comes back with infm. of future ops. and things begin to happen in a hurry. Major Lindell and Major Hamilton sent for. Lt Dalmer sent on recce up Belmont road. Ops. instr issued to 5 Fd Pk Coy and 7 NZ Fd Coy.'

The instructions were for 7 Field Company to concentrate, less a small B echelon, on the [Cassino- Belmonte](#) road near Sant' Elia and take under command a section of [Mechanical Equipment Platoon](#)—23 sappers, two D8s and two D6s, commanded by Lieutenants Belhamine<sup>3</sup> and Tassell.



**from cassino to balsorano**

Fifth Field Park Company was to send half its tipper trucks with the detached Mechanical Equipment section, hold the mechanical shovels for the time being and send the rest of the platoon and equipment to 8 Field Company. [Bridging Platoon](#) would hold for immediate despatch its bridging set, possibly man a forward bridging dump at Sant' Elia and, when the situation allowed, maintain a forward dump of dieselene.

Sixth Field Company, which still had a platoon maintaining the [Colle Belvedere](#) track, was to remain attached to 5 Brigade and be prepared to send a platoon to 8

Field Company.

The situation of 8 Field Company, with 6 Brigade, needs a little more explanation. The brigade's role under the altered circumstances was to cover the Division's right flank and clear the [San Biagio- Atina](#) road so that it could be opened as a possible main axis. It will therefore be seen that the two brigades would be working down converging valleys which, like a recumbent Y, met at [Atina](#), a little village perched on a crest which commanded the two valleys and so of considerable military importance. The orders were that the brigade which reached [Atina](#) first would carry on towards [Sora](#), the entrance to the upper [Liri](#) valley, unless strong opposition was met.

An added complication, not concerned with enemy movements, was notice that the Prime Minister would review the sappers at a parade to be held for him on 28 May. Prime Minister or no Prime Minister, the war had to go on, so it was that 7 Field Company, with [No. 1 Platoon](#) working on the road behind 5 Brigade and the rest of the Company standing by at two hours' notice, was not represented.

Eighth Field Company, with [No. 2 Platoon](#) divided between a reconnaissance group (Lieutenant Menzies) and the balance with 6 Brigade Headquarters (Lieutenant Fisher) searching the road towards [San Biagio](#), managed to send two platoons to the ceremony; 6 Field Company did the same, while 5 Field Park spread itself handsomely over the rest of the parade ground.

The parade was formally inspected by the Rt. Hon. Peter Fraser, who then addressed each company informally and answered questions. 'Questions put to the Prime Minister concerned chiefly the possibility of furlough for the 4th and subsequent reinforcements. The inconclusive nature of his replies was taken philosophically,' was the entry in 5 Field Park Company's war diary. According to a sapper, ' [6 Fd Coy](#) was not very excited either'.

'An inspection and informal chat by the Prime Minister but no one very thrilled by the visit,' one diarist records. 'His only news was that we were to go into action that night. Some hectic preparations as bivvies and bodies were flung onto the trucks and the convoys pulled out once more.' Before last light the Company was spread between [Belmonte](#) and [Atina](#) ready to commence maintaining that stretch of

road in the morning.

As soon as the Prime Minister and his escort of high-ranking officers were safely out of the way, HQ NZE moved to Sant' Elia. Major Hamilton was informed that RE companies would undertake road clearing duties for 6 Brigade as far as [Atina](#), that he was detached from 6 Brigade and that he was to relieve 7 Field Company, which was working with 5 Brigade feeling along the valley towards [Sora](#).

Fifth Brigade crossed the shingle-bottomed Melfa River on 28 May, then halted until the inevitably blown bridge had been replaced. Persistent heavy shelling suggested caution but was also a sign that the enemy rearguards were getting ready to give ground again, a sign that was confirmed later in the day when the demonstration ceased. [No. 3 Platoon](#) (Lieutenant O'Reilly), told off to get the wheels across the [Melfa](#), found that it had rather a job on its hands.

The bridge had consisted of masonry arches and timber trestles, all well demolished, and the 200 ft span made it an unsuitable place for launching a Bailey without a supporting pier. Just a little upstream, however, the river divided into two channels forming an island, something, on a smaller scale, like the [Sangro](#) below the tiki bridge. One channel could be easily forded and an 80 ft double-single Bailey over the other would get the traffic moving again.

While the bridging components were being brought forward a track was formed into the shallow river for the Staghounds and other fighting vehicles to cross.

The bridge was ready for wheels at 2 a.m. but the clay bank at the ford had also been so badly cut up that it was decided to put in a culvert. A bed was dozed pending the arrival of the components, a number of empty 44-gallon drums welded together and known in the trade as saveloys, bangers or sausages. The culvert, four drums long and nine wide, was put down and covered by a dozer with three feet of fill in under two hours.

Once more, this time permanently, traffic flowed towards the advancing infantry, and [No. 3 Platoon](#), which had had little sleep during the previous thirty-six hours, rejoined the Company and bedded down.

Eighth Field Company arrived in its new area between [Atina](#) and the [Melfa](#)

during the day (29th). The enemy took an instant dislike to its presence with long-range guns, and a stores truck had to be written off. Major Hamilton reported to Headquarters 5 Brigade and was informed that the [Maori Battalion](#) would be crossing the Fibreno River after dark, whereupon the Company would please replace the bridge that used to be there.

The war had passed 7 Field Company by for the time being and the sappers took stock of the situation. Advancing along a single road through a narrow valley with, presumably, infantry chasing the enemy off the flanking hills, had been an entirely new experience to even the oldest hands. Lieutenant O'Reilly wrote:

'This is a peculiar war—"fluid" they call it, but it was never like this even in the desert. Nobody knows where anybody is.... 2 Pl have been marching up the road <sup>4</sup> with a dozer in support—forward elements of [2 NZ Div](#)! The Italians are streaming back into this valley from the hills where they have been living for nine months. And are they glad to see us. It's genuine too, in their case, they haven't had much of a deal from the Hun in this area.'

The Fibreno was more of a river than the [Melfa](#) and of more importance to the enemy, who was withdrawing as slowly as circumstances permitted, the circumstances being the New Zealand infantry. Beyond the [Melfa](#) the valley widened appreciably as it approached the considerable town of [Sora](#) at the entrance to the upper [Liri](#) valley.

The jobs for the night of the crossing were:

[No. 2 Platoon](#) (Lieutenant Fisher) was to sweep the road verges from the [Alvito](#) turnoff to the river and, with the help of a dozer, fill any demolitions.

[No. 1 Platoon](#) (Lieutenant King) was to put the Bailey over the river.

[No. 3 Platoon](#) (Captain Burgess) was to relieve 7 Field Company of road maintenance.

The Maoris made a successful crossing of the waist-high and twenty-yard-wide Fibreno and the road to the river was checked for mines before daylight. A 'recce' for a bridge site disclosed a nasty situation. The road itself was on the top of a high

embankment, suggesting frequent floods and limiting the dispersal of bridging trucks, and a wide drain, almost a canal, met the road at the point where the bridge had crossed the river. It had been totally destroyed, the near abutment undermined and there was a 50 ft crater where the far abutment should have been. Between the crater and the riverbank was a mass of soft spoil. There was a better site for a bridge close handy but it meant a sharp turn off the main road, along a side road, across the canal, and another sharp turn to the actual river; in fact, a difficult route in the shape of a large Z. The enemy concurred that it was the best place for a temporary bridge, for his guns kept the area under constant fire and rather neglected the original bridge, which was the site finally decided upon.

The bridge train arrived about midday but the first truck to move along the embankment, after Brigade Headquarters had indicated that the enemy had moved back and that the site was no longer under observation, was caught in a storm of shells and extracted only with the greatest difficulty. It was a neat job coolly performed by Sergeant Kerr of 5 Field Park Company.

The unloading of trucks, the preparation of the approaches and the assembly of the bridge commenced as soon as it was dark enough, but the project had been conceived under an evil star. First the rocking roller on which the bridge is built sunk through the undermined concrete of the near abutment and could not be retrieved; when the launching nose eventually reached the far side and the sappers tried to jack the bridge up, the grillage work, instead of taking the weight of the bridge, sank into the ground. Hours of heartbreaking lifting and heaving followed. Three men were wounded during the night, and when a party arrived from [No. 3 Platoon](#) to help in the work the bridge builders were so tired that they could scarcely push down the handle of a lifting jack. At the first possible moment Lieutenant Tassell got a dozer over the bridge and filled the demolition by pushing a nearby house into it. Traffic began to roll at 9 a.m., when tanks and Staghounds crossed to the support of the infantry waiting to exploit towards [Sora](#). Eighth Field Company remained in the area strengthening the bridge into a triple-single Class 40 and became responsible for the road from the [Alvito](#) turnoff to the Fibreno, where [No. 1 Platoon's](#) all-night effort had been christened, as a compliment to the sappers and their commander, 'Kingi's bridge'.

The locations of the other sapper companies on the last day of May were:

6 Field Company was still filling demolitions, picking up mines on side tracks and dodging the attentions of our own planes on the [Belmonte- Atina](#) road.

7 Field Company was in reserve near the [Melfa](#) bridge.

5 Field Park Company was at [Montaquila](#) waiting to move forward, and [Mechanical Equipment Platoon](#) was working its machines wherever the need was greatest.

Fifth Brigade was by this time consolidating in [Sora](#), which had not been strongly defended, preparatory to moving on [Balsorano](#) in the upper [Liri](#) valley. [Sora](#), dominated by a castle on a hill, is built on both sides of the Liri River, and Route 82, which joins Route 6 at [Arce](#), 20 miles north-west of [Cassino](#), follows the valley through [Sora](#) past [Balsorano](#) to [Avezzano](#), some 30 miles to the north. [Avezzano](#) will be remembered as the objective of 6 Brigade before the capricious [Sangro River](#) and the Italian winter altered General Montgomery's plans. From that town, situated at the junction of Route 82 with Route 5, it would have been possible to move west on [Rome](#) or south against the enemy's rear.

Sixth Brigade was brought in for a two-brigade thrust to [Balsorano](#), six miles up the valley and situated on a plateau above a gorge. This town was a difficult objective and not worth a pitched battle, for if [Rome](#) fell, the enemy could not continue to hold it. The advance was to be made with a brigade on each side of the river, and naturally the two bridges connecting the eastern and western sections of [Sora](#) were blown.

The replacement of these links was assigned to 7 Field Company which, with [Mechanical Equipment](#) and [Bridging Platoons](#) of 5 Field Park Company, moved into [Sora](#) on 1 June and began work forthwith on a 160 ft double-single Bailey, supported at mid-span by a crib pier. An interesting point is that the whole bridge was completely assembled in one length on the street approach and launched on its rollers over the centre pier in one operation. The work was done by two platoons, one on the bridge itself and the other removing the steel debris of the ruined structure with cutting charges and winches. The crib pier was built on the foundations of the old bridge which rested firmly in shingle in the riverbed.

Lieutenant O'Reilly describes it:

'The site was good but it was 160 ft wet gap and the old demolished wrought iron bridge had to be got out of the road first. Then to get Class 40 we had to build a central crib pier. It was some job but from first to last went without a hitch. We started the bridge at 4.30 and the first vehicle went over at 0045 hrs—an amazing achievement. Not only is it the longest Bailey 2 (NZ) Div has built but it is one of the quickest and it is a job we can well be proud of. Bill Sharpe<sup>5</sup> and No. 3 did the bridge, I and No. 1 the pier, and if it wasn't that we were held up for gas (cutting) for a couple of hours the bridge would have been open at 2300 hrs. Civilians turned out in hundreds watching us and we even had them carrying panels for us. It was more like a carnival than a job 2 miles behind our forward infantry.'

Fifth Field Park Company left [Montaquila](#) on 3 June and joined its Bridging and Mechanical Equipment Platoons in [Sora](#). Civilians, ill clad and half starved, were returning from the hills to their battered dwellings, and the sappers lived a little scantily because of giving away their rations. The town, with 7 Field Company's bridge as the main target, was under intermittent shellfire and there were civilian casualties, but beyond setting two trucks on fire the shelling caused no material damage.

Three companies, 6 and 7 Field and 5 Field Park Companies, were now camped near each other in [Sora](#), while 8 Field Company remained on line-of-communication duties.

The enemy showed no signs of vacating [Balsorano](#), but the ink was not dry on the operation orders designed to remove him when a signal was flashed through that [United States](#) forces had entered [Rome](#). Some fast enemy movement northwards was expected and 2 NZ Division was ordered to stand by at forty-eight hours' notice to join the chase.

The Divisional Cavalry, with attachments which included 7 Field Company, was instructed to take over the New Zealand sector for the time being while the infantry brigades were reorganised for the expected pursuit. The enemy rearguard lost no time in departing and the sappers got on with the now familiar task of picking up mines, bridging or filling demolitions and putting in bypasses.

As the Headquarters Divisional Engineers war diary puts it: 'June 6. 1000 hrs. Germans retire from [Balsorano](#). Engrs get cracking (7 NZ Fd Coy, 2 D8s and D6).'

So single-minded was the 'cracking' that no mention was made in any of the sapper war diaries of the fact that the long-awaited Second Front had been opened on that day by the landing of the Anglo-American armies on the [Normandy](#) coast.

The Division's pursuit role was washed out almost as soon as it had been announced, and the new plan was to advance as rapidly as possible to [Avezzano](#) and to clear Route 82 as an alternative forward route.

Some 7 Field Company sappers repaired culverts, filled lesser demolitions and lifted mines up to and beyond [Balsorano](#) while others put a 30 ft Bailey over a big 'blow'; the dozers were also going flat out on obstructions to wheeled and tracked vehicles. Meanwhile the leading infantry battalion (26 Battalion) had to debus and give a hand with testing the road verges for mines. That night (7 June) 6 Field Company took over the job of clearing the road to [Balsorano](#) while 7 Field Company worked on road improvement between that town and [Sora](#). Eighth Field Company handed over to 571 RE Company the maintenance of all roads east of Kingi's bridge, and while [No. 3 Platoon](#) worked from Kingi's bridge to [Sora](#) the rest of the Company concentrated in [Sora](#) itself.

Sixth Field Company and the Mechanical Equipment dozers worked throughout the night on eight major demolitions and put down two small Baileys while the infantry slept on the side of the road. It was the same the next day: sappers not previously employed, again with infantry help and, of course, the dozers, got the road opened as far as [Civitella Roveto](#), ten miles farther north, which involved building a 60 ft single-single and an 80 ft double-single bridge. Eighth Field Company came forward to assist and from the Morino power station area worked with 6 Field Company to get as far as Capistrello road fork, four miles south of [Avezzano](#), during the night 9 - 10 June. Undoing the German sappers' work was not as routine as it sounds; the unit war diaries mention two men wounded by a delayed action charge and two wounded, one fatally, by an S-mine on 9 June.

The Division's role was again altered with the occupation of [Avezzano](#) and it now was to go into Army reserve. The companies continued with the maintenance of

the roads and sending out reconnaissance parties with Divisional Cavalry patrols until 13 June, when all formations began to concentrate at [Fontana Liri](#), a rest area near [Arce](#) for the late enemy garrison of [Cassino](#).

Little enough has been mentioned concerning the work in the field of the [YMCA](#). That the sappers were not unappreciative is clear from an entry in 5 Field Park Company's war diary prior to leaving [Sora](#):

'On the eve of our departure from [Sora](#) it would not be out of place here to pay tribute to the work of Mr Jack Meikle, the Div Engrs [YMCA](#) Secretary. Arriving in the town with the Field Coys, he and his offsider, Sgt Shute, quickly cleaned out a large building, dug up tables and forms to place under the trees in the courtyard, set up his canteen, installed a radio, and commenced an excellent evening refreshment service for the men. Magazines were plentifully distributed, and a civilian enticed in to play an acquired piano. The effect was that of a miniature [NZ Forces Club](#).'

The Divisional rest area was along the [Liri](#) riverbank and around the village of [Arce](#). Part of 6 Field Company was quartered in an explosives factory plentifully embellished with Italian notices 'Multo Pericoloso', indicating where it was dangerous when the factory was working. It had been bombed and possibly put out of action by Allied aircraft, but the departing German sappers had gone to some pains to ensure that it would not be in working order for a long time. The buildings covered a considerable area and all retorts, boilers, settling tanks and overhead gantry had been systematically destroyed. In addition the buildings were heavily booby-trapped with charges fixed to doors, moving parts of machinery and everything else likely to appeal to the curious. The New Zealand sappers had, however, become very cagey regarding booby traps and it was said that a gold watch would lie on a road for a very long time before anyone would pick it up or even drive close to it; likewise a tempting bunch of grapes or an overladen fruit tree would remain undespoiled until less cautious or less experienced troops came along.

The break at [Arce](#) was spent in combating the fly menace, training with 100 ft lengths of Bailey bridging mounted on especially adapted Sherman tanks, building suspension bridges, lifting lethal German mines, including the new and tricky Holtz mine, and putting down safer ones for infantry to locate. These duties were interspersed with limited leave to [Rome](#) and less limited unofficial hitch-hiking to the

same city, 70 miles away.

It was a more relaxing period than the break after [Cassino](#), when the mood had been hurt surprise at the setbacks, if not outright defeats, suffered since the Division had come to [Italy](#). The sappers had been nurtured during their military lives on stories of chasing Jerry all over North Africa—anything pre- [Alamein](#) had been more or less forgotten—and then, for two campaigns, they had been locked in combat with an enemy who not only declined to be chased but often refused point-blank to shift at all.

But all was well again; from [Terelle](#) to [Avezzano](#) was quite a step and Jerry was still hot-footing it northwards. And now with the [Normandy](#) landing making progress the war was as good as over—almost.

By 6 July 8 Field Company had converted a section of the spillway at the munitions factory into a 100 ft swimming pool complete with springboards and was busy organising a swimming sports meeting when it was told to pack up and come under command of 6 Brigade.

The battle line had moved steadily towards [Florence](#), but the enemy was being very pigheaded about leaving [Arezzo](#) and was seriously upsetting General Alexander's timetable. Thirteenth Corps had no reserves left and 2 NZ Division was the most readily available formation. It was quite unexpected, a veritable bolt from the blue, and entailed some fast work on the part of the people responsible for juggling with divisions.

The five thousand odd vehicles comprising the wheels of 2 NZ Division were to move in five groups, 8 Field Company with the leading 6 Brigade Group (night 9 - 10 July), 7 Field Company with 5 Brigade Group, while 5 Field Park Company and 6 Field Company were with the Divisional Troops Group.

In every case the move was done in two stages, mostly by night, with complete wireless silence and with all insignia removed. The route was through the outskirts of [Rome](#) to [Civita Castellana](#), 30 miles or so to the north of that inviting city; another 100-odd miles brought the sappers to the new Divisional area spread along the western edge of [Lake Trasimene](#), in size about the same as Taupo but so edged with swamp that it was difficult to get to the water.

A sapper's impression of the new locality:

'The people in this part of the country are definitely not as pleased to see us as they were further back. I don't know why unless this has been a very Fascist community. There seems to be little or no shortage of food here and never once have I seen kids hanging around the cookhouse hopefully waiting for scraps which has been the inevitable habit until now. Wine is very plentiful and amazingly cheap. We get delightful bianco for 16 lire a litre while 150 miles back we would pay 60 lire for vino much inferior in quality. The shops too seem well stocked and in [Cortona](#) which is a pretty little hill top town with an amazing panorama view of this valley one can buy A1 Borsolino hats for 25/-. The women are beautiful, some of them very fair and invariably well dressed. Like all Italian women they run to bust and even slim girls of 14 or 15 have breasts like Sherman turrets.'

Eighth Field Company settled in near 6 Brigade Headquarters in the [Castroncello](#) area some 20 miles south of [Arezzo](#). The first job was to find a water point, which was difficult for, although there were several wells with good water, the yield was not sufficient and recourse was made to a canal. Filtration and chlorination, the bane of tea-drinking Kiwis, were both necessary and a mobile unit was sent forward by 5 Field Park Company for the purpose.

On the evening of 13 July, after patrols had established that the Castiglion Maggio peak was not held by the enemy, Lieutenant Foster ( [No. 3 Platoon](#)), with 14 sappers and two White scout cars (reinforced by thirteen more men the following day) went forward to work with 26 Battalion and Divisional Cavalry. Two dozers were standing by at call at Company Headquarters.

The job was to assist elements of 26 Battalion, armoured cars of Divisional Cavalry and tanks of 18 Armoured Regiment to reach Route 71 by way of a road over the hills from [Castiglion Fiorentino](#) to Palazzo del Pero, a distance of about eight miles.

Work began after dark on the 14th with five demolitions in the first two miles of winding track. The column was finally stopped by a large crater at the junction of another road that circled round the northern face of [Monte Spino](#), about two miles

short of Il Palazzo del Pero. The obstacle was covered by enemy guns which were dropping a shell a minute on the crossroads, and nothing our guns could do would stop them. Sappers and dozers pulled back and the tanks harboured for the night. Lieutenant Foster was the only casualty and he, after receiving attention, was able to rejoin the Company while Lieutenant Fisher took his place with the detachment.

At daybreak enemy guns were still shelling the crossroads and it was decided to put in a bypass. This the detachment and the dozers had ready by midday and a troop of Divisional Cavalry was in Palazzo del Pero half an hour later.

The following day, the 16th, was very important for some sappers but supremely unusual for others; the enemy lost [Arezzo](#) and was chased across the [Arno River](#); the forward sapper detachment carried on tidying up the road into Palazzo del Pero village and road junction; everybody else celebrated the news just released that the married men of the 4th Reinforcements were going home on furlough.

Sixth Brigade was withdrawn from the fighting and the sappers ceased to be attached. The luck of [No. 3 Platoon](#), which had just finished a dangerous job, ran out at this point, for with celebrations pending, the whole platoon, Lieutenant Brown commanding, was detailed to leave the Company and return in the morning of the 18th to clear the road from Palazzo into [Arezzo](#), six miles by airline and considerably more by winding road.

They missed quite a celebration. There were parties day and night for three days, with a parade for [General Freyberg](#) thrown in. The General will probably remember that parade for a very long time. Lieutenant O'Reilly, an old [Western Desert](#) hand himself, later wrote:

'What a performance! We were still throwing celebrating Kiwis aboard as the trucks moved off down the road. Then I realised Sam [Allom](#) <sup>6</sup> was missing and found him just starting to pack his gear! However he finally made it.'

It is expedient to pause again to pick up the threads. A consequence of the opening of the Second Front in [France](#) was the diversion of material and manpower from the now secondary theatre in [Italy](#). The Fifth and Eighth Armies were to hold as many enemy troops as possible in [Italy](#), thus preventing their transfer to [France](#), and

the only way to do so was to continue the pressure of the campaign.

That, shortly, is why the New Zealanders, instead of resting along the [Liri](#) valley, were rushed to the [Lake Trasimene](#) area and why 6 Brigade assisted with the fall of [Arezzo](#). It is also the reason why the Division was again catapulted into the fighting in front of [Florence](#).

The axis of advance for [13 Corps](#) was up the valley of the [Arno](#). The Kiwis were to relieve [2 Morocco Division](#), destined for [France](#), as early as possible after dawn on 22 July, when the thrust line would be northwards from [Castellina](#) in Chianti, cutting across Route 2 at [San Casciano](#) thence to the [Arno](#) at [Signa](#), about seven miles west of [Florence](#). The New Zealand sector was not wide, about three miles, but it included a network of tracks and minor roads which the enemy, although still falling back steadily, found time to demolish, mine or booby-trap. With the thoroughness expected of him he blew up crossroads and blew down buildings, particularly when they were in narrow village streets, and he surpassed himself with trip-wired mines.

But that is to anticipate. Meanwhile 5 Brigade, with 7 Field Company as part of the brigade group, was to open the New Zealand offensive while the balance of the Division remained on three hours' notice. As it transpired, the whole Division moved in fourteen convoys between 21 and 23 July.

The campaign opened inauspiciously for the Engineers, for while the convoys were travelling that 60 dusty miles through the Chianti country, the CRE was involved in a traffic accident and evacuated to hospital. Major Pemberton (promoted temporary lieutenant-colonel), who had recently returned from New Zealand, assumed command.

The deprivation, temporarily or permanently, of a high-ranking officer's presence, does not as a rule seriously upset the morale of the rank and file, and the change in command was noted with equanimity; but there was satisfaction when the news seeped through that sundry persons in [Germany](#) had tried to remove [Hitler](#) suddenly with explosives. The venture was, unhappily, a failure, and resulted in the demise of the originators of the enterprise, but the sappers felt that they had passed on in a good cause. No doubt the expressions of condolence, had the victims heard of them, would have been a comfort as they faced the firing squads.

Seventh Field Company made camp on rising ground overlooking an expanse of gently rolling wooded country near [Castellina](#) in Chianti, a pleasant little town in the [Tuscan](#) hills, albeit somewhat the worse for shellfire.

Fifth Field Park Company arrived the next day, after, as the war diary puts it, 'an appallingly dusty trip on roads choked with tpt. Bedded down for night among trees on roadside.'

The other sapper units were located on arrival between [Castellina](#) and [Siena](#), where the usual water points and road jobs were waiting.

The Division was now in the Renaissance country, for in the adjacent cities of [Perugia](#), [Assisi](#) and [Florence](#), mankind, during the 14th and 15th centuries, emerged it is claimed from the darkness of the Middle Ages. With two world wars in one lifetime, it could be maintained that we have not emerged very far.

The organisation of a New Zealand Field Company when under brigade command, and forming part of a force advancing along a road in hilly country where the enemy is using demolitions and mines to hinder the movement, is given in the following extract:

The vanguard will normally consist of—

One Coy of Infantry—covering troops.

One Pl of Engineers—mine clearance and road repairs.

One Tp of tanks—supporting troops.

The infantry company commander will be in command of the vanguard and the speed of the advance will be determined by the progress of the sappers, i.e. Infantry should not proceed too far in front of sappers and must be prepared to supply flank protection where necessary.

Engineer organisation—

If the advance is as usual along one road there will be one platoon forward, one in support and one in reserve. Other situations will be dealt with as they arise.

Bulldozers would be allocated by the CRE according to circumstances and the Mechanical Equipment officer would be under command of the Field Company. The Engineer platoon commander would indicate the work required and the Mechanical Equipment officers would be responsible for carrying it out. In general the forward platoon would clear roads, bypass or repair demolitions in the quickest possible time to enable tracked vehicles to get forward.

The support platoon would check verges and side tracks and improve road repairs for the passage of wheeled vehicles, while the Company reserve would provide relief for the forward platoons and carry out any minor tasks such as manning water points in the brigade area.

Major Lindell received the 5 Brigade operation order on the night of 22 July. The brigade would take over from the French and continue the advance, always providing the enemy did not stick his toes in and require a set-piece attack to shift him. The brigade, moreover, was going to operate with two battalions up working along parallel roads, which meant two platoons of sappers forward all the time and double duty for the company reserve.

No. 3 Platoon's report of its activities with the [Maori Battalion](#) is typical of sapper work during the period when the infantry were feeling along the axes of advance towards [Florence](#):

No. 3 Pln. — Task — Supporting 28 Bn				
Location	Job	Time Started	Time Completed	Remarks
731422	By-passing blown Bridge. 30' span approx.	1930 hrs 22 July 1944	2030 hrs 22 July 1944	Found abutments interfered with, prepared charges placed with pull ignition attached. Passed information back.
730430	By-passing demolished houses and craters.	2200 hrs 22 July 1944	2330 hrs 22 July 1944	Very dark. Dozer driver had much difficulty in seeing his blade.
728435	Did Recce up to this point and found road clear.	0100 hrs 23 July 1944	0200 hrs 23 July 1944	Bn. stopped at this stage.

726446	Dozed demolished house and trees off road.	0530 hrs 23 July 1944	0630 hrs 23 July 1944	Bn had moved forward at 0500 hrs.
720445	Removed mines (9) from prepared Demolition which had not been fired.	0730 hrs 23 July 1944	0800 hrs 23 July 1944	These mines placed in Sewer coupled up with F.I.D. but not fired. Suspect he did this in village of <a href="#">Lignano</a> .
720445	Dozed demolished building off road.	0830 hrs 23 July 1944	0900 hrs 23 July 1944	
713460	Dozed in Craters at forked road. Had to retire as spot was being heavily shelled.	1200 hrs 23 July 1944	2300 hrs 23 July 1944	Finished this job under cover of darkness.
716466	Removed trees and 16 Mines from road.	2330 hrs 22 July 1944	2400 hrs 23 July 1944	These mines were not fused. (Teller)
729453	Cleared 6 R Mines and Dozed in Crater.	1700 hrs 23 July 1944	1800 hrs 23 July 1944	Did Recce at this road for possible supply route. O.K.
715465- 712482	Did Recce of this road. All clear.		0100 hrs 24 July 1944	Bn. stopped at this stage.
712482	Cleared Schu & Teller Mines and made Detour around Crater.	0700 hrs 24 July 1944	0830 hrs 24 July 1944	Schu mines placed in loose Rubble so did not risk clearing same at this stage. Job which could be done when time permits.
712486	Cleared 6 Teller & 8 Schu.	1000 hrs 24 July 1944	1100 hrs 24 July 1944	Took time as being fired on by L.M.G.
712846	Removed 3 Fallen trees off Road.	1300 hrs 24 July 1944	1330 hrs 24 July 1944	
	Relieved by No. 2 Pln.			T. C. Hanger, Lieut 1200 hrs 25

at 1430 hrs. 24 July  
1944

July 1944

By the afternoon of the 24th, when, as indicated on Lieutenant Hanger's report, **No. 3 Platoon** was relieved, the road through **Sambuca** to its junction with Route 2 had been occupied and a ford opened over the Pesa River.

The fine warm days had so lowered the streams that bridging was unnecessary and drum culverts sufficed to pass the tanks over watercourses. It was soon evident that the German engineers also recognised that bridge demolition was not as important as usual and had concentrated on road cratering, anti-tank and anti-personnel mines. They had also thought out a new anti-personnel mine, the Reigel or 'R' mine, a very nasty piece of work—a metal box about 30 in. by 4 in., filled with explosive and tricky to lay or disarm. The enemy sappers did not seem to like them much either for many were found with the safety pin still in place. They were generally blown in situ.

The locations of the other sapper units were:

Sixth and 8th Field Companies were at **San Donato** doing road maintenance, culverting and bridging.

Fifth Field Park Company remained in position but sent **Bridging Platoon** up to **Tavarnelle**, followed by Stores Platoon, which took a wrong turning and was lucky to escape casualties for it got up within mortar range of the enemy before being turned back by two of our Sherman tanks, which were themselves being harried out of the village just ahead. Stores Platoon was only too happy to remove itself with all possible speed, but was held up for many anxious minutes by having to change a splinter-pierced tyre.

The 25th was another day of cautious prodding, with the enemy offering relatively light opposition. At last light 21 Battalion held a line from the Fantreggi crossroads along a road leading to a blown bridge over the **Pesa**; 28 (Maori) Battalion was halted at the **San Pancrazio** crossroads by a mined demolition covered by anti-tank guns. Nos. 1 and 2 Platoons of 7 Field Company joined forces here and, with the help of the infantry advanced guard and several Staghounds, got the tanks around the obstacle and as far as the **Lucignano** fork where 1 Platoon, relieved by

No. 3, went back into support.

At this point the [Pesa](#) changed direction to the north-west and narrowed the New Zealand front to such a degree that 21 Battalion was instructed to cover the whole brigade front, while the [Maori Battalion](#) had a spell and watched the western boundary until [8 Indian Division](#) caught up. On account of renewed enemy activity, 5 Brigade was ordered to stand firm on its present line for the time being.



**the advance to florence**

During the day the sappers in the rear areas, including [No. 1 Platoon](#), 7 Field Company, caught a glimpse of a distinguished visitor. According to the 5 Field Park Company war diary, 'HM the King, in a cloud of dust and a Humber car whizzed by today and was duly cheered by representatives of the Unit assembled on the road at [Castellina](#).'

The night 26 - 27 July was extremely busy. Fifth Brigade infantry occupied a road from [La Ripa](#) to [San Quirico](#), where a well-mined cratered junction was an efficient road block. [No. 3 Platoon](#), with the usual dozer assistance, had a detour past the demolition ready for a 6 Brigade unit, when it arrived, to relieve the 5 Brigade infantry whose mission in that locality was ended. Two sections of [No. 1 Platoon](#), 8 Field Company, began to clear the road from the bypass to [La Ripa](#), while 3 Platoon, 7 Field Company, joined a 'recce' party making for [Montagnana](#), about two miles west of [Cerbaia](#).

The road to [Montagnana](#) followed a ridge down to the flat ground bordering the [Pesa](#), and, with the coming of the first light, was in full view of the enemy on the far side of the river. They were, however, far too busy with 6 Brigade to pay much attention to the 'recce' party, a company of infantry followed by sappers and a dozer, followed in turn by a few tanks and anti-tank guns. There was only one blow, which the dozer filled in twenty minutes, and after a cautious investigation by the infantry the deserted village was entered in time for breakfast.

Before recounting 6 Brigade sapper operations, it is necessary to return to the point where 7 Field Company had opened a ford across the Pesa River. Later some infantry had used the ford and attacked [Fabbrica](#), which they found to be too strongly held.

On 24 July the sector was taken over by [Arm cav](#), a composite force drawn from 4 Armoured Brigade and Divisional Cavalry. [No. 2 Platoon](#), 6 Field Company, was a part of [Arm cav](#) and its first job was to improve the crossing over the [Pesa](#) originally opened by 2 Platoon of 7 Field Company, for [Arm cav](#)'s mission was to establish contact with the flanking South Africans and to follow the enemy withdrawal along Route 2.

This highway crossed the [Pesa](#) but followed its eastern bank for some three miles before it turned north-east to [San Casciano](#), an important road-junction town.

[Arm cav](#) began its operations before first light on the 25th. The day for 2 Platoon, 6 Field Company, may be imagined from the understated lines in the Company war diary:

'Lt Hunter and party continued up Route 2 at 0500 hrs. Established two deviations before Fabbrica. Deviated demolition before Casciano. Got tanks through then pulled out on account of heavy fire.'

The next day followed much the same pattern; on the 27th patrols entered the hilltop village of [San Casciano](#) to find that a stubborn enemy had departed, leaving the place in a more than usual mess. [Cerbaia](#) was only three miles away, but owing to damage in [San Casciano](#) and the craters along the connecting road it might as well have been thirty.

[Armca](#)v was now, in the continued absence of the South Africans, guarding the New Zealand right flank; 21 Battalion at [Montagnana](#) was doing a similar service on the left while waiting for the Indian division to come up.

Sixth Brigade, with 8 Field Company attached, moved up to the [San Pancrazio](#) area, halfway between [San Donato](#) and [Cerbaia](#), in readiness to relieve 5 Brigade after its occupation of [La Ripa](#). No. 1 Platoon, 8 Field Company, was to take over from 3 Platoon, 7 Field Company, at the [San Quirico](#) crossroads.

Back at Company Headquarters the camp site was shelled at intervals at a cost of four wounded, one fatally, plus sundry damaged trucks before the camp was moved a little.

No enemy were encountered on the western side of the [Pesa](#) but a support tank went through a small bridge near Casetta, necessitating the services of a dozer to make a track across the stream. This did not take long and in the interim infantry patrols reported that the blown bridge over the river had dammed it to such an extent that a tank crossing below it appeared possible. Sapper investigation disclosed that although there were crossing places the German engineers had not been idle, and all points of easy access had been well mined. It was not therefore until early afternoon that a track was dozed in an unmined area and the tanks got across to the support of the infantry, who had found [Cerbaia](#) deserted.

The occupation of [San Casciano](#) and the forcing of the bridge-head over the [Pesa](#) were the opening moves of the final stage of the New Zealand advance on [Florence](#), the 'City of Flowers'.

On the left flank the Indians had come up level with 5 Brigade, but the South Africans were still making slow progress and the Division continued to operate with a tender right flank.

The final enemy defences south of [Florence](#) lay along a line of commanding hills that stretched from the South African front across Route 2 to the high ground of the [Pian dei Cerri](#) facing 2 NZ Division. [San Michele](#) and [La Romola](#), two villages included in the enemy defensive scheme, were situated about a mile south of the crest of the [Pian dei Cerri](#), and roughly a mile and a half apart. They were names that will not be

quickly forgotten in New Zealand.

Fourth Armoured Brigade had absorbed [Arm cav](#) and was given the amended task of attacking the eastern portion of the New Zealand sector, which included [La Romola](#), while 6 Brigade pushed past [San Michele](#) to the top of the [Pian dei Cerri](#). This was later amended to waiting on an intermediate brigade line, Points 208 and 261, until 4 Armoured Brigade had secured its objective.

When Arm cav had been disbanded on 27 July, 6 Field Company settled in alongside Route 2 near [Tavarnelle](#), leaving [No. 2 Platoon](#) with the armour. Six armoured-car crews were also detached to work with the Divisional Cavalry, the whole under the command of Captain Andrew.

The command of Andrew Detachment was: OC: Captain Andrew.

[No. 2 Platoon](#): Lieutenants Hunter and Skipage with complete platoon.

Lieutenant Ross and three crews from [No. 1 Platoon](#).

Lieutenant Valintine and three crews from [No. 3 Platoon](#).

It is not possible to follow the armoured-car crews in any detail, but these extracts from the diary of a sapper involved suggest that there were safer occupations:

'Early in the morning went to aid of a Staghound which had struck a mine. While clearing area Noel [Hood](#)<sup>7</sup> lost his foot on a Schu mine... We dived into the cellar with the other four and some Ities. One came through the cellar wall and landed six inches from Max and me but luckily didn't explode. I think we would have invested in Tatts if it had been possible.... After lunch called out to go to aid of Staghound in midst of minefield beyond [Gepetto](#). On way between Fornicuzzo and [Gepetto](#) our car struck a mine (or two rather) and was wrecked. Max [Evans](#)<sup>8</sup> wounded and Eric not too good.... We had to wait till 8.30 hrs before a rescue car could get to us on account of being under observation. Rather depressing waiting five hours with our infantry behind us, shells and mortars cutting us off and the [RAF](#) bombing and straffing half a mile away. Very thankful to get back to our slitties that night and find a relief party waiting for us.'

Because of the uncertain situation on the South African front, 4 Armoured Brigade objectives were amended to a line south of [La Romola](#).

About midnight two groups of 22 (Motorised) Battalion infantry and tanks, with the armoured-car crews spread among them and the sappers following the infantry, moved up two roads, the right-hand force to [Spedaletto](#), the left towards [Pisignano](#). For the sappers it was just another night of getting tanks around or across demolitions. By dawn on 28 July the crest of the rising ground south of [La Romola](#) was firmly held and [No. 2 Platoon](#) went back for a rest. The armoured cars stayed on and after first light found how mistaken was the supposition that the enemy had left during the night—one car was hit and there were four casualties, one fatal.

On 6 Brigade front the right flanking unit was followed by Lieutenant Brown and his sappers leading the tanks. The route was via [Cerbaia](#), then across the valley and on to the ridge that carries a road from [Castellare](#) to Cigoli between [La Romola](#) and [San Michele](#). The infantry had found a soft spot in the defences and were soon out of sight and hearing of the sappers sweeping for mines in front of the tanks. It was a confused night, with no clear contact between front and rear. A blown crossroad where the track from [Cerbaia](#) met the [Castellare](#) road kept the sappers busy for some time in getting the tanks over. While waiting for further orders a section of infantry who had been covering the working engineers announced that there were enemy in the immediate vicinity. They had two wounded Germans to prove it, so, isolated and without instructions, the sappers decided to hunt enemy. At this point some men from 24 Battalion appeared with the information that they had collected a few Jerries from a house nearby and that there were no more about; and with no infantry, no tanks, and no orders Brown decided to return to the company lines.

Lance-Corporal [Nicol](#)<sup>9</sup> with his section had swept the road as far as the tanks wished to advance, then, leaving his men under cover, he went forward to report to the infantry commander before returning to the main party. While he was there a counter-attack appeared probable, shells were coming in from all sides and all the tanks except one were out of action. Nicol collected his men and brought them to a house where the men of C Company, 24 Battalion, had gathered. He had acquired a Bren gun by this time and took his position by one of the windows, where he exchanged shots with the advancing enemy.

The Company was forced to fall back some distance to another house occupied by A Company, 24 Battalion. Nicol brought his men out safely and was later awarded an MM for his determination and example.

Lieutenant Menzies and his detachment had an unenviable time for the leading company took the wrong turning and, instead of passing through [Castellare](#), found itself in [Cerbaia](#). Thus it was close to daylight before the infantry were near their objective and the project was abandoned for the time being.

The New Zealand advance paused in the face of heavy opposition. On 4 Armoured Brigade's front the flank was too open and the defence too solid for further penetration. The fiercely combative mood of the enemy invited a reappraisal of the Divisional situation. The result of conference and enemy pressure was the taking over on the night 28-29 July by 23 Battalion of 22 Battalion's right-hand sector, with under command a platoon of machine guns, a troop of anti-tank guns and 1 Platoon, 7 Field Company. Some uneasiness about tank noises to the right rear of the position was allayed by the assurance that they were coming from the South Africans, who were making way slowly against a stubborn defence.

The main operation that night for 6 Brigade was the attack on [San Michele](#). The taking, or rather the defence after the taking of [San Michele](#) was a gallant affair, but the sappers were not involved. The road up to the village was intact and there were no mines. The sappers stood by all day and, before withdrawing after dark, helped with the consolidation by practising the now almost forgotten art of laying a protective minefield. They were all back before daylight at a cost of only one wounded.

A major re-deployment of 2 NZ Division, made possible by the appearance of [8 Indian Division](#), resulted in the shift of the rest of 5 Brigade over to the eastern wing, which offered the shortest route to [Florence](#) and an opportunity to help the South Africans. Fifth Brigade would advance two battalions that night to cover the right flank while 4 Brigade attacked [La Romola](#).

Sapper dispositions and occupations on 30 July, that is after the Divisional deployment already mentioned which threw the infantry weight on to the right flank, were:

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<sup>1</sup> `Water points.

<sup>2</sup> Lt J. H. Flood; Brisbane; born Queensland, 1 Sep 1917; clerk; wounded 4 Aug 1944.

<sup>3</sup> Lt E. T. Belhamine, BEM; born NZ 27 Dec 1913; foreman mechanic; killed in action 25 Jul 1944.

<sup>4</sup> Actually it was a side road.

<sup>5</sup> 2 Lt W. M. Sharp; born NZ 9 Oct 1912; clerk of works.

<sup>6</sup> Spr S. H. Allom; Christchurch; born NZ 18 Jul 1918; taxi-driver.

<sup>7</sup> Cpl N. W. Hood; Te Karaka; born Aust., 14 Nov 1918; shepherd; wounded 27 Jul 1944.

<sup>8</sup> Sgt T. M. Evans; Upper Hutt; born Oamaru, 20 Jun 1919; boilermaker; wounded 27 Jul 1944.

<sup>9</sup> Cpl R. W. Nicol, MM; born Scotland, 10 May 1901; watersider; wounded 25 Sep 1944; died Wellington, 14 Jul 1948.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 6 FIELD COMPANY

### *6 Field Company*

Company Headquarters still at [Tavarnelle](#) and the platoons, less Andrew Detachment, working on road maintenance. The Andrew Detachment, with headquarters at [Bargino](#), had opened roads around [San Casciano](#), made a bypass around that much mined and often shelled village and cleared the road through to [Cerbaia](#).

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 7 FIELD COMPANY

### *7 Field Company*

Company Headquarters had moved the previous day to a spot near the culvert where Route 2 crossed the [Pesa](#). The sappers had seen the battalions and brigade 'B' Echelon safely into their new locations: [No. 3 Platoon](#) worked on the road to [Cerbaia](#), No. 1 was with 23 Battalion and No. 2 with the Maoris bivouacked near [San Casciano](#), each platoon with a dozer under command.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 8 FIELD COMPANY

### *8 Field Company*

Company Headquarters remained in position near [Tavarnelle](#) area, where, after the return of the sappers from [San Michele](#), the whole company was concentrated.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## 5 FIELD PARK COMPANY

### *5 Field Park Company*

Company Headquarters remained at [Tavarnelle](#) with the platoons spread along Route 2. [Bridging Platoon](#) was standing by at a moment's notice, Mechanical Equipment was fully extended, with drivers being changed daily, while Workshops and Stores functioned as usual.

Fifth Brigade's plan was to advance two battalions to occupy high ground on their immediate front, whereupon 4 Armoured Brigade would send 22 Battalion into [La Romola](#). The role of the engineers was, as usual, to ensure that support arms reached the forward infantry at the earliest possible moment. On this occasion it was more important than usual for huge German Tiger tanks were reported to be in the area. Tigers were more than a match for our Shermans, whose armour-piercing shells were said to bounce off them like the Boys anti-tank rifle bullets did against the German tanks in [Greece](#).

There was a big demolition at [Spedaletto](#) village, on the junction of Route 2 and a side road to [La Romola](#), which the sappers were asked to look at before the attack went in that night (29-30 July), but the fire was too heavy for dozers to work there in daylight.

Twenty-third Battalion's starting point was at the demolition. [No. 1 Platoon](#) sappers and a dozer began work on it at dusk and were still working at ten o'clock, when the barrage opened and the infantry advanced. The job was completed shortly afterwards and the armour moved through, and that was all the sappers were asked to do.

The Maori attack was along the [San Casciano- Faltignano](#) road for a distance of three-quarters of a mile, but the tanks were soon stopped by a stream with high banks. It would have taken too long to get them across and they were re-routed through 23 Battalion's area. [No. 2 Platoon](#) worked on the obstacle and the Maoris waited in [Faltignano](#) until the armour arrived. The sappers were not further involved

and by the end of the day Maori advanced elements were spread along their objective and in touch with 23 Battalion north of Sant' Andrea.

Fourth Armoured Brigade's attack went in the same night. Owing to the work done previously the tanks were able to pass through [Cerbaia](#) and thence to [La Romola](#). There were two demolitions to be filled for the passage of wheeled support-arms transport, and there were still snipers in the higher end of [La Romola](#) who spared time to make the sapper platoon's work dangerous, but there were no casualties.

Second New Zealand Division's Operation Order No. 45, issued on 1 August, ordered a three-brigade attack on a three-battalion front against the line Poggio delle Monache, La Pog-giona, Poggio Valicaia.

The 'Poggios' were the three eastern crests of the [Pian dei Cerri](#), high country screening [Florence](#) from the eyes of the approaching New Zealanders. The code-word for the operation was plonk and the final brigade objectives were appropriately enough coded gin, zibib and hock.

It will make for clarity to reverse the military style hitherto used in this volume and work from 6 Brigade, left, to 5 Brigade, right.

Twenty-fifth Battalion was to make the initial attack and 8 Field Company was instructed to provide a working section to operate with that unit. Major Clarke arranged that Lieutenant [Warrington](#)<sup>10</sup> and half the section would move with the leading company, and that Lieutenant Budge with the other half would stand by at Battalion Headquarters. The axis of advance was the [Castellare](#)-Cigoli road thrusting up between [San Michele](#) and [La Romola](#), and the objectives a group of hilltops about three miles north of [Castellare](#).

The whole affair went off with unexpected ease and the sappers' only job was to lift some mines placed across the road near Point 281. It was different with the other brigades, which met determined resistance, and 6 Brigade was instructed to hold fast until further notice. It was in fact practically all that 6 Brigade was asked to do, and 8 Field Company spent the next few days in minesweeping and general road maintenance.

Twenty-second Battalion attacked from [La Romola](#) along an axis road leading to [La Poggiona](#) ridge. The battalion made a two-pronged advance, the right-hand prong leaving the road to attack its objective hill while the left-hand group carried on to [La Poggiona](#) on the ridge top. Lieutenant Valintine, commanding the right-hand party, helped the tanks along the road that led to the large house on the hill which was the company objective.

Sergeant Farnham with the left-hand prong got the tanks past a demolition. The infantry took the ridge top, was counter-attacked and driven off it, attacked again, consolidated and waited for the counter-attack. Instead the dawn came, and with it a wonderful view of [Florence](#) and the intervening low country. There was no local enemy fire and patrols could find nothing but empty weapon pits and abandoned gear.

The plan of 5 Brigade on the right flank was to capture at first light on 1 August the high country from Poggio delle Monache to [La Poggiona](#). The Maori Battalion, already probing along the road, was to take these objectives, then hand over to 21 Battalion. The axis road passed between the two objectives and, via [Giogoli](#), crossed the River Greve and so led direct to [Florence](#).

[No. 2 Platoon](#), 7 Field Company, was to work with the Maoris while No. 3 reported to 21 Battalion. In the event the Maoris were repulsed by Tiger tanks and returned to their start line, and the sappers were not called upon. Twenty-first Battalion was thrown in that night (1 - 2 August) but in the face of determined opposition its men were also forced to return to their starting point at [Il Pino](#). Again the sappers had nothing to do beyond tidying up the road and filling one not very large demolition.

The position was now that 6 and 4 Brigades were on their final objectives while 5 Brigade had been twice repulsed. A new programme was arranged for the coming night (2 - 3 August) while everything that could be brought to bear—bombers, fighters and artillery—saturated the area almost without pause. The battalion made no mistake the second time, and while it was consolidating on the twin points of [Poggio Issi](#) and Poggio delle Monache, [No. 3 Platoon](#) tidied up the road from the start line at [Il Pino](#).

The enemy were clearly thinning out all along the front and 28 (Maori) Battalion was ordered to exploit through 21 Battalion's position. They were away soon after first light, accompanied by two troops of tanks.

Twenty-third Battalion was also let loose along a side road and the South Africans were now almost neck and neck on Route 2.

Part of the [Maori Battalion](#) was directed on [Giogoli](#), at the bottom of the tree-lined road that led over the last hill at the edge of the narrow Florentine plain. The enemy had a number of guns still trained on the locality and the streets were full of rubble and the cellars full of civilians. [Scandicci](#), on the Greve River, an outer suburb of [Florence](#), was only three miles away. Fifth Brigade halted where it stood at dusk on 3 August, under orders to 'push on quietly' in the morning. The instructions about pushing on quietly were interpreted liberally and it was more or less a case of 'Tally Ho!' Infantry mounted on tanks surveyed the blown bridge over the Greve at [Scandicci](#), left their mounts to wait for engineers and dozers and pushed on through cheering crowds of civilians. Lieutenant Veart <sup>11</sup> and a dozer got the tanks over the Greve at a makeshift ford and they caught up with their late passengers. We must leave the New Zealand and South African units at this point, for racing for the honour of being first into a foreign city is not a sapper duty.

Seventh Field Company was concentrated in [Scandicci](#) by the evening of 4 August and put in a pair of drum culverts for the use of wheeled traffic. The forward battalions had been persuaded by this time that delivering [Florence](#) and the Florentines from a foreign yoke was not now a New Zealand responsibility. On the contrary 2 NZ Division, commencing on 6 August, would sidestep some 15 miles to the west.

Eighth Field Company spent a frustrating day with detachments doing odd tasks and the rest standing by for bridging jobs on the [Arno River](#). The mission was finally cancelled and the Company diarist disgustedly wrote:

'2120 Hrs. OC returned to this Hq and that finished about the worst day we have had for a long time. Packed and half packed all day. Orders and counter orders and then heavy rain. Apparently the NZ Div is not going to cross the [Arno River](#) south of [Florence](#) and is moving to another sector.'

Fifth Field Park Company, less [Bridging Platoon](#) which moved to [Scandicci](#), concentrated near [San Casciano](#) where, the Company diarist wrote, 'they occupied portion of the grounds of an Italian of baronial rank, who invited our not unwilling men to make free of his wonderful acres of fruit. So many peaches and grapes were stowed away in the ensuing days that it was almost unnecessary for our cooks to put on any meals.'

All detachments had rejoined 6 Field Company by 5 August and it moved to [Geppetto](#), where it stayed until the 15th sweeping verges, filling craters and doing general road maintenance.

An interesting comment on the acquisitive reputation acquired by the Kiwi soldier is supplied in the private diary of Sapper Thornton, who was something of an art connoisseur:

'Doug and I walked to Montegufoni Castle about three miles from platoon area. Tried to get permission to see over it but zealous Fine Arts officials refused on the grounds that we were New Zealanders and would be bound to attempt plunder and loot. The castle, owned by the Sitwells, was a refuge for the Pitti Palace collections of paintings. Doug and I extremely chagrined and returned to the platoon in bad tempers frayed even more by the scorching heat and dust laden air. Tom [Haisman](#)<sup>12</sup> cooked a goose for supper. Swore an Itie family gave it to him!'

The Division's new task was the relief, commencing on 6 August, of [8 Indian Division](#) in the sector facing [Empoli](#), 15 miles to the west of [Florence](#). It was in fact rather more than the relief of the Indians, for it was hoped to screen from enemy eyes the deployment of [2 US Corps](#) preparatory to a co-ordinated attack by both Fifth and Eighth Armies, whose sights were now fixed on the [Gothic Line](#) designed to block the entry of Allied forces into North Italy. The task set the infantry was, with patrols, to edge the light enemy forces across the [Arno](#) so that American engineers could make their bridge 'recces' for the crossing. As for [Empoli](#), if the enemy did not vacate voluntarily they were to be pushed out by 5 Brigade.

The first fortnight of August was, for 7 and 8 Field Companies, one long reconnaissance. The whole network of roads in the area was checked for mines, culverts searched, and reports made on bridges. Sappers prowled along the

riverbank with the infantry patrols collecting information for the incoming Americans.

There was only one action of any magnitude; [Empoli](#) was the last enemy strongpoint and 5 Brigade was ordered to clean it up. There was the usual checking of routes for the tanks, clearing fallen trees and filling of demolitions by 7 Field Company during the operation, which began at midnight on 11 August with the occupation of surrounding villages and ended three nights later with the clearance of [Empoli](#) itself.

The relief of the Division by 85 US Division began on the night 14–15 August and was completed the following night as far as the engineer units were concerned. The companies moved back to the [Castellina](#) area near [Siena](#) for a spell.

In due course two more Military Medals were awarded to sappers: to Sergeant Day<sup>13</sup> for devotion to duty and disregard for his own safety, and to Sapper [Funnell](#)<sup>14</sup> for minesweeping under aimed fire.

Engineer casualties for the period May-August were relatively heavy—15 all ranks killed and 51 wounded.

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<sup>10</sup> [Capt J. R. Warrington](#), m.i.d.; born [Hamilton](#), 7 Mar 1922; student; killed in action 10 Apr 1945.

<sup>11</sup> Lt Veart's MC citation mentions the quick passage of the tanks across the Greve as the finale to a number of meritorious actions through three campaigns.

<sup>12</sup> [Sgt T. F. Haisman](#); [Gisborne](#); born NZ 2 Nov 1908; carpenter and joiner.

<sup>13</sup> [Sgt W. F. Day](#), MM; born NZ 7 Feb 1919; plumber; died of wounds 11 Aug 1944.

<sup>14</sup> [Sgt L. W. R. Funnell](#), MM; [Palmerston North](#); born [Palmerston North](#), 28 Oct 1918; farmer.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

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INTENTION

# NEW ZEALAND ENGINEERS, MIDDLE EAST

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At [Castellina](#) the engineer companies ceased to be brigaded and reverted to the command of the CRE. It was a period of real relaxation: an hour's route march in the morning to remind the sappers that they were still in the Army, followed after lunch by a little cricket or a sleep in the Italian summer sun. Local leave was available to the many-towered hilltop city of [Siena](#), where the South Africans had opened a restaurant and had hospitably extended its facilities to the Kiwis. And, of course, there was always the chance of six days' leave in [Rome](#).

This idyllic existence was interrupted on 24 August by what 8 Field Company war diary describes as 'a very long hot dusty and dry experience for us.'

A sapper in 6 Field Company was a little more expansive:

'All the company were up bright and early for a hot and dusty march for several miles where we lined the road and waited nearly an hour while the sun beat down mercilessly. The occasion was the visit to the NZ troops of [Winston Churchill](#) but the Engineers gave him a fairly unenthusiastic welcome. Not so the Maoris, though.'

Generals and chess players have this in common: always, while ending one situation they are working out the moves for the next. Much thought therefore had been given to the position of the Fifth and Eighth Armies before the advance to the [Arno River](#) had brought them to the outer fringe of the [Gothic Line](#).

In general this line was situated just forward of the watershed of the Northern Apennines. But there was, along the east coast, a long narrow passage, reminiscent of the [Sangro](#) country, of rivers and ridges reaching almost to the sea and a narrow coastal plain.

Tentative plans for a thrust through the mountains on the inland flanks of both armies were discarded when three American and all four French Expeditionary Force divisions were withdrawn for a landing in southern [France](#). It was felt that the best chance of success under the altered circumstances lay in a secret shift of the weight of the Eighth Army to the east coast, to be followed by a pincer movement on

## Bologna.

There were, of course, to be sundry alarms and excursions designed to confuse and deceive while divisions and regiments moved across [Italy](#) to the Adriatic coast, where the Poles and Germans faced each other across the Metauro River. The way back was along two highways towards the recently captured port of [Ancona](#). The Polish divisions which had fought their way the 100-odd miles from [Pescara](#) to the Metauro were to mask the entry of the new build-up—eleven divisions with 1200 tanks and 1000 guns—almost half the force in [Italy](#). The New Zealand Division would be in Army reserve, ready to assume its traditional, but so far in [Italy](#), chimerical, role of fast-moving exploitation.

Meanwhile the sappers sat in the sun, drank wine, ate fruit and played cricket. A war diary entry dated 25 August by 8 Field Company reads: 'Played [6 Fd Coy](#) at cricket; two innings; we won, by 16 runs after a tense and exciting finish. We have now won all our matches in the Engineer games and the celebration in the evening was most fitting.'

There had also been some changes in the sapper command; Major Jones had left 5 Field Park Company and Major Hamilton 8 Field Company and their places had been filled by Majors Goodsir and Clarke respectively. It was soon common knowledge that the Kiwis would shortly be on the move again; paint brushes were obliterating truck markings, there were lectures on security, deficiencies were made up, equipment checked and there were conjectures about destinations. Finally all badges, titles and fern leaves were removed—in fact the only things that remained untouched were the unit signs which indicated the bivouac area. They, as usual, were left in situ as a deception measure and 5 Field Park was always kept busy supplying new signs after a move of this nature. The journey began on 25 August. Major Lindell remembers it well: 'These night moves into strange country were always a fascination, although rather tiring. A strange feeling moving through dark deserted villages which occasionally came to life when some Provost people emerged at a tricky corner. I remember on this night move in the early hours seeing a butcher shop open for business cutting up a beast with a queue of people waiting to be served—black market I suppose as there was very little meat in [Italy](#) then.'

The convoys took the southern route, staging, after 150 dusty miles, for a few

hours near the railway junction at [Foligno](#). The second leg, through the Colfiorito Pass and via Macerata, a ridge-top town with a long history but little else of interest, brought the troops to the [Iesi](#) area near the coast. The second day's 80 miles were more trying than the first day's journey for there were many wearying stops on the narrow road which, with the passing of innumerable vehicles, was inches deep in fine dust. The trucks and their passengers might have come through a North African dust-storm. By the afternoon of 29 August all the sappers had settled into the new area.

The Division remained around [Iesi](#) for a week; the single men of the 4th Reinforcements left for Egypt and furlough, after suitable if hurried send-offs; officers and sappers who had returned from furlough were marched in.

Engineer training took the form of dozing the shingle bed of the [Iesi](#) River and, with the spoil, making a dam so that there was sufficient of a lake for practising with pontoons. Everybody knew the offensive against the [Gothic Line](#) had begun, for all the security measures in the world could not prevent soldiers and civilians from noting the intense activity at the nearby airfield nor from seeing the constant two-way movement of bombers in the air lanes; and with only one main road from the supply port of [Ancona](#) to the Metauro the traffic and the dust never ceased.

Sunday, 3 September, the fifth anniversary of the war, was a day on which the springs that make a division tick over were wound up a little. Formations were warned that, with 3 Greek Mountain Brigade under command, 2 NZ Division would move a little closer to the battle, so that if the occasion for a breakthrough presented itself there would be no delay.

The new locality was between [Senigallia](#), where [1 NZ General Hospital](#) took over what had previously been a children's health resort and more recently a German military hospital, and [Fano](#) on the north side of the Metauro River. Ten of the thirty-miles-deep [Gothic Line](#) had been secured at the Adriatic end with the capture of [Pesaro](#) by the Poles; the Canadians had swung around that seaboard town with their sights set on [Rimini](#), the end of the mountain corridor, the last of the [Gothic Line](#) defences and the gateway to the wide Po valley. For the moment they had stopped for a breather at [Cattolica](#) just short of the Conca River, another ten miles or so nearer [Rimini](#).

It was only a short move of between 30 and 40 miles according to the destination of the companies. Seventh and 8th Field Companies were located near [Fano](#), 6 Field Company back near the hospital and 5 Field Park at [Mondolfo](#).

The check, for in plain language that is what it was, to the drive for [Rimini](#) was the continued enemy occupation of the highest of three spurs pointing towards the objective town and jutting from a ridge forming the north side of the Conca River watershed. This spur, the [Coriano](#) ridge, extends almost to the coast and is part of the watershed of the Marano River. Higher country farther inland afforded the enemy good observation and so dominated the area that extensive operations were necessary before further penetration along the coast was possible.

On 7 September General Alexander announced the plans for carrying on the offensive. The high ground west of [Coriano](#) was to be captured, the spur itself occupied and a bridgehead secured over the Marano River. The Eighth Army would then be in a position to tackle the last obstacle—the [Rimini](#) line—at that moment being feverishly strengthened by every means possible.

Sufficient of the general picture has been sketched to appreciate the significance of the New Zealand Division's move forward to the [Fano](#) area.

There were signs that autumn was just around the corner; the temperature dropped a little and there were showers heavy enough to make the ground sticky and for drivers to remember the advantages of a metalled road. The GOC warned his brigade commanders that it was possible—just barely possible—that they might have to fight for the break-through. The strength of the [Gothic Line](#) had not exactly been underestimated nor the fighting capacity of [1 Canadian Corps](#) overestimated, but the timetable was a little behind schedule. The contingency was probably too remote to be taken seriously, but what was not remote was the fact that the area where the Division was likely to be operating was highly malarious and that September was the height of the season. Would they take all the usual precautions?

The Greek Brigade was sent forward for a little real battle training under the aegis of 5 Canadian Armoured Division. Again there was no real significance in the transfer—merely a toughening-up exercise for the Greek soldiery who had not yet been under fire. But the gravity of the situation was apparent after the

announcement on 8 September that rugby practice matches for the purpose of selecting a team to represent [2 New Zealand Division](#) would, for operational reasons, be indefinitely postponed.

Brigadier Parkinson had already been informed that if the Division was thrown into the battle 6 Brigade would lead. Water in the shape of lakes, rivers, estuaries, or even the open sea might be encountered; while, therefore, the balance of the sapper strength rested, 8 Field Company formed an access road to the lagoon at the mouth of the Metauro and an indent was placed with 'Q' Company, RASC, for storm boats, assault boats, motor tugs, Bailey raft and pontoon equipment.

The Metauro flooded and ruined the lagoon as a training area before the indent arrived, whereupon the company worked on the open coast under the instruction of a detachment from 'Q' Company until 11 September, when the New Zealand Division came under the command of [1 Canadian Corps](#). Orders were received by 8 Field Company to move on the morrow and to hand over the equipment to 7 Field Company; 6 Brigade Group was moving to an advanced concentration area in readiness for the resumption of the offensive that same day.

A cautious passage through belts of wire and gapped minefields, over lately cratered crossroads and past concrete gun emplacements brought the company to [Gradara](#), a small village with a large, ancient and picturesque castle. They were just beyond enemy field-gun range.

[No. 2 Platoon](#) (Lieutenant Smith) reported to 24 Battalion and [No. 3 Platoon](#) (Lieutenant Farnell) went to 25 Battalion. [No. 1 Platoon](#) (Lieutenant Warrington) remained in reserve with Company Headquarters. The strength of 8 Field Company was increased the next morning by the attachment of 2 officers and 30 other ranks with two D8 and two D6 dozers from [Mechanical Equipment Platoon](#), plus 27 sappers and the Divisional Bailey set from [Bridging Platoon](#). The men and equipment were distributed thus:

To [No. 2 Platoon](#)—Lieutenant Gowan, one D8, one D6 and seven trucks of Bailey, 14 Mechanical Equipment and 13 Bridging sappers.

To [No. 3 Platoon](#)—Lieutenant D. F. Brown,<sup>1</sup> one D8, one D6, eight trucks of Bailey, 12 Mechanical Equipment and 16 Bridging sappers.

The [Coriano](#) ridge fell to the assaulting Canadians and the sappers waited the word to go. There was, however, the need for reliefs before the battle, the bloodiest in the Italian campaign to date, was resumed. The objectives now were the capture of the [San Fortunato](#) ridge, the occupation of [Rimini](#) and the forcing of a bridgehead on the Marecchia River. Sixth Brigade would then push along the coastal plain to [Ravenna](#)—a job similar to that envisaged for it in the opening stages of the [Sangro River](#) crossing, and with the same result.

Sixth Brigade and 8 Field Company were still waiting on the 15th. It had been appreciated that the Canadians might not be able to move the enemy from the [San Fortunato](#) ridge without the help of fresh troops. If the situation developed so, 5 Brigade was to establish the bridgehead and 6 Brigade would carry on.

Seventh Field Company had trained in watermanship, played football, held a race meeting and generally enjoyed itself until 5 Brigade Group, in readiness for the possible entry into the battle, moved forward during the 16th to a position near but in advance of 6 Brigade. The Company was joined there by Lieutenant Foster with thirteen sappers from Mechanical Equipment plus two D6 dozers.

Sixth Field Company, after a week of pontoon training and lectures to the armoured regiments on mines and the use of detectors, packed up and moved northwards to within three or four miles of [Cattolica](#), but inland. 'Our new area is a very attractive spot with hills all around us. Cooked breakfast for the whole section—gave them oyster fritters'.

The 17th was another day of standing by. Sixth Brigade had been warned to be ready to move at any time from the afternoon of the previous day. Actually the only move was made by the remainder of 5 Field Park, which shifted to a bivouac area on Route 16 some eight miles north of [Pesaro](#).

With the [Greek Brigade](#) working along the coast, assisted by elements of armour and 22 (Motor) Battalion, and British and Canadian divisions slowly and bloodily grinding their way forward, [1 Canadian Corps](#) was now ready to make a direct assault on the ridge of [San Fortunato](#) lying between the Ausa and [Marecchia](#) rivers. [San Fortunato](#), like the [Coriano](#) ridge, slopes north-east and covers [Rimini](#) and Route

16.

The battle for [Rimini](#) began on the morning of 18 September with a terrific programme by guns, including New Zealand field regiments, and bombers. While the assault, first to the Ausa River and then to [San Fortunato](#), was being made, [2 New Zealand Division](#) took its stance for the break-through.

Sixth Brigade Group got on to its mark on Route 17 between [Riccione](#) and the Marano River. It should be noted that the Italian conception of the importance of a river does not quite coincide with ours; the name [Marano](#) creek would be more to our way of thinking.

On the 18th 8 Field Company's strength was further increased by taking under command a Corps convoy of 37 vehicles loaded with bridge components and assault boats. Fifth Brigade Group made preparations but did not actually move closer to the fighting. The fortunes of the day changed so often that a chapter would be needed to detail the movement orders that were issued and cancelled.

Next morning (19th) the ridge was still far from won and 6 Brigade Group was told there would be no move that day. Eighth Field Company, from a hill handy to its lines, watched the ebb and flow of the fighting. The Company diarist wrote—under date of the 19th—'No movement today. Whole Coy are getting grandstand view of the battle. The Canadians got onto their objective just before dusk.'

Seventh Field Company was still standing by at [Gradara](#), 6 Field Company and 5 Field Park Company still near [Pesaro](#). Something of the battle could be seen from the beach near by, according to Sapper Thornton's private diary:

'From the beach we had a marvellous view of the three-fold attack on [Rimini](#), a few miles up the road. A British cruiser and two destroyers are lying offshore and pouring shells into the town. Spit bombers and Mitchells are going in to bomb continuously and the artillery keeps up a deadly rain of shells.'

The Canadians were consolidating on [San Fortunato](#) ridge on 20 September and the writing was on the wall for the Germans in [Rimini](#).

It was still not certain whether 5 Brigade would be needed to force the

bridgehead over the Marecchia River, but it was moved in readiness to an area between the Marano River and the Rimini airfield which the Greek Brigade had previously cleared. The final instructions were for 5 Brigade Group to pass through the Marecchia bridgehead as soon as possible after first light on the 21st. In anticipation for what lay ahead, 100 feet of double-single Bailey components and accessories were detached from 8 Field Company and joined 7 Field Company late that afternoon.

As soon as Rimini was occupied and the Marecchia River that flowed through the centre of the town rebridged, the broad and flat Po valley lay open to our armour. At least that was the pleasing conceit widely held in the upper brackets of command; how it worked out is the province of the rest of this chapter.

The 5 Brigade Group orders were now (21 September) to enlarge the Canadian bridgehead and advance to the Scolo Brancona, a minor waterway about two miles beyond the Rimini- Cesena railway. The Group would also, if possible, carry on to the more substantial Rio Fontanaccia, but otherwise 6 Brigade Group would take over from the Scolo Brancona. There was jocular argument as to whether the troops would stop for a breather in Venice or push straight on into Austria.

A new enemy, or rather an old enemy who had been forgotten, now entered the battle on the side of the Germans. Rain fell in torrents while 5 Brigade Group waited and the Greek Brigade, still assisted by tanks and 22 Battalion, occupied an evacuated Rimini from whose cellars 30,000 inhabitants slowly emerged; it continued to fall while Canadian brigades moved up to the Marecchia and forced a bridgehead; and the foul weather and ground conditions so delayed 4 British Division that it was well into the morning before it was on its objectives. Eighth Field Company's diary sketched the day's happenings:

'Cold and showery. D8 and operators sent from No. 3 Pl to repair dem near Rimini. Lost the rest of our Bailey bridging Pln—to 7 Fd Coy, who have a job on northern outskirts of Rimini. No move today; just as well as ground is wet and greasy and some trucks could not move. 6 Bde said we won't move before 0700 hrs on 22nd.'

While 7 and 8 Field Companies were trying to keep dry until it was necessary to

get wet, [No. 2 Platoon](#) of 6 Field Company was called forward to do a job for 4 Armoured Brigade, which felt it would like to be in the race for [Venice](#) and other points north. To make what follows clear it is necessary to explain that there are in reality two [Marecchia](#) rivers; the original river mouth had been converted into a small harbour and, to prevent silting, the river had been diverted by means of a canal. The old river mouth was now the Porto Canale and the new [Marecchia](#) was about a half mile to the north.

Major Lindell made a reconnaissance into [Rimini](#) as far as the Tiberius bridge over the Porto Canale and found that this stone arch bridge built by the Romans of an earlier day had not been blown—a few of the heavy paving stones forming the roadway had been removed, but apparently there had been no time to lay charges and it was captured intact.

The commander of 4 Brigade had obtained permission to thrust into the area north of [Rimini](#) via this bridge instead of adhering to the original plan, which had been to use the muddy and damaged Fortunato track to a bridge being repaired by the Canadians.

The tanks shot their way up to the new [Marecchia](#), which they found had concreted banks. The bridge there was blown and the engineers' job was to break down the concreted banks for the tanks to ford the knee-deep river.

It was the first time the sappers had had the advantage of driving up to a job without headlights and of still being reasonably sure of not getting ditched en route. A method of providing 'artificial moonlight', that is indirect illumination from anti-aircraft searchlights, had been perfected during the summer and was being used by [1 Canadian Corps](#). The essence of the idea was to converge the beams of several searchlights over the selected area and the downward glow provided the artificial moonlight. The advantages to drivers, and indeed to all arms, are obvious. But the enemy was rather disconcerted.

The infantry of 22 (Motor) Battalion leading the attack waded across at 7 p.m. and the first tanks were over by 2.30 a.m. The ford was then improved with three truckloads of Somerfield track obtained from 8 Field Company. The area around the ford, a deviation on Route 16 and the highway itself as far as the [Celle](#) crossroads

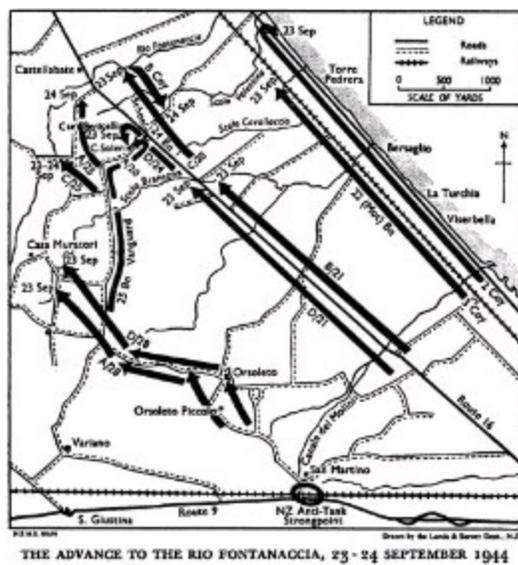
were searched for mines under desultory shellfire but there were no casualties. The searchers, however, ran into a scuffle between Canadians and Germans near [Celle](#):

'Our section swept across the river and the approaches. In the early hours we swept for mines up Route 16 to the fork, being covered by a Canadian infantry party. Quite an exciting time as Jerry heard or saw us and opened up with spandaus. However the Canadians silenced them.... We returned to platoon in [Rimini](#) about dawn and found them working on a low level Bailey bridge.'

The forward battalions of 5 Brigade Group also got away late in the afternoon of 21 September. They were using roads and crossings prepared by Canadian engineers, so the sapper platoons previously allotted to them improved the secondary roads into [Rimini](#) and, with 5 Brigade Headquarters, moved into the southern outskirts of the town on the 22nd.

At 8 a.m. that day 2 NZ Division took over operational responsibility from [1 Canadian Division](#), which with 3 Greek Mountain Brigade went into Corps reserve. The position was that, from Route 16 to the coast, 4 Armoured Brigade had a mile-deep bridgehead over the [Marecchia](#), 5 Brigade was on its start line and 6 Brigade was standing by for the break-through. Operation CAVALCADE it was called.

The first task was to secure a crossing over the [Rio Fontanaccia](#), a fair-sized creek running across the plain four miles forward of Route 9. The infantry were operating in a densely populated area of small fields, with line after line of grape vines growing along wires which had been fastened to pollards, behind which the enemy disappeared as the advance went on. Ditches which served the dual purpose of drainage in the winter and irrigation in the summer provided ready-made trenches for the astute enemy, with the consequence that by nightfall only about one-third of the proposed advance, to the line of the Canale dei [Molini](#), was possible.



### the advance to the rio fontanaccia, 23–24 september 1944

During the day 5 Field Park Company shifted to the northern outskirts of the Rimini airfield; 6 Field Company went into Rimini, where 1 and 3 Platoons put a 50 ft single-single Bailey over the Marecchia and 2 Platoon, less a couple of armoured cars detached to 22 Battalion, worked on road improvements.

Seventh Field Company, under 5 Brigade command, was not involved. Company Headquarters moved into Rimini and the platoons opened roads through the town up to Route 9.

Sixth Field Company advanced with 6 Brigade Group to the southern outskirts of Rimini under orders to be on wheels by 7 a.m. the next day (23 September), half the bridging column returned from 7 Field Company and additional Corps equipment and personnel were marched in. The equipment consisted of three mobile bridges, three armoured bulldozers and three armoured troop-carriers besides the usual personnel trucks.

The Army names of the new apparatus were not very descriptive: an Ark (mobile bridge) was a Sherman or Churchill tank less its turret and with steel channels fitted along each side of the hull to form a roadway. Hinged ramps attached to each end of the channels could be spread to extend the length of the roadway. The tank was driven into an obstacle and, in effect, became the centre pier of a bridge which could bear the weight of other tanks. They had their drawbacks but were invaluable under favourable conditions, for it was possible to place them end on end or even one on top of the other.

A Sherman dozer (armoured dozer) was, as its name implied, the answer to the need for a bulldozer that could be used under fire. It was in effect a tank with a dozer blade attached. It also had its limitations for the operator had a very restricted field of view and had to be guided in his work by wireless instructions.

The third new amenity was a method of getting sappers through areas swept with fire and on to the job. It was known as an 'AVRE', short for Armoured Vehicle Royal Engineers, and as well as the sappers, carried fascines for use in soft-bottomed canals.

The three were complementary; the Sherman dozer made the approaches to and from a crossing site, the AVRE brought up the fascines for soft ground and the men to do the necessary work, and the Ark provided the means of crossing. None of this equipment had yet been issued to the New Zealand Division.

Fifth Brigade attacked again that night (22–23 September), progressing as far as the [Scolo Brancona](#), about one and a half miles. Seventh Field Company was not engaged apart from routine mine checking.

While 5 Brigade was consolidating and patrolling beyond the [Scolo Brancona](#), 4 Armoured Brigade was slightly ahead on the coastal route to [Ravenna](#) and 6 Brigade was moving up preparatory to passing through 5 Brigade.

During 6 Brigade's move, 25 Battalion Group took the Maori access road as far as the [Scolo Brancona](#), but at that point the leading tank troop, followed by a sapper 'recce' party, made a wrong turning and cut across 21 Battalion right into the German defences on Route 16. The two leading tanks were brewed up and the third retired to the cover of a convenient house. The sapper 'recce' scout car was hit and two men killed, while the wireless car had to be abandoned. A regular mortar battle ensued between the enemy and 25 Battalion while the sappers took what cover they could. Corporal [Horsfall](#) <sup>2</sup> distinguished himself by bringing the wireless crew back to cover and then returning for the maps and codes that had been abandoned. Twice after last light he again returned to the car, and on the second occasion managed to start the engine and drive it out through enemy fixed-line small-arms fire. He was awarded an immediate MM.

The enemy still confronted 2 NZ Division with an unbroken line and lapped dangerously around the inland flank, so the crossing of the [Rio Fontanaccia](#) was postponed until nightfall. Meanwhile the sappers, with sweepers and dozers and often under artillery fire, tidied up behind the leading units. The infantry brigades changed over and 7 Field Company went back to [Rimini](#); it was still warm enough for swimming and the beach was handy.

The enemy was induced to pull his forward posts back behind the [Rio Fontanaccia](#) which, in spite of its imposing 'Rio', was actually an irrigation canal carrying, at that date, about a foot of water. The [Rio Fontanaccia](#) was, however, a satisfactory defence line, or at least the German generals considered it so and were reluctant to depart from it until obliged to do so.

The final arrangements were for 6 Brigade to force the canal line along the axis of Route 16 on the night 24–25 September to a depth of two and a half miles, with 4 Armoured Brigade conforming on the coastal sector.

The dozer with [No. 2 Platoon](#), 8 Field Company, got the tanks over the canal on the right of Route 16 and the sappers were not further called on. There were two sapper casualties, neither serious.

The armour required no assistance in crossing the [Rio Fontanaccia](#) on the western (left) side of Route 16 but called for a dozer to fill a drain that blocked the track it was following. The main job for [No. 3 Platoon](#) that night was to make a detour around two knocked-out tanks, which was done without loss. Sixth Brigade stood fast during the day (25th) and 4 Armoured Brigade, after the enemy had got rid of shells which he was probably unable to shift, moved up to complete the line along a lateral road north of the [Rio del Moro](#).

The main tank force stayed south of the [Rio del Moro](#), and that evening the 6 Field Company reconnaissance party with 19 Armoured Regiment had a look at a partly blown bridge in the sector but decided that it was not worth repair and called forward a dozer to help in establishing a ford close by. In point of fact 4 Armoured Brigade's proposed jaunt to [Venice](#) was postponed at this point and its front was covered by 6 Brigade.

There were no special sapper tasks for the night 25–26 September, when 6 Brigade reconnoitred towards the knee-deep 24-ft-wide Uso River about a mile ahead. The German rearguard had already withdrawn and the infantry had no trouble in advancing its line to the south bank of the river.

Sixth Brigade orders for the night 26th–27th were for a firm bridgehead to be established across the [Uso](#) in readiness for an advance at first light to the Fiumicino River, something under two miles and three irrigation ditches to the north. By this time the unit of length seemed to be no longer the mile but the number of watercourses between two objects. And the word 'break-through' was being dropped in favour of 'limited objective'.

The vital question of getting tanks and support arms across the [Uso](#) was dealt with by putting down an Ark at a suitable point on 25 Battalion's front. As soon as the material was at the site a company of infantry formed a protective screen and the artillery laid on harassing fire, both to cover the noise of the working dozer and to protect the infantry screen.

On 26 Battalion's front a suitable ford had been located, and after the banks had been dozed to get the tanks over, Somerfield track was laid for wheeled traffic. The company war diary mentions that there were no casualties but some lucky escapes. Sapper [Armstrong](#)<sup>3</sup> could fairly be included among the latter. He was the dozer driver who broke down the riverbanks preparatory to the track being laid. There was no covering party for this job and not sufficient artillery fire to drown the noises of the dozer, which attracted considerable mortar fire. An enemy party got close enough to use their pistols, whereupon Armstrong retired to the cover of some trees until the patrol's departure, when the work was resumed. He received an MM for his tenacity and devotion to duty.

The infantry moved off in heavy rain towards the [Fiumicino](#) and [No. 3 Platoon](#), 8 Field Company, worked on the main sapper job, which was to replace the Ark with a 50 ft double-single Bailey. The enemy had confined his demolition activity, in the absence of other main roads, to Route 16 and craters up to one hundred feet across abounded. They were attended to by 3 Canadian Field Company which was under the New Zealand Division's command, while [No. 3 Platoon](#), 6 Field Company, decked a steel girder bridge which the enemy had left standing between Route 16 and the

coast.

The infantry brigades changed over again; 8 Field Company diarist summarised 28 September thus:

'We had no sapper tasks and we are out of action until 5 Bde have had it. The heavy rain has bogged everything.'

The Company went back to Rimini and cleaned the mud off its vehicles and itself while 7 Field Company began work on the rapidly deteriorating forward road network.

The sappers spent the night keeping the roads, which were breaking up under the weight of traffic and the persistent rain, open for the battalion support vehicles. The Medical Officer caring for the sappers had no casualties to attend to but was nevertheless not idle, for the Company war diary ends the résumé of the day's activities thus: 'OC conference at Bde at 1500 hrs. RMO delivered a child at 1400 hrs.'

The weather worsened on the 29th with winds of gale force and driving rain. The infantry dragged themselves up to the objective river, beyond which the enemy had got his forces safely arrayed again.

By evening 7 Field Company had the [Uso](#) in high flood behind it and the [Fiumicino](#) a roaring river in front; filled demolitions were breaking up, artillery pits were flooded and tanks were stuck like flies on a treacle paper. It was still raining twenty- four hours later and the offensive had to halt until conditions improved. Canadian Corps Headquarters could almost hear the sighs of relief being sent up by their opposite numbers on the stand-fast line beyond the [Fiumicino](#).

The position was virtually unchanged a week later, though plans were made and altered and dropped as the rain promised to stop but did not do so for more than a few hours at a time. The sappers' biggest worry was water removal, which meant culverts, water-tables and drains; traffic was not very dense for the simple reason that the heavy vehicles were mostly still bogged down. All 5 Field Park Company tipper trucks were carrying metal, or more properly rubble, from stricken houses to the harassed roadmenders. The enemy, on balance again, reinforced with men and

material and, comfortably ensconced in selected buildings, had very definitely the advantage of the situation. Even 7 Field Company headquarters back at [Rimini](#) had a taste of long-range shelling.

Sixth Brigade went into the line again during the night 6–7 October. Major Clark's instructions were for 8 Field Company to 'recce' the [Fiumicino](#) the following night for assault crossings. Tanks could move only with the greatest difficulty and in second gear and the operation did not get beyond the operation order stage. By this time all idea of break-throughs had been abandoned; Eighth Army was virtually bogged down and the Fifth Army machine was grinding to a halt among the mountain peaks still far from the city of [Bologna](#), its proposed destination. The official plan was now to push the enemy as far north as possible before winter arrived. The sappers would have taken some convincing that it had not in fact already come.

Further instructions were issued concerning an advance across the [Fiumicino](#) which was to go through irrespective of the weather, and which was then postponed because of the weather. A sapper's view of the situation, as seen by 8 Field Company and entered in its war diary, reads:

9 October. Weather—Dull and showery in morning; cleared up and fine later with light wind.

Ground—Worst conditions yet experienced. Much surface water due to blocked drains.

Uso River—Rise of 12 feet during night—All Bailey bridges OK—D/D and D/S on Route 16 have logs and fishing vessels swept against piers: D/S at 763064 has debris in panels and fishing vessel against abutment. Water level now 5 Ft below bottom chord; bridge at 760055 put across by [6 Fd Coy](#) closed due to work on West approach road.

In more elevated circles the decision had been taken to alter the direction of the attack from [Ravenna](#) to the slightly higher country along Route 9 leading to [Bologna](#). Orders for the regrouping of Eighth Army contained, inter alia, the following:

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<sup>1</sup> Lt D. F. Brown, MC; Denniston; born NZ 18 Mar 1917; mining student.

<sup>2</sup> L-Sgt R. H. Horsfall, MM; born NZ 18 Jun 1916; window dresser.

<sup>3</sup> Sgt G. E. Armstrong, MM; Bunnythorpe; born Palmerston North, 29 Jun 1920; tractor driver.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## INFORMATION

### *INFORMATION*

After ten days of intermittent rain, the ground on the front of 1 Cdn Corps is such that great difficulty is experienced in moving fwd vehs of any kind. Ground on which the going is more suitable lies to the SOUTH of the rly line and along HIGHWAY 9. 1 Cdn Corps is to take over from 5 Corps that portion of the front at present occupied by 56 Div. The op. from that pt. will develop so that the main thrust of 1 Cdn Corps will be along HIGHWAY 9 towards BOLOGNA.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## INTENTION

### *INTENTION*

1 Cdn Corps will extend its front to the left in order to take over the sector at present occupied by 56 Div. and will est a brhead over the R FIUMICINO on night 11/12 Oct preparatory to advancing along HIGHWAY 9 in the direction of BOLOGNA.

The execution of the redeployment placed the New Zealanders in the centre of 1 Canadian Corps and involved a move wherein 2 New Zealand Division's left boundary became its right boundary, with its new left boundary on the line of the Rimini-Cesena railway.

The German generals had also decided that the seaward flank could take care of itself, or rather that the weather would do it for them, but that their inland flank was not secure. It was in fact in some danger of being turned, for the left wing of 5 British Corps had crossed the Fiumicino and was sitting above the German right wing. A fighting withdrawal to the next river line was therefore in order.

The above piece of omniscience is a background for what follows.

The New Zealand Division's role was to protect the flank of the attacking 1 Canadian Division as it thrust along the axis of Route 9 towards Cesena, about eight miles distant, but the immediate objective was the Pisciatello River, four miles and three water jumps—the Rio Baldona, the Scolo Rigossa and the Scola Fossalta—away.

The switch to the new area was effected by 6 Brigade's going into reserve and 5 Brigade then moved into the line.

Infantry patrols felt their way up to and across the Fiumicino during the early hours of 11 October and reported that the enemy weapon pits were unoccupied, whereupon the Maoris began to trickle across the river and form a bridgehead. They were soon followed by 23 Battalion. The combined bridgehead was not expanded to any extent for enemy tanks might appear before supporting arms were over the

river. The instructions the sappers received about bridging are in the Headquarters 2 New Zealand Divisional Engineers war diary:



THE ADVANCE TO THE SAVIO, OCTOBER 1944  
the advance to the savio, october 1944

10 Oct. 2330 Hrs. Ring from G Ops to say Tedeschi pulling back. Adjnt to 6 Fd Coy to line up recce of br site for first light and warn bridging pl.

11 Oct. 0400 Hrs. Ring G Ops wanting br to come forward. 6 NZ Fd Coy and Br Pl sent fwd. G Ops want second br and 7 Fd Coy put on job at 700048. <sup>4</sup>

Pursuant to instructions Lieutenant Hunter and a reconnaissance party from 6 Field Company left forthwith and returned at 4.30 a.m. with the required information. There was a road from San Mauro which crossed the river and entered Gatteo, a mile north of the river and presumably within the enemy lines. The bridge of course was blown, but with roads being the only possible axis of advance for wheels, Lieutenant Hunter proposed to replace it with a 100 ft treble-single Bailey.

Sixth Field Company, poised for a quick getaway, had the first panel on rollers at 8.20 a.m. before the infantry were properly in possession of the far side of the obstacle. Four hours later, in spite of some intermittent shelling, traffic was moving over the bridge and the reassured infantry were probing around the outskirts of Gatteo.

Owing to the desire of HQ 2 NZ Division to have two bridges on the one and a half mile long 5 Brigade front, No. 2 Platoon of 7 Field Company left some time after

6 Field Company for their job which proved, after some misunderstanding was cleared up, to be at another demolished bridge on a further road that led south-west into [Gatteo](#). The approaches were cleared and building started at midday. Enemy reaction was immediate and continuous and the men were withdrawn until the somewhat fluid situation on the New Zealand right flank was stabilised. [Maori Battalion](#) transport was routed through the 23 Battalion area via the 6 Field Company bridge.

Fifth Brigade spent the rest of the day attaining a start line running through [Gatteo](#) to a point a quarter of a mile south of Sant' Angelo village, which unlike [Gatteo](#) the enemy held strongly. He had sound reasons for doing so for the [Rio Baldona](#) ran through the village and the guns sited there commanded all roads leading to [Gatteo](#). While the enemy held Sant' Angelo, New Zealand infantry could not advance very far for lack of the vital road-bound support arms.

The attack was due to start about daybreak on 12 October, and the sappers attached to the infantry swept the roads into [Gatteo](#) and a dozer filled two large road demolitions in the village. Eighth Field Company was occupied in clearing and maintaining all tracks from Routes 9 and 16 into the New Zealand sector. It was still not possible to do much work on the MAORI bridge, as the 7 Field Company job was called. The infantry trudged through the muddy fields to the pause line on the [Rio Baldona](#), the enemy garrison of Sant' Angelo sent their bridge over that same obstacle sky-high but did not give any indications of vacating the key point, and by midday 7 Field Company finished its bridge. Although generally known as the Maori bridge, to the sappers who built it it was the Angus bridge, named after Lieutenant Angus Black <sup>5</sup> who was in charge, and who packed his kit for return to New Zealand as soon as the job was finished.

There was a pitched battle with infantry attacking German strongpoints and the artillery pumping shells into [Gatteo](#) and Sant' Angelo respectively before the advance was resumed in the late afternoon.

Twenty-third Battalion, which owing to the direction of the [Scolo Rigossa](#) had the greater distance to go, was lucky to find the bridge over the Baldona- [Gatteo-Gambettola](#) road intact and so had the comforting presence of supporting tanks. By late afternoon both 5 Brigade battalions were established in houses on or near the

[Scolo Rigossa](#), but the Maoris were being annoyed, almost threatened, by the obstinate enemy in Sant' Angelo.

During the night the Maoris tried, first with a fighting patrol and later with a company, to enter Sant' Angelo but were not successful.

The 13th and 14th of October were routine days for the sappers while the forward infantry closed up to the [Scolo Rigossa](#). Several fine days had dried the surface of the ground a little, but the tanks and the wheels were still confined to the roads and had to run the gauntlet of shells from the Sant' Angelo sector. There were, however, more planes in the air and the enemy strongpoints were given a torrid time. The Canadians on the left were not very far ahead with the main thrust and the troops on the right were still on the [Fiumicino](#).

The Maoris sent two companies behind a heavy barrage into Sant' Angelo on the night 14–15 October only to find that the garrison had departed. The enemy had in fact fulfilled their object in slowing down the rate of the New Zealand advance while a new defence line was being prepared on the Pisciatello River, three miles beyond the [Scolo Rigossa](#).

Seventh Field Company began immediately to open the road from [Gatteo](#) into Sant' Angelo and from [Fiumicino](#) village to the same locality, while [No. 1 Platoon](#), under command of 8 Field Company (Lieutenant [Hudson](#)<sup>6</sup>), already briefed, stood by to replace the [Rio Baldona](#) bridge in Sant' Angelo with a 60 ft single-single Bailey. They were on the job about 2.30 a.m. and had a clear run for nearly an hour when Spandau bullets began to hit the panels and the sappers halted work. The Maoris asked if they could do anything to help the pakeha bridge builders and it was arranged that three Maori Brens would engage the German machine gun if it opened fire again. It did open again but not for long, and the bridge-building went forward for another couple of hours before the sappers were chased off the job again, this time by shellbursts which wounded three men.

The shelling persisted intermittently and the bridge was not across by daylight. Colonel Anderson then asked for air cover while the Bailey was being launched. Six Spitfires arrived soon after the request, smelt out the self-propelled gun that had been causing the delay and silenced it. An armoured dozer also came up to help in

the launching and the bridge was finally completed by 11.30 a.m., so that access was now available on the New Zealand right flank for road transport up to the Rigossa.

Patrols felt across the Rigossa towards [Gambettola](#) during the night of the Maori attack and confirmed the impression that the enemy was withdrawing again. Twenty-third Battalion built up a cautious bridgehead and entered [Gambettola](#). The Canadians were in the tactically important [Bulgaria](#) village, so a troop of tanks was sent to [Gambettola](#) via [Bulgaria](#) before the sappers had a bridge across the [Scolo Rigossa](#).

It was a busy day for the Engineers: 7 Field Company put in the approaches and assisted with a scissors bridge across the Rigossa south of [Gambettola](#), and then put in a drum culvert alongside the scissors. Sappers not so occupied worked on the roads and the Company ended the day by helping to establish an Ark bridge a mile eastwards of the scissors. [No. 1 Platoon](#), 8 Field Company, had finished the bridge at Sant' Angelo as already mentioned and the greater part of 6 Field Company was standing by to build a 70 ft double-single Bailey in place of the drum culvert and Ark at [Gambettola](#) as soon as the shelling ceased. The job was eventually postponed until the next morning. There were, in addition, mines to be searched for and lifted along the banks of the Rigossa and the usual road maintenance that was second nature to the sappers not detailed to specific tasks.

In a review of the Engineers' activities during this period Colonel Anderson commented:

'Demolitions continued to give trouble and the Mech Equip Platoon wrought wonders in the way of repairs. The shovels were kept close behind the advance loading bricks from damaged houses in S MAURO, [GATTEO](#) and [GAMBETTOLA](#). This was the only "metal" available and proved very effective in surfacing repaired demolitions and filling soft places.'

The constant preoccupation with drainage problems might again be mentioned. The water table is very close to the surface in this part of [Italy](#) and any damage to side drains by shell-bursts or skidding vehicles completely destroyed sections of the road. Movement other than by road was impossible and, except for short stretches

such as bridge approaches, new construction was out of the question. If it had not been for the spoil taken from damaged houses it is possible that the advance might have been halted for lack of communications.

During the following two days the infantry worked towards the [Pisciatello](#), which had some claims to be called a river for on the New Zealand sector it was 50 feet wide and ran between stopbanks 15 feet high.

Corps Engineers took over all work south of the [Scolo Rigossa](#), and [No. 1 Platoon](#), 8 Field Company, still under command 7 Field Company, built a 50 ft single-single Bailey at the north road-exit from [Gambettola](#). Seventh Field Company, close behind the infantry, culverted several waterways (including the [Scolo Brancona](#)) for wheeled vehicles and wondered when the tanks would be able to move freely across country again. There had been no rain for a week and the artillery wheels were taking to the fields. The tank regiments were in fact beginning to think again in terms of working as a brigade spearheading a break-through. They had been thinking like that off and on for the year they had been in [Italy](#).

Fifth British Corps from the south and [1 Canadian Corps](#) from the west were now closing in on [Cesena](#), a town of some importance situated on the [Savio](#) River, which at that point flowed north, whereas the [Pisciatello](#) ran roughly from west to east. The immediate plan was for 2 New Zealand and 1 Canadian Divisions to establish crossings over the [Pisciatello](#) and push on to the [Savio](#); the New Zealand plan was to force the [Pisciatello](#) with 6 Brigade and exploit to the [Savio](#) with 4 Armoured Brigade.

Sixth Field Company, less [No. 2 Platoon](#), retained under command of the CRE for bridging work, was to support the armour. More particularly, a 'recce' party (Lieutenant [Whiteacre](#) <sup>7</sup>) in armoured cars was to move with 20 Armoured Regiment and another (Lieutenant Skipage) with 18 Armoured Regiment. A third party (Lieutenant [Jackson](#) <sup>8</sup>) reported to 22 Battalion headquarters.

Eighth Field Company would, as usual, support 6 Brigade and would have the services of a section of armoured bulldozers and a section of AVREs for work on the bridge sites. These would then pass to the command of 6 Field Company. Once the river was bridged 6 Field Company would be responsible for getting the tanks on to

their objectives and 8 Field Company would be responsible for the following wheeled traffic.

The infantry advanced behind a barrage about midnight 18–19 October and confirmed what was already suspected—that the enemy had again decided on a fighting withdrawal behind the [Savio](#) River and was in the process of doing so.

A scissors tank and an Ark tank were placed in position but the scissors tilted after the first tank crossed. A spare was called up but the sappers considered that it would have suffered the same fate as the first one because of the soft banks. Colonel Anderson then sent his reserve bridging platoon (2 Platoon of 6 Field Company under Lieutenant Hunter) forward to put down a 40 ft single-single Bailey.

All traffic was routed over the Ark bridge until the Bailey was ready and a more permanent structure was ordered to replace the Ark. [No. 1 Platoon](#), 7 Field Company (Lieutenant O'Reilly), was detailed for the work, a 70 ft double-single Bailey; the first truckload of equipment arrived at 8 a.m. and traffic was crossing three and a half hours later. O'Reilly has recorded:

'The bridge was open at 11.30 hrs exactly and almost the first jeep across was [Tiny Freyberg's](#).<sup>9</sup> Tiny is still convalescent, he has lost a lot of weight but looks very fit. It was quiet enough.... but we were extremely short of bodies and had to rope in everybody incl. cooks assistant, wireless operator, storeman, mechanic, MT corporal and drivers but they went like veterans. I'm very proud of them.'

During this period 18 and 20 Armoured Regiments exploited towards the [Cesena- Cervia](#) road. There was little sapper work except for the 'recce' officers. They were mounted in Honey tanks and were kept exceedingly busy feeling down lanes and across ditches for routes forward. They were followed by the leading tanks which smashed shells into every likely enemy hideout.

The armoured advance was continued the next day (20 October) and went without much difficulty due west to the objective, a lateral road just short of the [Savio](#), behind which river the Germans had once again consolidated. Apart from a couple of small bridges put down by 7 Field Company and routine maintenance by the general sapper establishment, 6 Field Company detachments with the armour were the only engineers involved in active operations.

The Company war diary summarises the day:

'General Bde operation continued from north east lateral road running from [Cesena](#) and continued to the east bank of the [Savio](#). There was little opposition to this move but a lot of demolitions were met and our detachments were very busy. The Sherman Bulldozers worked continuously tho' the AVRE's were not needed. In the evening we borrowed two thin skinned dozers from [8 Fd Coy](#) in order to open up the supply road to 18 Regt. Once again the tanks managed to cross the open country with little difficulty tho' this entailed a lot of recce work by the forward officers. A few mines were suspected and some were found but in no great quantities.'

Lieutenant Skipage, who commanded the sapper reconnaissance group with 18 Armoured Regiment, received an immediate MC for examining under heavy fire enemy minefields along the riverbank by day and reconnoitring the bends opposite the regiment's sector by night.

During this period Major Goodsir (5 Field Park Company) and Major Wallace (6 Field Company) marched out to furlough and were replaced by Majors Malt and Andrew.

Rumours, never entirely absent where soldiers gather, multiplied and flourished in the rear areas that night. That they were built on some foundation of fact was confirmed when an officer from each Company left as an advance party to some unknown destination the following day. Even a conference of officers to discuss road maintenance problems that evening was a tongue-in-cheek affair for it was then common knowledge that the Division was being relieved by 5 Canadian Armoured Division and the Kiwis were going back to an area near [Iesi](#). The most widely held rumour, and a classic example of wishful thinking, was that the whole Division was en route to a tour of duty in Egypt.

During the advance to the [Savio](#) New Zealand Divisional Engineers built nine Bailey bridges. They comprised:

3 100 ft Triple-Singles

2 70 ft Double-Singles

1 60 ft Double-Single

1 50 ft Single-Single

2 40 ft Single-Singles

They also built two Ark and three scissors bridges. Generally it was a busy period under arduous, very wet and uncomfortable conditions. The casualties were 5 killed and 19 wounded.

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<sup>4</sup> [Fiumicino village](#).

<sup>5</sup> 2 Lt A. R. Black; Dunedin; born Dunedin, 25 Jan 1910; architect.

<sup>6</sup> Maj D. A. Hudson, m.i.d.; [Auckland](#); born Hastings, 13 Apr 1911; civil engineer; OC 5 Fd Pk Coy Aug 1945; 5 Engr Coy ( [Japan](#)) Oct 1945-Aug 1946.

<sup>7</sup> Capt E. W. Whiteacre, m.i.d.; born NZ 23 May 1917; accountant.

<sup>8</sup> Lt G. K. Jackson; [Auckland](#); born NZ 4 Apr 1909; civil engineer.

<sup>9</sup> Lt-Gen [Freyberg](#) was injured in an aircraft accident on 3 Sep 1944. In his absence 2 [New Zealand Division](#) was commanded by Maj-Gen C. E. Weir.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## CHAPTER 22 – TO THE SENIO

## CHAPTER 22

### *To the Senio*

The Canadians expressed regret that they and 2 NZ Division were parting company, for several signs appeared on the exit route worded, 'Cheerio Kiwis all' and 'Nice to have worked with you'.

A day or so earlier Brigadier C. A. Campbell, Chief Engineer 1 Canadian Corps, had written to Lieutenant-Colonel Anderson, CRE New Zealand Division:

Dear Anderson,

As you are about to leave our Command I take this opportunity of expressing our feelings towards you and all your sappers.

I congratulate the NZ Sappers on their efforts and appreciate very much the co-operation you have given me during the past few weeks. It is with some regret we lose you but I hope that the future may bring us together again.

With the very best wishes to all NZ Sappers from the Cdn Sappers.

Kindest personal regards.

C. A. Campbell,  
Brigadier  
CE 1 Cdn Corps.

The route back lay through Rimini, Pesaro, Fano to Iesi, then along valleys that wound into the heart of the Apennines. Every engineer company war diary mentions a day of waiting at Iesi because the Fabriano road was blocked. Seventh Field Company, which was attached to 5 Brigade for the move, knew only too well what caused the delay. Its war diary gives the essentials:

'Oct 23—Moved from Fabriano to Metelica after lunch. No. 2 lay out and unload bridge at Metelica. No. 1 and 3 build T/S<sup>1</sup> entailing delaunching to complete triple truss and relaunching.'

Here is a more elaborate description by a sapper involved: 'It was a 120 ft T/S

and a bigger bastard of a bridge I've never met. Everything that could possibly go wrong with a bridge went wrong with it including pushing out the bank seats and an unsuccessful jacking down. No. 2 had laid the foundations and set the bridge out and I think they hadn't laid them level for we had Hell's own job getting the third truss on. Moreover the Div set had all been dumped on the near bank but we were still 7 bays of nose short. We scrounged around and borrowed from some Tommies but they were on the far bank and couldn't get those 14 panels to us. So we had to launch as a D/S, carry the panels over—a Hell of a job—delaunch, put the third truss on and launch again. We started at 2000 hrs and finished at 1000 next morning—14 hours! What a job. We moved immediately to a new area in a village called S. Saverino, just getting on to the road ahead of [6 Bde](#)<sup>2</sup> transport which had been held up behind us.'

All sapper units reverted to the command of the CRE and were billeted in [San Severino](#). They were the first troops, Allied or German, to live in or possibly even to visit the area, which was far off the lines of communication.

It was a countryside of soft, rolling, cultivated hills with winding lanes and tree-lined roads, picturesque homesteads and busy streams set against a background of gaunt mountain tops. The inhabitants were a pleasant simple folk. It was a place where one could forget the war and the Army—if the Army would let one forget it.

But the Army did not let the sappers forget it; there were roads to be kept in order because of the unusual traffic and 5 Field Park Company had little rest from carting and spreading metal. [Bridging Platoon](#) vehicles required a lot of attention owing to the heavy loads they had had to carry over potholed and broken-up roads; [Workshops Platoon](#) kept long hours on the hundred and one repair jobs saved up for when units came out of the line.

The Field Companies held parades in the mornings and in the afternoons played, with varying fortunes, each other, the infantry and the Italians at rugby and soccer. There was a Divisional boxing championship tourney; the heavyweight title going to Sapper [Hepburn](#)<sup>3</sup> of 7 Field Company; each company organised dances which were held in the Opera House at [Matelica](#) and attended by the local girls (and their mamas) in large numbers.

In addition the [Kiwi Concert Party](#) entertained and Mr J. Meikle, the Engineers' [YMCA](#) Secretary, was indefatigable in organising table tennis, card tournaments, cinema programmes, race meetings and concerts, the last with a liberal sprinkling of local talent.

The reorganisation of the Division took place during this period. It had become increasingly clear that the Division, built up by experience for a war in North Africa, was not properly balanced for a war in [Italy](#). The crying need was for more infantry units and provision was made for a third infantry brigade by converting the Divisional Cavalry and 27 (Machine Gun) Battalion into infantry and reverting 22 (Motor) Battalion to a straight infantry unit. The whole programme was not carried out at once, but both three-battalion brigades had a fourth unit attached by marching 22 Battalion and Divisional Cavalry Battalion into 5 and 6 Brigades respectively for indoctrination. In addition, reductions were made in selected artillery, Army Service Corps and medical units.

The existing furlough arrangement was also abolished and in its place was instituted a replacement scheme whereby long-service personnel would be returned to New Zealand and directed into essential industry. Third Division, which had served in the [Pacific](#), and men released from essential industry would supply the reinforcements needed to implement the new plan.

In general, it meant that the 5th Reinforcements, men who had served in [Fiji](#) and the three furlough drafts that had returned from New Zealand would now go home. A proportion of officers and NCOs would have to remain until their places could be suitably filled and the whole scheme would be progressive.

The sappers acclaimed the news, for rightly or wrongly it was generally felt that the 'essential industry' excuse to avoid being called up was, to say the least, overdone. Pessimists who wanted to know when the scheme would start operating were answered by [General Freyberg](#); it would start early in January at the latest, for the first replacement draft would be ready to join the Division by then.

A month passed very quickly and happily. Towards the end of November a round of smoke concerts suggested that the holiday was nearly over. On the 24th the sappers packed for an early move on the morrow.

While the New Zealanders rested in their mountain valleys the enemy had been pushed from the [Savio](#) River to the [Ronco](#), to the Montone, to the [Lamone](#)—20 miles farther along Route 9 but still nearly 40 miles from [Bologna](#). [Ravenna](#), the other objective city, was almost within reach.

Allied strategists, bent on ending the war by continuing the offensive throughout the winter in Western Europe, considered that the best way the Fifth and Eighth Armies in [Italy](#) could help to bring about a German collapse would be to continue their offensive operations as long and as intensively as possible—to the limit set by exhaustion and material shortages.

The Kiwis were to relieve 4 (British) Division during the night 26 – 27 November and the axis was still Route 9. <sup>4</sup>

The engineer companies, after a 150-mile drive, were billeted just east of the Montone River in [Forli](#), a city of some 80,000 inhabitants. Seventh and 8th Field Companies took stock of their brigade communications while the infantry reconnoitred for assault crossings over the Lamone River, 'a formidable obstacle indeed, a dirty big ditch running between 20' stop-banks and the Hun is obviously going to defend it stubbornly.' <sup>5</sup>

It was not an inviting prospect, for heavy rain had begun on the 26th and the roads were noticeably breaking up under the pounding of tanks, artillery, and Divisional transport.

'What a mess,' Lieutenant O'Reilly wrote. 'Our infantry had moved up by this time and our tanks churning through, literally cut the roads to ribbands. The roads here are all sunken with deep drainage ditches down both sides and they act as a drain for all the surrounding country. Of course with shell fire and tanks chewing across ditches the drainage is all messed up and the rain water just flows straight into the road.'

Main Headquarters, [2 New Zealand Division](#), was most anxiously concerned about its communications and informed all units that, in view of the deterioration of the roads in the area, it was imperative that they be used only by essential and maintenance traffic.

On the night 29 – 30 November, the road-cum-river leading to the forward troops near the [Lamone](#) stopbank became flooded and eroded a deep gap which blocked all traffic. Major Lindell's citation for the award of an immediate DSO mentions inter alia that 'It was very important that ammunition and supplies should go forward before first light. Major Lindell appreciated the seriousness of the position and, under extremely difficult conditions of weather and approach road, quickly organised a bridging party. Every noise and movement of bridging vehicles immediately brought down enemy mortar and fixed line machine-gun fire. Though ... two loaded vehicles were knocked out Major Lindell, with energy and inspiring leadership rushed an eighty foot bridge to completion in sufficient time to allow the ammunition to go forward before dawn.'

For a fortnight the full Engineer strength of the Division worked on traffic circuits, particularly the axis route branching from Route 9 near Cosina northward to La Viola. Referring to this stretch, the CRE instructed that: 'It is vitally important that the road shall be kept open. Since it must be used for 2 way traffic (under Div Pro) it is very desirable, if at all practicable, that some passing places should be constructed. Small parties with perhaps a winch truck to be kept at bad points throughout the night. Report progress as opportunity offers.'

Fifth Field Park Company, which had to supply the means of carrying out the work, had under command a detachment some sixty strong of 240 (Italian) Pioneer Company who were employed in cutting trees for corduroy. [Mechanical Equipment Platoon](#) was also augmented by a party with tip-trucks from 131 Corps Troops Company, RASC, and armoured dozers from 1 Assault Squadron, RAC, RE.

The Engineers had discovered by trial and error that laying corduroy from 10 to 12 feet long and 4 to 6 inches in diameter was the best method of overcoming the problem of constructing roadways to bridges and around demolitions. A hundred yards or so could be laid rapidly, and when covered with three or four inches of earth or sand would bear the weight of all types of traffic, including tanks—for a period.

Road metal did not exist in the area but a substitute was provided by gathering up the wrecks of brick houses with tiled roofs that had been destroyed in the fighting and spreading the debris in lieu of more orthodox materials. Undamaged houses conveniently situated were evacuated and demolished for the same purpose. It was

no time for kid gloves.

The neighbouring 46 Division, which, after heavy fighting, had made a small bridgehead beyond the [Lamone](#), was even worse off for communications, and to assist it 8 Field Company with Mechanical Equipment dozers and trucks spent a week building up a seven-mile artery from Route 9 south to [Quartolo](#). It was called the [Lamone](#) road, really a courtesy title for most of it was one-way only and the whole length was closed for twelve hours daily for maintenance; during the open twelve hours movement was rigidly controlled.

On 9 – 10 December 7 Field Company put a 100 ft double-single Bailey over the Marzeno, a tributary of the [Lamone](#). It crossed the road that 8 Field Company was working on and the bridge site was close to a brickworks, a natural target for trigger-happy German gun or mortar crews. The job took nine hours, five of which were spent in carrying the components the last sixty yards to the site.

'At 23.30 hrs. the site was stonked by Nebelwerfers, 8 barrelled rockets—from [Faenza](#),' Major Lindell wrote. 'It was a cold starlight frosty night and the clanking of the Bailey parts probably caused the stonk—the enemy were rather close to us and we had a platoon of Div. Cav. as a covering party dug in around the bridge site. During the night we were hailed from the opposite bank and it turned out to be a Tommy officer wanting to know what was going on—so much for letting your neighbour know what is happening.

The bridge cost only two casualties, neither serious, but during the day a working party was 'stonked' off the job while laying 400 yards of corduroy approaches.

The work was finished by Lieutenant O'Reilly and the balance of the platoon after dark 'without any trouble in the way of enemy interference. Dacey brought me up 20 new blokes about 2000 hrs. They are 13th Reinforcements and had arrived at Coy Hq at 1630 hrs that afternoon. The Major shoved them straight up on to the job and what a grand initiation they had. A few mortars and a bit of spandau flying about but no one hurt.'

The Brickworks bridge, as it was called, and the approaches thereto were partly concealed from the view of the enemy by planting lines of poplar boughs as a

screen.

Fifth Brigade entered the bridgehead on the night 10 – 11 December, the night after the Brickworks bridge was built and the same night that 6 Field Company, with a platoon of RASC under command, assembled the components for a 110 ft double-single Bailey and timber cribs in Cardinetta village preparatory to providing vehicle access over the [Lamone](#) to 5 Brigade.

This crossing, built by [No. 2 Platoon](#) (Lieutenant Hunter), was done in daylight under cover of a smoke screen supplied by the artillery, for it was only two miles south of the enemy-held town of [Faenza](#) and a few hundred yards from the German FDLs.

'I selected an approach road site and kept all traffic off it,' Lieutenant Hunter wrote later, 'got the bridging to the site and we got stuck into it by mid morning the day after arrival. CRE wanted only a double single which we built and had across late in the afternoon. Had a straight go with only the occasional shell none of which landed too close to stop the job. Used half a dozen Itie haystacks for the wheeled vehicle road (no tanks on this route) and covered it with reinforced mesh ... and put houses on top of the mesh—quite a tidy job it looked when pure and undefiled. I had just got a section on the far bank with crib timber and was starting on the pier (about 8 ft high) when we got a message that CRE wanted it triple single as it was the only heavy bridge over the [Lamone](#). Simple enough to do when launching but a pig of a job when the bridge is launched and seated. However we plugged along and finished it late in the evening.... A heavy day's work for my gang and I can't speak too highly of my platoon. Even though I say it, I reckon they were the best Bailey platoon in 8th Army and put up over 1,000 ft of bridges in the Po area before I left them.'

The job earned the warm commendation of [General Freyberg](#), and was noted on the maps of the area as Hunter's bridge.

All the following day the whole company toiled with corduroy, demolished houses and road netting laid on straw to make the two-mile track between the Brickworks and Hunter's bridge into something resembling a road. It was used by a jeep train to service 5 Brigade in the first place and later to get tanks up. According

to the official history of 23 Battalion its jeep drivers, in spite of these efforts, did not think much of this road:

'Some drivers who had known the [Terelle](#) "Terror Track" declared they preferred it to the one they now had to use to supply 5 Brigade across the [Lamone](#) west of [Faenza](#). Whereas at [Terelle](#) they could and did move at full speed, this was quite impossible in the mud. Thus, it often took the jeep train with rations twelve hours to get from [Forli](#) to 5 Brigade Headquarters. Harassing fire was a trouble but was nothing compared to the condition of the roads. On the night of 12 – 13 December, for instance, out of a convoy of twenty-six jeeps with trailers, two jeeps crashed over a bank, six trailers had to be temporarily abandoned beside the track and only sixteen won through to Brigade Headquarters.'

Twenty-seventh Machine Gun Battalion, with trucks carrying ammunition and rations to its forward guns, did not like the road much either. Lieutenant [Moss](#),<sup>6</sup> the Battalion IO, paints a sympathetic picture of the sappers' difficulties in his private diary:

'This area is very badly served by roads and over the last week we have had four different road traces adjusting routes as different tracks became U.S.<sup>7</sup> With only one up and one down route there is such a volume of traffic that engineers are compelled to do road repairs with vehicles passing the whole time. It means that they are unable to put down a solid foundation and perpetual maintenance is necessary to keep the road in a useable state. Literally hundreds of casas have found a last resting place on the road surface and any house which had been badly damaged is liable to be knocked flat by a bulldozer, loaded into trucks by a mechanical shovel and spirited away. As the battle moves on, the returning Ite is liable to find a rectangular patch of brick chips and cement rubble the sole reminder of his former castle. Abandoned property left in casas chosen for road metal goes on the road just the same, and sections of the strada are a mosaic of umbrellas, pottery fragments, pictures, the odd frying pan, perhaps a dead rabbit or fowl and so on....'

Sixth Field Company, less four 'recce' parties (Lieutenant Jackson) with 18 Armoured Regiment, maintained Hunter's bridge approaches and tested the 5 Brigade axis for mines.

Lance-Corporal Thornton, working up to 23 Battalion's FDLs, confided to his diary:

'In the evening [12 – 13 December] Frank's depleted section and I were sent to sweep the road up to the forward infantry platoon. Trouble with the infantry covering party, detectors, jeeps, mines, Jerry spandaus, mortars, nebelwerfers and shelling. Unbeknown to us 100 Jerries were attacking the platoon ahead of us <sup>8</sup> so we had some close calls—only located two teller mines. Arrived back with no casualties much to Mike Andrew's amazement. Told him the job was not completed.'

Seventh Field Company spent its time between Route 9 and the Brickworks bridge spreading 'metal' provided by Mechanical Equipment Platoon. To quote 5 Field Park Company's war diary, 'All tippers working all night metalling approaches to 7 Fd Coy br at M 317220'.

A week without rain had dried out the roads sufficiently for some eighty-odd New Zealand tanks with lorries hauling extra fuel to move into 5 Brigade bridgehead and ruin the road that the jeep drivers had to traverse nightly.

Lieutenant Brown was patching up a bad break at [Princes Cross](#) <sup>9</sup> when he had his dozer knocked out by shellfire. He sent for an armoured Sherman dozer, which, though not so mobile as its thin-skinned relative, could stand up to more punishment but necessitated Brown's staying out in the open to direct the work so that the jeeps could get through.

Eighth Field Company maintained the road between the other two units.

With the New Zealand tanks in the bridgehead, [5 Corps](#) was able to reopen the offensive, which so far had failed to push the Germans out of [Faenza](#) and behind the River Senio, the next of the innumerable stop-banked watercourses—ready-made anti-tank ditches and parapets for the enemy.

Shortly put, [2 New Zealand Division](#) was to attack through the crossroad village of [Celle](#), then with [10 Indian Division](#) was to force a crossing of the [Senio](#). [Faenza](#) would thus be out-flanked, but should the garrison still refuse to move it was to be thrown out by a further attack.

The CRE was responsible for the Divisional road network forward of the Brickworks bridge and for the eventual bridging of the Lamone River, which was still in enemy hands on the direct Route 9 highway into [Faenza](#), to replace the original bridge on that route. This job was given to 7 Field Company and will be dealt with later.

The night previous to the resumption of the offensive, a working party (Lieutenant Whiteacre) started on a bypass around [Princes Cross](#) by way of a jeep track of corduroy brought up in armoured cars but was twice chased out by close and personal enemy fire.

Soon after the 400 guns opened the attack on 14 – 15 December and the support arms commenced moving up, a bad patch developed on the road between Hunter's bridge and [Princes Cross](#) where a deviation had been made around a demolition.

[No. 3 Platoon](#), 6 Field Company, trying to lay corduroy there, lost its stores truck to an enemy shell, and when both a Sherman and a D6 dozer bogged down in the deviation, it was decided to use a Bailey. [No. 1 Platoon](#) was called out for the assignment and had to carry the components for a 40 ft single-single bridge some 200 yards to the site.

'We were still struggling when daylight came and Jerry opened up with minewerfers (7? multi-barrelled mortars). Sgt [Roberts](#) <sup>10</sup> wounded. After this he scored a direct hit with a shell and wrecked all our work. Darkie [Mudford](#) <sup>11</sup> (a new reinforcement of three days standing) was badly wounded. Helped to carry him out to the RAP but never realised how long and hard a mile could be.'

Captain Andrew sent for an Ark to replace the ruined Bailey. It was put down by 9 a.m., and although it was not possible to work in the open until the afternoon, essential vehicles got through before the approaches cut up too badly. Lieutenant [Lewis](#) <sup>12</sup> and a few sappers were able to finish the jeep track at [Princes Cross](#) for the evacuation of casualties. The Company diarist must have been involved, for he feelingly entered in the day's events:

'This Cross was one Hell of an unhealthy place to work as the enemy was

determined to prevent any repair work being done there which would open the road to [Faenza](#).'

The detachments with 18 Armoured Regiment spent the day clearing the brigade area of mines and placing notices and mine signs. In the evening the rest of [No. 3 Platoon](#) joined them in general mine-clearing and heard of Sergeant Farnham's exploits as a fighting tank commander. He was travelling in a Sherman during the advance when the commander was wounded and evacuated, and with the consent of the crew Farnham took command although fighting a tank is not included in the sapper training syllabus. They located a German Mark IV Special and immediately engaged it. The gunner got two direct hits on the enemy tank but apparently did not do much damage, so a Sherman with a heavier gun was called up. Farnham fought his tank until the reinforcement arrived and the Mark IV Special was knocked out, whereupon the sapper-cum-tankie went on with his job of searching out routes for the supporting armour. He later received an award of an immediate Military Medal.

The infantry were consolidating when 5 Brigade was advised that the enemy was probably withdrawing from [Faenza](#) and that the road should be opened as soon as possible from [Princes Cross](#) through [Celle](#) to Route 9 for the passage of 20 Armoured Regiment. The advance to the [Senio River](#) was resumed at daylight (16 December) and 6 Field Company was deployed as follows:

[No. 3 Platoon](#) mineswept through [Princes Cross](#) to [Celle](#). According to the Company war diary, '3 Pl located and lifted quite an assortment of mines, including Topf, Tellers plain and done up nasty, Schu, Improvised mortar mines, "R" mines, and two prepared demolition charges.'

[No. 1 Platoon](#) opened a corduroy track for wheels around the craters at [Princes Cross](#). Lieutenant D. F. Brown took a D6 dozer through the Cross to make good the craters and demolitions while the sappers put in timber revetting where the shelling had broken the shoulders of the road. Brown meanwhile had had his dozer shot up, the second in twenty-four hours. When an armoured dozer arrived to replace the thin-skinned casualty, the sapper officer directed its operations from the exposed open road. In due course Lieutenant Brown was awarded an MC for these and other instances of determination.

As soon as the road was cleared to the outskirts of [Celle](#), [No. 2 Platoon](#) was to build a 60 ft double-single Bailey across a stream. Lieutenant Hunter, in charge of replacing the demolished bridge, was twice knocked down by the blast of exploding mortar bombs before he had examined the bridge site. There were no casualties, but one truck of equipment was ruined and two trucks badly ditched. Hunter's MC citation concludes: 'Lieut Hunter quickly obtained reserve parts and under his cool and inspiring leadership the bridge was completed to allow support weapons so urgently needed to move forward.'

A letter from Lieutenant Hunter describes inter alia the Kiwi method of unloading bridge components in a sticky situation:

'... consider my decoration as recognition of the fine job those fifty blokes did over a period. Had quite a battle on this job with the RASC sgt and officer of the bridging platoon about how to and how not to unload bridging. Told them I had handled tons of the stuff and that they would do as they were told. Method was to back the trucks flat out with all ropes undone then jump on the brakes—result one hell of a bang and all the bridging was unloaded—no squashed fingers and very quick. Spasmodic mortar and machine gun fire so I wasn't very interested in arguing.... persuaded them down the road to the accompaniment of loud threats as to whom they would report me to—couldn't care less at that stage. The old Pom loved to work by the one stop two methods laid down in "the book" and was outraged by our heathen methods.'

Seventh Field Company had been advised that it would put the bridge over the [Lamone](#) into [Faenza](#) as soon as the enemy, willingly or otherwise, had departed. The information available was vague, but it was known that in the vicinity of Route 9 the wet gap was between 60 and 70 feet wide and that shelving banks were bounded by high stopbanks about 200 yards apart. Forty trucks of components would be needed and [San Giorgio](#) village, one kilometre from the river, was inspected for a possible parking area. Major Lindell then called a conference of his platoon officers to work out details, so that there would be the least possible delay once the job started, for big issues depended on getting an all-traffic bridge into the town, not the least of which was the prospect of eliminating the precarious supply route via Hunter's bridge and [Princes Cross](#).

Two possible sites, one 150 yards and the other 350 yards south of the demolished Route 9 bridge, had been selected from aerial photographs, and at midday on 16 December, following reports that [Faenza](#) was clear of enemy and that a patrol of Divisional Cavalry Battalion had crossed the river farther upstream, the forty-truck bridge train left for [San Giorgio](#). Major Lindell, Major Armstrong (Mechanical Equipment) and Lieutenant [Annabell](#) <sup>13</sup> reconnoitred the river and decided that the upstream site selected by the CRE from air photographs was the most suitable.

The whole company, plus two dozers and eighteen tipper trucks from Mechanical Equipment, were concentrated on the job. [No. 3 Platoon](#) (Lieutenant Annabell) searched for mines, filled bomb craters and broke down the stopbank to give a turn on to the bridge; [No. 1 Platoon](#) (Lieutenant O'Reilly) built crib piers and abutments, demolished a three-foot-thick brick wall on the far side and removed with explosives a house that was in the way. [No. 2 Platoon](#) (Lieutenant Veart) built the bridge, one 30 ft and one 100 ft continuous triple-single.

The work was set out by 4.30 p.m., the crib piers erected by 11 p.m., and the bridge jacked down and the ramps completed by 9 a.m. on 17 December.

The enemy, with accuracy but complete lack of imagination, shelled and machine-gunned the site of the original bridge all night. Their industry was commended by all for the site was sufficiently removed from the scene of active work to avoid both casualties and stoppages. [General Freyberg](#) was an interested spectator and was the first across the Lindell bridge as it was named. Further work was necessary on the approaches before the banked-up stream of vehicles could cross but traffic was flowing at midday, by which time Mechanical Equipment had dozed a route into [Faenza](#) and 6 Field Company had opened the access road.

[Faenza](#) is a ramparted city much smaller than [Forli](#) and famous for its majolica ware, many specimens of which found their way from deserted buildings into the keeping of individual sappers. The enemy, loath to leave [Faenza](#), was holding on in the vicinity of the railway station on the northern outskirts of the town. [Divisional Headquarters](#) discovered this when it moved into the town as soon as the Lindell bridge was open. Incidentally, it moved out again fairly smartly back to [Borgo Durbecco](#) on the safer side of the [Lamone](#).

For the next two days 7 Field Company carried on at Hunter's bridge and on the road into [Faenza](#) while 6 Field Company maintained the highway from [Princes Cross](#) to [Celle](#) and tidied up the brigade area until the 19th, when it relieved 8 Field Company for operations with 6 Brigade. That brigade was to advance at right angles to Route 9, clear the country up to the [Senio](#) north of [Faenza](#) and thus extend the Divisional sector on the right of 5 Brigade.

The infantry left their start line about midnight 19 – 20 December and made steady progress. [No. 2 Platoon](#), 8 Field Company, with the job of searching the secondary road from the railway line to the village of [San Pietro](#), found to their satisfaction that the German sappers had missed their cue and Sergeant [Barbour](#)<sup>14</sup> removed their charges from two culverts. Support arms were through well before first light but misfortune overtook a reconnaissance party between [San Pietro](#) and the [Senio River](#). They were ambushed by a party of Germans hidden in a ditch, four sappers were taken prisoner and their car had to be shot up by our tanks to prevent the removal of the codes, maps and call signs.

The rest of the Company had an average night of minor demolitions with some narrow escapes but no casualties, and with the enemy now at a safer distance [Divisional Headquarters](#) resumed its interrupted occupation of [Faenza](#).

At last light on 22 December the infantry were firm on a line from the La Palazzo crossroads to [Casale](#), while the enemy occupied strong posts ensconced in a sea of mines along the near bank of the [Senio](#).

The first winter snow fell that night and sappers who remembered what frost, thaws and melting snow could do to nondescript roads did not regard the prospects of a white Christmas with any enthusiasm.

The engineer companies were at this date all located in [Faenza](#); 6 Field Company was maintaining the supply route via [Celle](#) to [Casale](#) and 8 Field Company was taking care of the other roads and tracks in the [Celle– Casale](#) area. [Mechanical Equipment Platoon](#) was, as usual, spread about as needed and 5 Field Park Company was, as usual, operating water points and issuing stores. Seventh Field Company, engaged in constructing a road across the much bombed railway station, had the good fortune to find a dump of about five tons of good quality coal, whereupon they

viewed the snow-covered countryside with more tolerance.

Colonel Hanson <sup>15</sup> and his staff were holding conferences with the company commanders on the problems involved in getting bridges over the [Senio](#) when the time came; enemy vigilance prevented a close look at the sites chosen from the map and the low cloud ceiling prevented the Air Force from helping with photographs. No division was better served by its sappers, but the stark fact was that the bridging of obstacles was still not quick enough to help the infantry maintain its rate of advance once a watercourse divided it from its support weapons.

The Operations staff also had their worries, not the least of which was an extreme shortage of ammunition. This was because priority was given to the fighting in [France](#)—the concentration of effort in the decisive theatre, a military maxim not to be disregarded but very frustrating to the planners in the Italian area. In any case the operations of Eighth Army were bound up with the situation in Fifth Army, which in turn was concerned about a likely enemy counter-attack against the vital supply port of [Leghorn](#). Finally, the enemy had built up such a concentration to fend off the penetration of his left wing that a counter-offensive was not beyond his capacity.

Generals conferred and staffs worked on plans, but the net result was that both Fifth and Eighth Armies were instructed to go on the defensive for the time being, so annulling the earlier decision.

The sappers, with a break for Christmas dinner that neither the Italian winter nor the malice of the German Army was permitted to interrupt, carried on with the never-ending task of keeping communications open in spite of snowstorms, frozen slush and thaws. On 28 December 7 Field Company was moved to work on an access route the Indian division was making towards the [Senio](#) if the spring offensive took that direction. They had an Indian pioneer company under command for widening and metalling, with Italian casars, the [Pideura](#) road, which ran along a ridge, and for the formation of a new road down the ridge to the [Senio](#). The route, known as Armstrong's track because of the dozer work done and the two hundred-odd loads of corduroy [Mechanical Equipment Platoon](#) cut and delivered, was in full view of the enemy-held village of Cuffiano, necessitating all work being done at night and carefully camouflaged before daylight. Some eight hundred yards of camouflage netting had to be lifted each night before operations could proceed on the lower

portion, which was not under enemy view. A length of both the [Pideura](#) road and Armstrong's track was revetted with seasoned mahogany and oak from a furniture factory in [Faenza](#). Finally the track was covered with a thin coating of demolished casas. A great advantage of working with an Indian unit was that Indians are not beer drinkers and it was possible to make an arrangement about their rations of that commodity.

The sappers on the eight to midnight shift of New Year's Eve were treated to as colourful a display of German flares as ever the [Western Desert](#) could produce.

Sixth Field Company went back to [Forli](#) for a rest on New Year's Eve—'Shifted to [Forli](#). All platoon in one casa. Our section arrived first to prepare the billet. Most of the platoon "ubriaco" from late afternoon onward. At midnight sampled some Chartreuse 200 years old.'

[Forli](#) had changed a lot since the sappers were last there. It was then a front-line town and was still under occasional shell-fire, but now there were theatres, NAAFI's, shops, bars, [ENSA](#) parties and streets full of civilians.

On 3 January 1945 a lamp post in [Forli](#) was decorated with floral emblems, and the reason is given in Lieutenant O'Reilly's private diary:

'I have been reading today's summary about the exploits of the partizans of [Faenza](#). The most picturesque of course was Corbari, famous as the Robin Hood of the Campagna and immensely popular among the Ites. He was captured some months ago and hanged in Castrocaro di [Forli](#) and later hanged (again) in the main square in [Forli](#). Some of his exploits were rather amazing and the Hun went to great lengths to catch him. Today the lamp post in [Forli](#) from which his body hung is kept bedecked with flowers and wreaths and everywhere one sees little posters on the walls—"Viva Corbari". He was only 22 when he was hanged.'

The 10th January saw the birth of a new sapper company in [2 New Zealand Division](#) when the [Mechanical Equipment Platoon](#) became 27 Mechanical Equipment Company, with an establishment of 7 officers and 150 other ranks organised into Company Headquarters and two working platoons. Fifth Field Park Company then reverted to its traditional formation of Company Headquarters, a bridging, a workshop and a stores platoon.

Official records show the new unit as coming into existence on 1 December 1944, to which time its formation was back-dated. Twenty-seventh Mechanical Equipment Company was commanded by Major Armstrong, recently returned from furlough, with Captain Faram as his second-in-command. The platoon commanders were Lieutenants D. F. Brown and A. A. Keller; Lieutenant N. A. [Bannantyre](#) <sup>16</sup> completed the original complement of officers. Regarding its formation and early days Major Armstrong wrote:

'The Coy was organised as a HQ including the admin. part of the show and the repair and maintenance sections and two working sections. Each Platoon had 3 dozers, 1 shovel, 1 compressor, 6 tip trucks and four transporters together with the usual personnel trucks, cook truck, fuel truck, jeep, etc. HQ included a workshop truck, a truck to carry spares, a compressor, a grader and the usual HQ vehicles.

'Each platoon was organised to be able to run all machines continuously on two shifts. It was usual on operations to have two operators out with each dozer.

'Had additional officers and men been available a 3rd platoon would have been added to enable a platoon to work with each of the three Field Coys when required. We undertook our own running repairs and normal servicing work and depended on a British Non Div Mech Equip Coy located as a rule near Army HQ for arranging replacements. They held a plant pool and when any of our machines were damaged beyond repair we simply loaded them on a transporter and sent it off to get a replacement. Some of the tractors in [Italy](#) at that time had had a hard life. Many had been in salt water at [Anzio](#) and [Salerno](#) and getting a good machine for a replacement was not always easy. S/Sgt Allen Morgan looked after this for us.'

It was about this time that [General Freyberg](#) had a brief encounter with Sapper 'Porky' Neale, who had gained some fame by winning boxing championships for the engineers, beginning when the First Echelon was en route from New Zealand to Egypt. Colonel Hanson relates the incident:

'It was somewhere around [Faenza](#) that the General saw Sapper Porky Neale after his return from furlough. The General knew him quite well from his part in various boxing tournaments. At one of the early morning conferences the General

announced that Porky Neale was back. He saw him the previous day operating a bulldozer. When the General drove up Porky was wearing a straw panama hat. The General said Porky didn't know whether to salute or raise his hat, so he compromised by nodding his head and saying "Good day". My comment was—"The young devil." The General immediately replied, "Now Fred, don't you say anything to him."

Engineer activities during the first three months of 1945 are to be envisaged against a background of maintaining roads, mostly corduroy tracks covered with a thin layer of demolished house rubble. More particularly, there were periods of snow clearing, drain revetting with timber or sandbags, and throwing more and more corduroy into patches where foundations softer than usual were periodically ruined by gun tractors and tanks.

The decision to go on the defensive included making dispositions to withstand a hostile counter-attack should one be mounted; the sappers' part therein consisted of preparing bridges for demolition in the case of an enemy advance. This was done in three stages, only two of which were to be carried out immediately:

- (1) The preparation of a scheme of demolition for each bridge. The collection and preparation of accessories. The burying of cable and the preparation of a suitable site for the accommodation of the firing party.
- (2) The fixing of charges and the laying of firing circuits, less the necessary detonators.
- (3) Insertion of detonators.

The demolition of bridges forward of the [Lamone](#) was the responsibility of 5 and 6 Brigades and those in rear that of 4 Armoured Brigade. Twelve bridges under the control of the Division were at Stage 2 on 19 January, eight of which were prepared by 6 Field Company, which on 12 January had returned from [Forli](#) and relieved 8 Field Company. A week later, when the Divisional boundary was altered so that the left flank was just south of the railway line near Route 9 and 6 Brigade relieved troops of 56 Division, eight more bridges already prepared for demolition by RE sappers were taken over.

Seventh Field Company stayed on Armstrong's track until 24 January, when 8 Field Company relieved it and the weary 7th moved back to [Forli](#) for a rest. Some enthusiasts had tried to vary the monotony by practising with skis made from the

furniture factory timber, but interest waned markedly when they found themselves in areas marked `Minen' and with other suitable warnings of a minefield.

Twenty-seventh Mechanical Equipment Company remained in [Faenza](#), for the most part procuring and carting road metal. The method was for a dozer to push a house over, then to gather the rubble in a heap so that the shovels could transfer it to the tipper trucks.

The replacement of long-service sappers and other arms promised for early in January, and which the pessimists averred would never happen, had been the subject of anxious consideration by the CRE and [General Freyberg](#). The scheme had been predicted on the assumption that adequate numbers would be arriving from New Zealand in the 14th Reinforcements to enable the return to civil employment of returned furlough men, 5th Reinforcements, and 6th and 7th Reinforcements who had served in [Fiji](#). In the engineer companies the number involved was about 400 all ranks, including the line-of-communication troops, i.e., Works Sections at [Maadi Camp](#), Advanced Base, etc.

To replace these 400 there were fewer than 200 arriving with the 14th Reinforcements—and they would need at least three months' training before marching into the field companies. [General Freyberg](#) was therefore forced to explain that the promise he had made could not be wholly fulfilled. The best that could be done was to put approximately one hundred on the New Zealand roll and work under strength to that extent, plus any casualties or evacuations through sickness, until the new men came up from the training camps.

Line-of-communications personnel were not to be included in the ballot and 5 Field Park Company, which contained a proportion of men who did not go into battle to the same extent as the field companies, received a lower quota. The sappers, both officers and other ranks, who missed out in the ballots were, as far as possible, to be transferred to unit headquarters, line-of-communication units, or 5 Field Park Company and replaced by sappers who had not had forward company experience.

The results of the draw were announced on 2 February. The earlier furlough drafts had meant time off from the war, but this was a farewell to arms for those drawn in the ballot, with the reasonable possibility of attaining the Psalmist's three

score years and ten. The celebrations were in keeping with the occasion and the draft left in the morning for [Forli](#) en route for New Zealand and civilian life.

The break with the old hands was easiest in 7 Field Company, for it left the following morning for 15 Army Group Bridge Camp on the coast at the mouth of the Tiber near [Rome](#)—Lido di Roma—where in company with two Canadian field companies it settled into excellent quarters and went through a ten-day course of watermanship, bridging and rafting, followed by three days' leave in [Rome](#) before returning to [Forli](#) on 19 February.

Eighth Field Company remained on Armstrong's track until it handed over the area on the 9th to the [Polish Corps](#). The Company thereafter maintained the roads in the Divisional area with two platoons, while the third did routine training in field company work. The day before 7 Field Company returned from its bridging course, [No. 3 Platoon](#), 8 Field Company, which was training with mines in [Forli](#), experimented with 27 Mechanical Equipment Company in cutting a sidling on a 1 in 8 grade up and down a 20-foot-high stopbank on the Lamone River. It took an hour and a half to cut out a track that a loaded 3-ton truck could easily negotiate.

Twenty-seventh Mechanical Equipment Company carried on with the delivery of house rubble as well as opening up and working a quarry discovered near [Princes Cross](#).

Sixth Field Company, with Major P. W. de B. Morgan now in command vice Major Andrew, marched out to NZ Roll, was mostly employed in bridging experiments under the direction of the CRE. They were in general a continuation of the lessons learnt on the [Volturno](#) before the [Cassino](#) battles, but the sappers who had been involved there were now either casualties or on furlough, recently departed for New Zealand or transferred to headquarters duty. In their places were men newly arrived from training camps or line-of-communication duties, and not conversant with the capacity of dozers to haul built-up bridge sections across country.

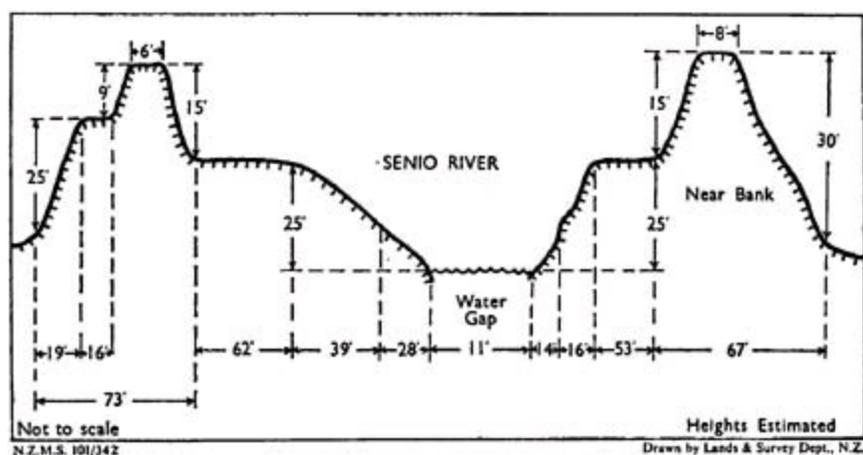
Typical of the experiments was one in which 6 Field Company proved that it took four and a half hours to sledge the components for 100 feet of single-single Bailey a distance of 250 yards across open ground, then manhandle them on to a 20-foot-high stopbank. It will be noted that engineer thinking was in terms of

stopbanks; in particular the [Senio](#) stopbanks.

The bridge had then to be assembled and the far stopbank tracked before the tanks and anti-tank guns could support the infantry against a counter-attack. It was assumed that 100 feet would be the minimum length of a high-level bridge, which meant in turn that 200 feet of components must be got on to the site. The reader will remember that as the bridge is pushed forward over the rollers a corresponding length must be built behind to balance the portion passing over the river, and so preventing it from tipping into the water. Finally, with the shorter nights approaching, not more than five or, at the most, six hours of darkness could be counted on after the infantry commenced the assault.

The suggestion was advanced that building time could be cut by removing a section of stopbank. As these were about 20 feet high and 75 feet wide at the base, and as at least 25 feet of bottom clearance was desirable, it meant that the top width of the gap would need to be about 60 feet across, which represented a very considerable amount of spoil to be shifted.

The idea was to tunnel or drill the bank and place in it some two tons of ammonal a night or two before the attack. The charges would be fired as soon as the infantry had crossed the river, whereupon the dozers, held some half a mile in the rear, would advance and clean up the gap while the bridging train was coming up and the far stopbank being checked for mines. The far bank would then be blown or graded by a dozer as the conditions permitted.



CROSS-SECTION OF THE SENIO RIVER, MARCH 1945  
—from a sketch in 7 Field Company's war diary

**cross-section of the senio river, march 1945—from a sketch in 7 field company's war diary**

An exercise designed to test the calculations involved was carried out by 8 Field Company on 22 February. The sappers were required to clear the approach route of mines, blow a 30 ft gap in the stopbank, and build 30 feet of bridge on skids. It was then to be hauled by tractors 700 yards to the site and the balance of the components sledged in for 100 feet of single-single Bailey, which was to be built and put down ready for traffic.

Everything went well until the sledging of the built bridge was attempted, when it was found that the ground was too soft, which caused the bridge to belly. The whole project was not persevered with.

What did not help much was the knowledge that among the spectators were [General Freyberg](#) and the Corps Commander. Sappers have a rich and varied vocabulary and it is probable that the visitors remained at a discreet distance, for the remarks querying both the ancestry of the recalcitrant bridge and those responsible for the ordering of the exercise would have had quite an edge to them.

Further demonstrations were given to the same audience on 26 February, when 5 Field Park [Bridging Platoon](#) launched a 'Canadian' footbridge across a 45 ft wet gap in nine minutes, which time included carrying it over the stopbank, and 7 Field Company built a 150 ft high-level bridge with two crib piers from components towed to the site 300 yards across country by dozers. Both were more or less routine jobs, but the third was something special.

A method to be tried out was believed to be quite new to military assault bridging and the product of much thought by the New Zealand engineer command; it required no launching nose, no tail, no counter-weight and no jacking down. The idea was, briefly, to use a folding boat as a movable platform from which to build each transom separately in situ and then join them to the rest of the bridge. The operation was a success and the crossing was ready in half the time required for a high-level Bailey. Everybody concerned with bridges went away to think out means of avoiding the snags which did crop up. The only major alteration to the idea was in the blowing of the near bank; the resulting spoil was so loose that it occupied more dozer hours to clean up than it would have taken to cut down the unblown bank.

Thereafter for low-level assault bridges graded roads generally ran over both

stopbanks, and for the high-level crossings part only of the bank was blown and the bridge launched through the gaps. The width of the wet gap and the height and distance back of the floodbanks determined the policy as each river was studied.

There was no doubt that both high- and low-level bridges were necessary; the high-level to provide crossings safe from floods and to allow the rapid and free flow of transport; the low-level to get the tanks across as soon as possible and at the same time afford some protection to the sappers while working in the open. One field company could build both bridges and clear the route beyond the river, and on a two-brigade front one bridge of each category per brigade was a reasonable requirement. A full-scale exercise on a selected length of the [Lamone](#) to represent the [Senio](#), with infantry crossing on kapok bridges and folding boats, the engineers following with high- and low-level bridges and the tanks crossing into the bridgehead, was staged on 3 March 1945 before a large audience of Corps, Divisional and unit officers.

The real-life Aldershot Tattoo was staged in brilliant sunshine. On a signal the demonstrating infantry swarmed over the near stopbank and across the river, the bridging gaps were blown and, almost before the rain of debris ceased falling, the sappers were at work.

While the audience discussed a morning tea of New Zealand ham and cheese sandwiches reinforced by sausage rolls and cakes from Eighth Army Cookery School, 8 Field Company worked on its 100 ft double-single high-level bridge, 6 Field Company on a 50 ft single-single low level and 7 Field Company on a 60 ft single-single low-level assault bridge, while 27 Mechanical Equipment tidied up with bulldozers and graded a track to the high-level bridge.

These low-level bridges were constructed on an entirely new principle, the brain child of the CRE, and a major contribution to the practice of military assault bridging where speed is essential. The details were worked out in collaboration with his officers. Major Morgan describes how the idea took form and substance:

'The CRE rang me at lunch time one day and said, "Can you not build a bailey off a F.B.E. raft?" I could immediately visualise what he had got hold of so I asked if I could come down and discuss it. While we had lunch Morris, Hunter and myself

worked out the method and drill required to build an "in situ" bridge using a F.B.E. raft as a building platform. It is all so simple once somebody had produced the basic idea.'

The assault bridges were constructed by slightly differing methods known in the sapper units as 6 and 7 Company styles respectively. The 6 Company style bridge—using a bay of folding boat as a building platform—was across in one hour and fifty-six minutes. Ramps were dozed down to bridge level and a track made up and over the far floodbank; support weapons were across the river less than four hours after the infantry.

Seventh Company's method of assembling one bay at a time and booming it out on a pier built on a folding-boat raft went amiss owing to a jammed roller tipping the pier and swamping the boat. The time for completion was five and a quarter hours but it was estimated that, all going well, three and a half hours would have seen the bridge ready for traffic. This was considered satisfactory because a very bad site had been purposely chosen to determine what was possible in making quick approaches and exits. The high-level bridge was put across in six hours twenty minutes.

Lieutenant [McLeod](#),<sup>17</sup> who at the time of these experiments was on the staff of Headquarters New Zealand Divisional Engineers, comments:

'It was a brilliant scheme and as far as I know was Brig Hanson's own, though no doubt his Company Commanders assisted. At the time I was a 2/Lieut in his HQ. Strangely enough the RE officers invited to witness the experiments were unimpressed and never adopted it, yet subsequent events proved it was unequalled. On the [Senio](#) neither the Poles on our left nor the Indians on our right managed any crossings (the Indians had one shaky double decker Ark) and used our bridges and similarly in the attacks following other Divs used our bridges. All NZ Div B Transport even was across in 24 hours. I was amused at a Corps report (RE) of that time commenting on the impossibility of maintaining all the bridges the Kiwis built. Again they failed to realize that it was the number of crossings that enabled not only [2 NZ Div](#), but the adjacent ones to get rolling north. Thereafter only one "up" and one "down" should have been necessary and the other bridges could have been removed.'

The New Zealand bridge-building theory must have made some impact on Authority, however, for it is thus commented upon in an official RE publication: <sup>18</sup>

'The New Zealanders developed a very rapid method of constructing low level Baileys across small rivers with high floodbanks. New Zealand practice was to dump bridging equipment on the near side of the floodbank, carrying it over the floodbank as soon as conditions allowed. Single single girders were then assembled, leaving out the bottom pins securing the end panels; and the girders were launched by supporting them on a folding boat raft. When across the gap the girders were lifted to the horizontal by manpower, and the bottom pins inserted. Transoms were then positioned and the bridge decked down, the complete construction of bridges forty or fifty feet long taking only between thirty five minutes and an hour. The blowing or dozing of the near floodbank progressed while the bridge was being built, and the first vehicle to cross was an armoured dozer to prepare an exit on the far bank.'

The command of the New Zealand sector near [Faenza](#) passed to the Polish [5 Kresowa Division](#) on 6 March, and the brigades and regiments of [2 New Zealand Division](#) turned their backs on the [Senio](#) for the time being. They were going into the foothills again, this time to train for the spring offensive. The area allotted to the engineers was in the vicinity of the walled hilltop city of Macerata, 22 miles south of [Ancona](#), to which district, less 5 Field Park Company and Headquarters 2 New Zealand Divisional Engineers, they departed on 5 March. The others followed two days later. 'A lovely area and we are quartered in a huge mansion with electric light and central heating. Lovely view of the [Apennines](#) which are only a few miles away.'

The training directive specified a week to rest, refit and clean up, followed by three weeks' solid training in all branches of sapper work. Practice with mines and mine detectors, plus route-marching and smartening-up drill, had their places in the syllabus, but the greater part of the time was spent in low-level bridging by both 6 and 7 Company methods, predicted on the proposition that building would not be possible before 11 p.m. and must be finished by 4.30 a.m.

It is, of course, vastly different building bridges in daylight to building them at night, for at night the fitting together of equipment and the working of mechanical equipment must be done by feel instead of by sight. Artificial moonlight was helpful for general movement, but for detailed work the sense of touch had to be relied

upon. In planning the schedule for a bridge-building operation it was considered necessary to double the time if the job was to be done after dark. So, naturally, most of the bridge training was done by night.

The composition of the sapper platoons had been so altered by the departure of the Tongariro draft and the allocation of front-line men to headquarters staffs and other rear area echelons that those who remained, plus the 13th Reinforcements, were in much the same position as the engineer companies on the [Sangro](#) a year earlier. Almost nightly then, wet or fine, they assembled components and built bridges by sense of touch across suitable lengths of sunken road. After the first few days it was certainly no holiday for the sappers nor for the officers and NCOs who, after each exercise, rebuilt the bridges in the Orderly Room, suggested short-cuts, improved techniques and changes of position in the bridging teams. There were water-courses almost ad infinitum between the [Senio](#) and the Po rivers—and [Venice](#) beckoned.

On 24 March 6 and 8 Field Companies and a detachment from 5 Field Park Company went to the Lido di Roma bridging camp for a week's training on the same syllabus as that followed by 7 Field Company the previous month.

Another engineer unit was formed during this period. Consideration had been given by the CRE ever since the opening of the winter campaign to the formation of an Assault Squadron to operate armoured equipment in place of the soft-skinned dozers, for use in situations where 27 Mechanical Equipment Company could not work. Twenty-eighth Assault Squadron came into being on 21 March 1945 under the command of Major J. Brooke-White. The establishment consisted of 7 officers and 156 other ranks organised into a Squadron Headquarters and two troops to operate 21 tanks—3 Stuarts, 2 Sherman troop carriers, 4 Sherman dozers, 4 Churchill AVREs, 4 Churchill Arks and 4 Valentine bridge-layers (Scissors). Much of the equipment, however, did not arrive until the first week in April, which meant that the operators were not very well acquainted with it when they took over their duties.

The personnel of the new unit came from several sources—signallers from the Divisional Signals, drivers from Advanced Base, technicians from 4 Armoured Brigade and key NCOs from the Field Companies. The bulk of the Squadron were from the 13th Reinforcements, some of whom had fought in the [Pacific](#)—'Coconut Bombers' to

the old hands—but the majority were without operational experience.

The war diary of 28 Assault Squadron begins on 24 March 1945:

‘Today two officers and 21 ORs start living together and get to know each other. Thus the nucleus of the new Assault Squadron was formed. A bit of transport arrived, two 3-tonners, two 15 cwts, one jeep, and 2 M/Cs and 6 scout cars on loan. So now we can move if necessary. Our location is in a beautiful casa on a hill overlooking Passo-de-Treia, weather beautifully fine. Ideal location for Div's resting up.’

Sapper casualties for the period 25 November 1944 to 6 March 1945 were 1 killed, 17 wounded and 5 prisoners of war.

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<sup>1</sup> Triple-single Bailey bridge.

<sup>2</sup> 5 Bde had taken a roundabout route which bypassed the blocked road.

<sup>3</sup> Cpl H. T. Hepburn; Te Aroha; born Thames, 13 Jan 1913; baker.

<sup>4</sup> The CRE had also at his disposal from time to time various Corps Engineer units, which were mostly used in the rear line of communications but will be mentioned when employed in the forward areas.

<sup>5</sup> Lt O'Reilly, private diary.

<sup>6</sup> Maj B. C. H. Moss; born NZ 14 Oct 1919; clerk; accidentally killed 1955.

<sup>7</sup> Unserviceable.

<sup>8</sup> For a description of this action, a clash between enemy fighting patrols and B Coy, 23 Bn, see 23 Battalion, pp. 410–11.

<sup>9</sup> Princes Cross, so named by British troops, was also called Ruatoria by the Maori Battalion and was a junction where roads from Celle and Faenza met.

- <sup>10</sup> Sgt R. J. Roberts, DCM; Hamilton; born Weber, 6 Sep 1910; carpenter; wounded 15 Dec 1944.
- <sup>11</sup> Sgt H. Mudford; Korokoro, Petone; born Wanganui, 28 Jul 1915; carpenter; wounded 15 Dec 1944.
- <sup>12</sup> Lt C. D. Lewis, m.i.d.; Okaihau; born NZ 25 Oct 1913; draughtsman.
- <sup>13</sup> Lt R. J. Annabell, m.i.d.; born NZ 24 Nov 1911; civil engineer.
- <sup>14</sup> Sgt A. Mack. Barbour, m.i.d.; Auckland; born Aberdeen, 20 Dec 1914; sheetmetal worker.
- <sup>15</sup> Col Hanson resumed his appointment as CRE 2 NZ Div on 12 Nov 1944 on his return from furlough.
- <sup>16</sup> Lt N. A. Bannantyre; Wellington; born NZ 30 Oct 1914; civil engineer.
- <sup>17</sup> Capt N. C. McLeod, m.i.d.; Mangakino; born Auckland, 5 Aug 1921; assistant engineer, Ministry of Works.
- <sup>18</sup> Engineers in the Italian Campaign, 1943–1945.
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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## CHAPTER 23 – TO RONCHI

## CHAPTER 23

### *To Ronchi*

The sappers at the Lido di Roma bridging course returned to the Division on the last day of March just in time to pack up for the return to the [Senio](#). The re-entry to the battle area was to be made strictly incognito, with all signs and insignia removed as part of a deception plan whereby it was hoped that the convoys would be assumed to indicate merely an internal relief.

The intention was that Eighth Army and Fifth Army should secure a large bridgehead in the Po valley as the first stage of an advance into north-eastern and north-western [Italy](#). Eighth Army was to attack through the [Argenta Gap](#) between Lake Comacchio and low-lying country which had been flooded, and at the same time was to thrust westwards over the [Senio](#), [Santerno](#) and Sillaro rivers to [Budrio](#); Fifth Army then was to open its offensive with [Bologna](#) as the objective, and the two armies were to establish the Po valley bridgehead around [Bologna](#) and [Ferrara](#). The wide alluvial plain, now firm of surface, offered free movement to hitherto road-bound vehicles; many of the innumerable irrigation ditches were dry and grape vines, hung on wires like green laundry, provided cover from view. Birds sang, frogs croaked and wild flowers bloomed underfoot. It was the Italian spring again.

The immediate object was to break the [Senio River](#) line and secure a bridgehead over the [Santerno River](#) beyond. Fifth Corps was to attack with [8 Indian Division](#), right, and [2 NZ Division](#), left, and left of the Kiwis was the [Polish Corps](#).

The New Zealand assault was to be made by [5 Brigade](#) on the right and [6 Brigade](#) on the left. Fifth Brigade would have, initially, an open right flank, for there was an interval between it and the left flanking Indian brigade. In this gap was the village of [Cotignola](#) which [27 Battalion](#) of [9 Brigade](#) was to capture at the earliest opportunity. <sup>1</sup> The earliest opportunity was much too late for [7 Field Company](#) because [27 Battalion](#) was coming up in armoured troop-carriers—Kangaroos in military jargon—and that meant that [Cotignola](#) would remain uncaptured until the [5 Brigade](#) bridges were across the [Senio](#).

The Engineer units settled in and around the small town of [Granarolo](#), six miles north of [Faenza](#). The sappers shrugged their shoulders in the Italian manner when

they realised that the Poles had inherited all their winter's work, for the new Divisional sector was some three miles seawards of the roads they had built and maintained throughout the winter.

It was, however, some recompense that the infantry were responsible for all secondary roads in the area; the Field Companies were to care only for the brigade main axes and Divisional routes forward to the river.

The area had not been thoroughly mineswept and the sappers walked warily until they had checked all tracks forward to the FDLs. There were enemy posts still on what was regarded as 'our bank' and minor battles went on for days until the last German was deprived of his grandstand. Engineers are not keen on working under close observation, and as they were going to be very preoccupied with the near floodbank, the chasing away of the enemy was a matter of favourable comment.

Equipment and personnel began to arrive for the Assault Squadron, as is shown by these extracts from the Squadron war diary:

2 April: 3 Valentine bridge layers and 4 Avres were collected from 4th Armd Bde. We are now beginning to look more like an Assault Squadron and are getting a rough idea of our tasks in the approaching attack.

3 April: Two Sherman dozers and one Valentine collected. We are getting a pretty good fleet together now. The Squadron was split up into troops today. No. 1 Troop has Capt Menzies as OC and Lt Ridley<sup>2</sup> as 2 i/c. No. 2 Troop has Capt Fenton<sup>3</sup> as OC and Lt McGregor as 2 i/c and Lt Logan<sup>4</sup> attached. Lt Tapley<sup>5</sup> went to Hq.

4 April: One Sherman and one Ark were delivered from the 4th Bde and they arrived OK despite having learner drivers. Also collected two Humber scout cars from FDS. Tank drivers left to collect Honeys.

On 5 April the Squadron moved forward to the crossroad village of La Bernada near the Lamone.

5 April: The two troops and HQ all settled in different casas within a radius of half a mile. All personnel except transporter drivers and tank crews were ferried

up on 15 cwts and scout cars successfully. At 1700 hrs 1 – 6 tonner, 3 Jeeps 3 winch trucks (3 tonners), 3 – 15 cwt and 3 half tracks were collected and equally divided among the two fighting troops and HQ. The three troops can now move independently of one another.

During this period 5 Field Park Company had collected from Corps dumps and delivered to the infantry units concerned with the initial crossing of the river some seventy-five assault boats and five kapok assault bridges. The CRE also had under command, in anticipation of numerous small obstacles to movement, E Squadron of 1 Assault Brigade, RAC/RE; an extra bridging train, [No. 2 Platoon](#) of 1 NZ Ammunition Company, which in turn was increased by six three-tonners from NZ Supply Company, came under command of 5 Field Park Company. The extra bridging detail was commanded by Captain [Williams](#)<sup>6</sup> and divided into two trains of 17 and 18 load-carrying vehicles, each with a full 110 ft Bailey bridge plus spares—the two high-level bridges for the Division. Fifth Field Park Company had also taken under command 309 Company, RASC, and Colonel Hanson was maintaining road communications with 565 Field Company, RE, in the rear areas.

In addition to the mechanical resources of the Division, there was available as needed a variety of fauna new to biology. These were:

Kangaroos: Sherman tanks stripped down for the conveyance of infantry.

Crocodiles: Flame-throwing tanks towing trailers of fluid.

Wasps: Flame-throwing Bren carriers, more mobile but with a shorter range than Crocodiles.

Ducks: Officially DUKW, American serial letters indicating a buoyant lorry driven over land on six wheels and through water by propeller.

Weasels: Amphibious small tracked vehicles.

Fantails: Amphibious tanks stripped of turrets and internal fittings. The driver sat at the rear and could lower the front to act as a loading ramp. It could carry an antitank gun or a Bren carrier. The tracks were fitted with 'grousers' which acted like small paddle wheels in the water.

Engineer thinking and planning had been to put down two assault low-level bridges immediately the infantry cleared the [Senio River](#) and two high-level bridges for the Divisional wheels, but the GOC altered this by announcing at a Corps conference that 2 NZ Division would have four tank bridges open for traffic before dawn. Perhaps he did not remember that high-level bridges were much longer and took more time to erect, but he smiled happily at Colonel Hanson who was with him. The CRE swallowed convulsively and set about doubling his low-level bridge component order and selecting extra sites from the air photographs.

In this connection it is worth mentioning that the enemy discouraged close scrutiny of the [Senio River](#) and there were many conflicting reports concerning the water gap. The distance between the stopbanks was clear enough on the photos, but reports of the width and depth of the water itself varied widely. Recourse was made to measuring up from maps the watershed of the [Lamone](#), which was in our hands, and that of the [Senio](#) which was not. As both waterways were in the same type of country, it followed that the [Senio](#) water volume would be proportional to the catchment area, and the calculation was made that the water flow of the [Senio](#) should be from 50 to 60 feet wide.

In point of fact the reports were accurate enough for the areas reported upon, but a tangle of blown bridge debris had collected above a weir west of [San Severo](#) and formed something of a dam so that the water backed up into a deep narrow lake.

The Field Companies swept the route to their bridge sites and marked turnarounds for the use of the bridging trains as the vehicles were unloaded; officers from Divisional Cavalry Battalion who would be in command of sapper covering parties were shown their areas of operations; guides for the transport memorised their landmarks, for although artificial moonlight was to be laid on, the smoke and dust could largely cancel out that advantage. <sup>7</sup>

The allocation of bridge-building tasks, with lengths of bridge according to the varying widths of the wet gap, were:

7 Field Company: one 40 ft single-single low-level and one 100 ft double-single high-level bridge.

8 Field Company: one 60 ft single-single low-level and one 100 ft part double-single and part single-single high-level.

6 Field Company: one 40 ft single-single low-level.

28 Assault Squadron: one scissors bridge.

E Assault Squadron, Royal Engineers, under command of the CRE for the operation, and 28 Assault Squadron were to give close support to the armour which would be hurrying to the aid of the infantry—as soon as the sappers made that possible.

By the night of 8 April there was little left to do. A series of conferences had assured that all officers concerned were fully briefed in their part of the Engineer plan for the assault crossing of the [Senio](#)—briefed in everything that is except the date.

The unblooded 28 Assault Squadron was still receiving equipment—'UCV arrived from Sigs complete with bells much to the joy of HQ. Operation Order No. 1 issued by Maj Brooke-White. As the time for our first operation draws near everybody is very keen and morale is excellent. Dust nuisance very bad and 2 I/C cannot get his hair cut.'

The signal that announced the day and the hour was sent at 10.30 the next morning and is reproduced in full. It read:

In lieu of AF C 2136—

From HQ [2 NZ Div](#) Engrs 091030 B

To

5 NZ Fd Pk Coy

27 NZ ME Coy

E Aslt Sqn RE

6 NZ Fd Coy

28 NZ Aslt Sqn

7 NZ Fd Coy

8 NZ Fd Coy

325 top secret (.) op buckland (.) Subject to last minute changes timings as follows (.) D Day 9 Apr (.) H Hr 1920 hrs (.) ack

Engineer command on 9 April 1945 was as follows:

Headquarters 2 NZ Divisional Engineers

Col F. M. H. Hanson

Maj R. C. Pemberton

Capt H. L. Yorke

Lt C. S. Fraser

2 Lt N. C. McLeod

Lt G. C. O'Hara, NZ Divisional Signals attached

6 Field Company

Maj P. W. de B Morgan

Capt N. J. H. Harris

Capt R. W. Morris

Lt R. Erickson

Lt G. K. Jackson

Lt G. F. Kirk

Lt R. J. Quinn

Lt T. L. Fancourt

Lt J. F. Davies

Lt W. J. Tattersfield

Lt H. E. Gibson

#### 7 Field Company

Maj G. A. Lindell

Capt A. Veart

Capt J. S. Berry

Lt J. L. Lawson

Lt L. P. M. O'Keeffe

Lt N. C. Stitt

Lt R. J. Annabell

Lt R. H. Park

Lt W. M. Miller

Lt T. Bassett

Lt S. J. Mathews

Lt N. N. Carnell

Rev. E. F. Farr, Chaplain attached

#### 8 Field Company

Maj C. Clarke

Capt A. A. Treloar

Lt J. W. S. Abernethy

Lt A. A. Begbie

Lt W. H. Harvey

Lt D. A. Hudson

Lt A. R. H. McLauchlan

Lt D. B. Roy

Lt R. J. McMillan

Lt L. G. Allan

Lt F. Boxall

Lt P. I. Bruford

## 27 Mechanical Equipment Company

Maj G. K. Armstrong

Capt L. F. Faram

Capt A. A. Keller

Capt W. J. McConachie

Lt S. R. T. Clarke

Lt R. Gilmour

Lt J. A. Marshall

Lt L. C. Bydder

## 28 Assault Squadron

Maj J. Brooke-White

Capt E. Farnell

Capt G. S. Menzies

Capt K. C. Fenton

Lt G. McGregor

Lt J. W. Ridley

Lt E. C. Tapley

Lt J. M. Logan

5 Field Park Company

Maj L. C. E. Malt

Capt M. H. Kemp

Capt K. R. Stemson

Lt E. W. Whiteacre

Lt N. R. Langbein

Lt D. Wilson

Lt H. G. Birkett

Lt R. Pedersen

Lt K. R. C. Rowe

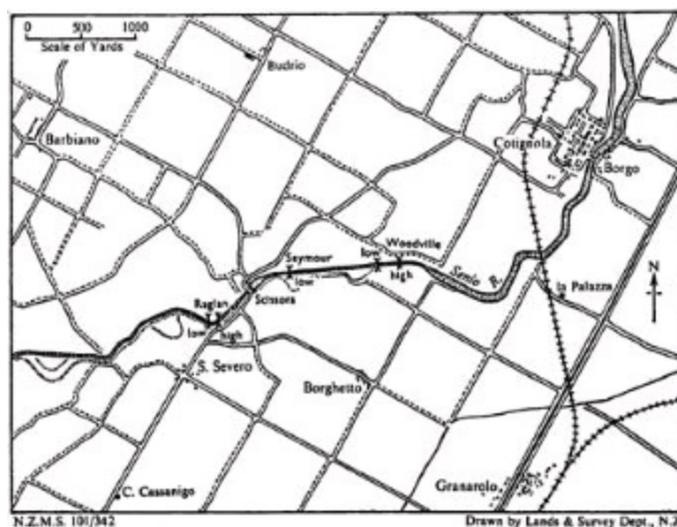
The morning of 9 April was much the same as recent mornings on the [Senio](#) front: the odd report of a gun sending a shell over and the answering crack of the reply; an occasional 'recce' plane taking a look around and a hard white frost melting in the warmth of the sun.

About 2 p.m. Fortresses and Liberators in waves of twenty, flying high up

against the blue of the afternoon sky—they appeared to the sappers to be wing tip to wing tip—roared up to and across the [Senio](#).

The lesson of the [Cassino](#) road-destroying heavyweight missiles had been learnt, for these planes were dropping small fragmentation bombs. For an hour they followed overhead, wave after wave, scattering 2000 tons of exploding metal. Then the guns, hundreds of guns, opened fire and the ground shook and the air quivered with the speeding shells. Then the fighter-bombers dived on their targets, then more gunfire, then more planes.... But there was still something new to come. At last light Wasps and Crocodiles rushed up the floodbank to spew streams of liquid flame across the river. Finally the steel curtain of the barrage, after blasting awhile on the far bank, moved forward and the infantry, hidden in the dust and smoke, quickly crossed the river on rafts and kapok bridges; it was then the turn of the sappers.

Major Lindell's plan was for 7 Field Company's [No. 1 Platoon](#) (Captain Berry) to search the far stopbank for mines (in the doing of which Corporal [Jorgensen](#)<sup>8</sup> laid the foundations for an MM), then place and blow a series of charges along a grade that would assist the dozer operator in the formation of a route for wheels and tracks over the obstruction. [No. 2 Platoon](#) (Lieutenant [Lawson](#)<sup>9</sup>) would build the high and [No. 3 Platoon](#) (Lieutenant Annabell) the low-level Baileys on 5 Brigade front.



BRIDGING THE SENIO, 9-10 APRIL 1945

### bridging the senio, 9 – 10 april 1945

There will be much mention of low-level bridging in this account and at a risk of

undue repetition the essential differences between the New Zealand and British systems of construction must be emphasised. The vital point is that, although they are referred to in this and other histories as low-level, they were in fact water-level bridges. Brigadier Hanson has contributed his views on the point:

'The New Zealand low level Bailey bridge is quite unrelated to the low level Bailey as so described in "Engineers in the Italian Campaign".<sup>10</sup> The British low level Bailey used up much more equipment than our bridge and was launched in the orthodox manner with launching nose etc. Our bridge was either pushed out with the end resting on a folding boat or it was built completely in situ with a folding boat or some form of raft or trestle to act as a supporting platform during the building work. It was not usual to leave out any bottom chord pin as suggested in the Blue Book. As a matter of fact the British and other Divs. in [Italy](#) never understood or appreciated our low level Bailey. The two outstanding merits of the New Zealand low level Bailey were the speed of erection and the use of minimum material.'

The bridging train, in this case the attached Ammunition Company platoon (Captain Williams), left [Granarolo](#) at a time which brought it near its unloading point at the appointed hour. It is of course axiomatic that when there are a number of bridges to be built simultaneously there must be the most rigid control of traffic circuits. No vehicles of any description were permitted between the assembly area for bridging trucks and the site of the bridge until the sapper officer in charge advised that he no longer needed unhindered use of approach roads. It further follows that crossroads within artillery range are natural targets. Defensive fire from the direction of [Cotignola](#), east of the New Zealand sector, upon the Agrippano crossroads set one truck on fire and ditched a second so that traffic in any direction was completely blocked.

Efforts to winch the ditched vehicle out had to be abandoned and a dozer was used to push the obstruction out of the way. Captain Williams's coolness in standing unsheltered on the target area while efforts were made, first to winch and then to clear the obstruction, was duplicated several times while his platoon was attached to 5 Field Park Company and was recognised by the award of an MC.

Referring back to the Ammunition Company's trouble at the Agrippano crossroads, three trucks of components had got safely to Lieutenant Annabell's

bridging party before the interruption, and in spite of having to take cover from time to time as the enemy sprayed the river line the sappers had the bridge across the wet gap by 1 a.m. An hour and a half later the approaches were finished and the dozer was working on the far bank. It is on record that 150 vehicles crossed this bridge by first light. The bridge was built at a cost of one killed and one wounded, and Lieutenant Annabell, whose example had no little influence on this pre-eminently successful effort, was later mentioned in despatches.

The high-level site was 200 yards farther to the right on the exposed flank of 5 Brigade and was subjected to quite heavy fire from mortars and guns in the [Cotignola](#) area. Sergeant [Archibald](#) <sup>11</sup> distinguished himself first in leading the mine checking party and later in the actual bridge-building, during which nine sappers were hit, two fatally. Part of his MM citation reads:

'The heavy fire continued during the bridging operations and the Platoon suffered severely in casualties, but by his personal example and inspiring leadership Sgt Archibald rallied his men to complete the bridge by early morning, thus contributing to the rapid build up of support weapons in the bridgehead.'

Traffic was passing at 8 a.m. and a section of sappers, held for the purpose, then took over the maintenance of both bridges.

Sapper [Hooper](#) <sup>12</sup> was also awarded an MM for endurance and gallantry at this bridge. He was engaged in carrying explosives across the river for blowing a gap in the top of the floodbank where the far end of the high-level bridge would be positioned. Until the mine-clearing party had made lanes, he picked his way as best he could through a belt of Schu mines so that there would be no delay in getting the vehicles through to the infantry. He carried on for three hours through mine-infested country and under shellfire until all the necessary explosive had been delivered.

A New Zealand war correspondent who managed to get himself attached to the Engineers for the occasion wrote this impression of 7 Field Company at work on its low-level bridge. It would apply with equal force to all the crossing jobs put through that night. His account ran:

'At midnight last night I sat on the stopbank on the [Senio](#) river and watched the 7th Field Company, New Zealand Engineers, build a low-level Bailey. Behind us the

big guns roared and crackled through their unending chorus of death as they hurled a creeping barrage ahead of the infantry battalions steadily advancing through the night two miles in front.

'The top of the stopbank cut a straight black line across the light as we approached, except for one deep gap where a dozer snorted back and forward, steadily deepening the approach to the bridge. In the 40 foot chasm between the stopbanks, where you had to peer into a man's face to distinguish his features, the company moved about its task with the precision and assurance of men working in broad daylight.

'On a ledge half way down big lorries driven through the gap had been loaded off, and all the materials lay in orderly stacks in their order of need. One man stood by to indicate the place of each piece called for.

'Across the long steel beams lay planks forming temporary bridging on which to build the bridge. As the last plank was laid the first side section of the bridge was carried on to it and the next was right behind and instantly tied to it. Before both sides had been completed, transoms and decking were going into place between them and as one watched these unhurried quiet-speaking experts, the bridge seemed to grow as if by magic. Actually, long before daylight tanks were rolling across it and speeding north in good time to take up their battle stations.'

Major Clarke's plan for the 8 Field Company assignment was for [No. 1 Platoon](#) to build the high-level and [No. 3 Platoon](#) the low-level Bailey for 6 Brigade. [No. 2 Platoon](#) was responsible for maintenance.

Lieutenant Begbie, whose diary has been quoted in earlier chapters, was in command of the mine-clearing party drawn from 3 Platoon. He writes:

'The infantry went across immediately the Wasps and Crocodiles had burnt out the Teds' stopbank. By this time we were in position near [Granarola](#) about 400 yards behind the Inf. As soon as the Inf went over the top I moved up with my mine clearing section and blew the cut. Then Hec [Sinclair](#)<sup>13</sup> and I crossed over with Don [Donovan](#)<sup>14</sup> (Div Cav covering party) and went forward on the recce. Finally selected a suitable route to the main road and then went on to [Barbiano](#) with one section of

Div Cav under a Cpl (Graham —). I sent Hec <sup>15</sup> back to carry on clearing the route out. We ran into two Tiger tanks near [Barbiano](#) just as they had bowled a couple of [25 Bn](#). Turned back and I wirelessly "road good to point 212". Saw the Major at ADS (Helluva din going on the whole time Moaning Minnie in action). Waited the removal of Tigers and carried on prodding. Major Clarke said to go forward again to [Barbiano](#). Did so. Heavily shelled on Dead Cow Corner. Lost two of my cover party. One stomach wound and one leg fracture. Reported road clear to 212 and suitable [for] tanks or wheels. Shelled on my way back. Lost one of my sappers (Alex [Mee](#) <sup>16</sup>) with leg wound.'

The train carrying the components for 8 Field Company's two bridges was not troubled by the German gunners until it reached the building site but neither trucks nor drivers were injured.

The area around the sites was checked, and the dozers were called up and working on the access routes by 9.45 p.m. Ten o'clock saw both platoons flat out; the low-level bridge was across at 2.30 a.m. and open to tanks at 4 a.m. Two hours later the high-level was also open to wheels. Two sections of [No. 2 Platoon](#) (Lieutenant [Boxall](#) <sup>17</sup>) went up at early light to maintain the bridges and approaches, for which job they had a dozer and four tipper trucks from Mechanical Equipment carting rubble. A shell landed by the dozer and wounded Lieutenant [Bydder](#), <sup>18</sup> who was in charge of the forward maintenance.

Sixth Field Company bridge, detailed by Major Morgan to [No. 3 Platoon](#) (Lieutenant Quinn), was situated between the two brigade main access routes and would put traffic on roads leading to both [Cotignola](#) and [Barbiano](#). The approaches were ready and building started by 11.30 p.m. The area was shelled sporadically and one of the covering party was wounded, but work was not interrupted. Exactly three hours later all mines had been lifted from both banks of the river, the bridge was ready for use and the dozer was making a track across the far stopbank. A culvert on the road to [Cotignola](#) completed the platoon's work and it returned to the Company area at 4 a.m.

The only place where the [Senio](#) was narrow enough to be spanned by a scissors bridge was between the 6 Brigade main artery and the 6 Field Company bridge, immediately below a blown weir.

No. 1 Troop, 28 Assault Squadron (Captain Menzies), was given the job of putting down a crossing place for the armour. The sappers found the enemy side of the near stopbank cunningly littered with mines of all descriptions—Schu mines, S-mines, Teller mines, Topf mines, and most dangerous of all, R-mines. The combination of dust and battle smoke made visual searching hopeless and it was necessary to clear a lane to the site with mine probes. Captain Menzies led the lane-clearing by personally lifting, disarming or destroying in situ, thus encouraging the new sappers in their first joust with sudden death. An armoured dozer got off the track in the murk and went up on a mine. Captain Farnell, who was supervising his Squadron's first effort, called up an attached 27 Mechanical Equipment Company D6 and meanwhile cleared a track to recover the damaged Sherman dozer. The driver, Corporal [Anderton](#),<sup>19</sup> though suffering from blast and shock, was anxious to get working again and as soon as the replacement arrived he took over its operation.

When the site had been prepared the scissors bridge was let down on solid timber foundations and Menzies led his mine-prodding party to the far bank, where another lane was cleared for the D6 to work on the exit track.

The thin-skinned D6 operated by Corporal [Read](#)<sup>20</sup> crossed the scissors and was followed by a Kangaroo. Three anti-personnel mines that had been missed exploded under the weight of the machine, but Read carried on until he detonated a deeply buried anti-tank mine. Almost simultaneously the Kangaroo found a mine that the dozer had missed. The dozer was not damaged but the Corporal was badly shaken and four sappers in the Kangaroo were wounded, the first casualties in 28 Assault Squadron. Despite his shaking up Read carried on grading a track over the stopbank. For this and later deeds of determination he was awarded an MM.

Other bridges were now nearing completion, so by direction of the CRE the project was abandoned and the armour was rerouted via the nearby 6 Field Company crossing. The scissors remained as a standby and a monument to gallant work by a squadron out on operations under difficult conditions for the first time. Captain Menzies' example and leadership were recognised by the award of an MC.

It is worth while at this point to study a table, taken from a contemporary official publication, which shows the numbers of bridges built and the times taken by the three Eighth Army divisions in the [Senio](#) assault.

On the Indians' front:	By 4 a.m.	A low level Bailey
	By 5 a.m.	An ark crossing
	By 8 a.m.	A second low level Bailey
	By 9 a.m.	A third low level Bailey
	Also a class 9 bridge that was damaged when a tank attempted to cross, and was finally abandoned.	
On the New Zealanders' front:	Six crossings—a scissors bridge, three low level Baileys and two Baileys level with tops of floodbanks—the first completed at 1.30 a.m., the last at 6.30 a.m.	
On the Poles' front:	By 8 a.m.	A floating folding boat bridge
	By 9.30 a.m.	A low level Bailey
	By 10.45 a.m.	A second folding boat bridge
	By 12.45 p.m.	A second low level Bailey
	By 7 p.m.	A mobile Bailey, completion of which had been delayed by the connecting link snapping when all was ready for launching.

All six New Zealand bridges were tank bridges.<sup>21</sup> The Poles had no tank bridges over by daybreak and it was only with difficulty that a few tanks got across on the Indian sector.

Of course, conditions were different on the other two sectors, where possession of the near stopbank was not gained before the main assault commenced, as was the case with 2 NZ Division. It will be noticed that the times do not correspond exactly with those given in the previous pages, which are when the bridges were passing traffic. The actual building of the bridges was one job and the preparation of approaches and exits a separate consideration.

Later river crossings confirmed the superiority of the New Zealand sappers' methods.

'For the type of river and canal encountered from the senio to the po, the low-

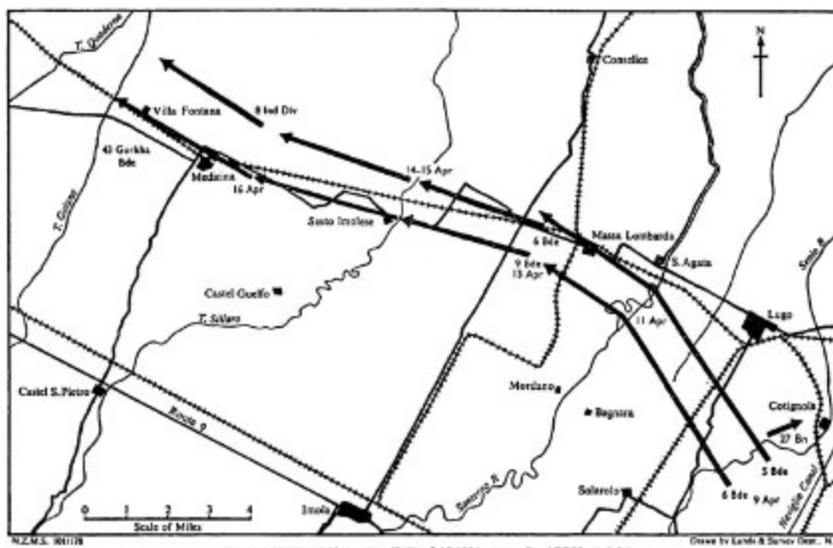
level Bailey built in situ at the bottom of the riverbanks, only a few feet above water, was by far the speediest means of getting tanks and Divisional transport forward. These low level bridges were invariably completed in half the time required to build and launch by orthodox means the 100 to 150 feet Bailey bridge at natural (not flood) bank height above water. Furthermore, owing to the greatly reduced span length at the bottom of the banks, a great deal less Bailey bridging was expended, a very important factor when supplies are short and replenishment difficult.

'Another advantage of the low level Bailey is the fact that down at the bottom of the river banks there is considerable cover from enemy fire; there were occasions when work would have been interfered with and delayed had a high level Bailey been under construction whereas on the low level bridge the work went ahead comparatively smoothly.'<sup>22</sup>

'E' Assault Squadron crossed the [Senio](#) ahead of the armour and escorted it forward. At first light the infantry was on the line of the Canale di [Lugo](#), which had already been treated by the bombers as an enemy defended position—which meant that hardly a building remained standing.

The Santerno River, which it was hoped to gatecrash, was about two miles away with the [Scolo Tratturo](#) in between.

Twenty-eighth Assault Squadron had got up before daylight and was waiting for the infantry to attack beyond the Canale so that tank crossings might be prepared. There was, however, very little water in the Canale and it was thus not a serious obstacle to tanks, but three crossing places were prepared for use if wanted.



### from the senio to the gaiana, 9 – 17 april 1945

The [Scolo Tratturo](#) caused some delay but the infantry had it behind them by late afternoon and were nearing the [Santerno](#). Both Assault Squadrons dozed crossings and each put down an Ark in the [Scolo Tratturo](#).

The infantry exploited through the shattered enemy defences up to the [Santerno River](#); 5 Field Park Company replenished its bridge holdings and moved into [Granarolo](#); 6 Field Company reported to Headquarters 5 Brigade near [Budrio](#) and 8 Field Company settled in with Headquarters 6 Brigade near [Barbiano](#). Seventh Field Company stayed put, with all men who were not resting after the night's work engaged on road maintenance with 27 Mechanical Equipment Company, which had made [Granarolo](#) its base. Twenty-eighth Assault Squadron and 'E' Squadron, RE, were in close support near the [Santerno](#). Farther afield, the Indians had already forced a small bridgehead and the Poles, after mastering determined resistance, were coming up fast. The enemy was certainly off balance for odd parties were trying to deliver rations behind our forward defended posts; 28 Assault Squadron collected its first batch of prisoners while they were engaged in this pursuit. 'Things became fairly static while a set piece attack on the [Santerno](#) was being jacked up. The OC and four of his staff made a recce in the Honey and bumped into some Jerries. They took nine prisoners and a ration cart and two ponies.'

The actual crossing of the [Santerno](#) began that night (10 – 11 April). The river itself had been straightened and there were actually two beds, one almost dry, the [Santerno Morto](#), winding in a series of loops and the other, the canalised [Santerno](#),

constrained between floodbanks, which cut across the old river loops so that some were on our side and some on the enemy-held side of the water barrier. It was a strong position solidly prepared for defence, and it could have been a hard battle had not the German [98 Division](#), from the enemy point of view, been largely a write-off after its hammering on the [Senio](#). Many of the concreted strongpoints were without garrisons.

On the 11th, while the action on the [Santerno](#) was developing, 7 Field Company moved up to a crossroads village between [Budrio](#) and [Barbiano](#). [No. 1 Platoon](#), already warned, built a 70 ft double-single Bailey over the [Scolo Tratturo](#) on the Divisional axis west of [Lugo](#). It was a straightforward job with no interference.

Major Morgan was instructed to get a 40 ft low-level bridge over the [Santerno](#) in support of 28 (Maori) Battalion, which in the early afternoon had built up a small bridgehead. There was little choice of sites for the whole area was under observation from the enemy-held village of Sant' Agata. The stopbank was charged and blown without casualties, but a dozer would have been a sitting shot until the Artillery had supplied smoke around the site and high explosive in great quantities on Sant' Agata. Sapper [Strahl](#),<sup>23</sup> preparing the approach route for the bridging trucks, was under such heavy fire that he was in the middle of filling a crater when a shell landed a few feet away from his machine and blasted away most of the spoil he had already pushed into the hole. It was after 6 p.m. before it was possible to get the components on to the site. Sergeant R. J. Roberts, in command of the bridge-building operations, had a difficult night for an enemy machine-gun post out on the flank frequently sprayed the area with bullets. He kept his team working at full efficiency by the force of his own example and by placing a sapper with a Bren gun well clear of the bridge, but in a position to fire long bursts in the direction of the German post. As soon as the bridge was down Sapper Strahl drove his machine across and dozed an exit route so that the crossing, sited at a point where the canalised river crossed a loop of the Santerno Morto, was passing traffic at 1.30 a.m. Strahl was awarded an MM, and the night's work was the first of several that were recognised by the award to Sergeant Roberts of an immediate DCM.

The Maoris were delighted to have their support weapons with them before the dawn as there were Tiger tanks in the vicinity. The Commander 5 Brigade was also appreciative of the sappers' efforts.

'E' Assault Squadron, now reduced to half a squadron, <sup>24</sup> was assisted by a dozer from 28 Assault Squadron, trucks from 27 Mechanical Equipment Company and sappers from 6 Field Company in preparing the approaches for an Ark in support of 6 Brigade. It was a difficult job, which was tackled by positioning a single Ark without ramps in the river and ramping down the banks to the level of the Ark. The approaches were too soft, however, and a second Ark, with two ramps, was placed on top of the first one. It was ready at 5 a.m. About the time the double Ark opened for traffic, 7 Field Company was warned for another bridging job, this time on the [Santerno](#) and a quarter of a mile to the right of the 6 Field Company low-level bridge. The bridgehead had been sufficiently widened by this time and Sant' Agata sufficiently silenced. There was some enemy mortaring but not enough to prevent 27 Mechanical Equipment dozing the approaches. The bridging train arrived at 11 a.m., by which time the home stopbank had been blown and access to the site finished. The bridge, one 80 ft and one 40 ft span built on a steel crib pier, was open to traffic at 7 p.m. on the 12th.

A high-level bridge on 6 Brigade's axis was the task of 8 Field Company and was sited on the southern crossing of the loop that 6 Field Company had already bridged on its north end. The preliminary work, in spite of some interruptions, was completed by 8 a.m. and the bridge, a 110 ft double-single with a steel crib pier, was finished at 1 p.m. and dozers working on the far bank. Traffic was passing through at 8 p.m.

The infantry brigades, with 19 and 20 Armoured Regiments in support and each tank regiment with a detachment of 28 Assault Squadron attached, had deployed on the far side of the gate-crashed [Santerno](#) before daybreak. The policy was still 'Forward' and the next objective was the [Sillaro River](#), five miles and several scolos, fossas and canales away.

At midnight 12 – 13 April the enemy supply centre of [Massa Lombarda](#) had been occupied on the heels of the departing garrison, and by first light the infantry were consolidating along the [Scolo Zaniolo](#), a thousand-odd yards east of the town. Twenty-eighth Assault Squadron had a busy time with small dozing jobs, but the enemy had not been able to blow the culverts and progress was rapid.

But infantry, like other troops, must have time off to sleep and it was now necessary to reorganise. Fifth Brigade was to drop back into reserve, 6 Brigade to sidestep to the right and occupy the 5 Brigade front, while 9 Brigade moved into the area vacated by 6 Brigade.

Seventh Field Company moved up to a crossroads near [Massa Lombarda](#), 5 Field Park and 27 Mechanical Equipment settled themselves in the town, and 8 Field Company maintained communications to the southwards. Sixth Field Company, warned to assist 28 Assault Squadron which was to support 9 Brigade up to the line of the Sillaro, also shifted to the vicinity of [Massa Lombarda](#).



FROM THE SENIO TO THE ADIGE, 9-27 APRIL 1945

**from the senio to the adige, 9 - 27 april 1945**

The barrage preceding the approach to the Sillaro opened at 2.30 a.m. on the 14th, with the sappers checking the roads for mines behind the attacking infantry and armour. As far as the engineers were concerned the advance went through with little trouble, except that [No. 3 Platoon](#), 8 Field Company, had to put a 50 ft single-single Bailey over the [Scolo Gambellaro](#).

The Engineer tasks for the Sillaro were for 8 Field Company to put down two crossings, a 40 ft low-level Bailey and a drum and fascine culvert for the use of 6 Brigade, while for 9 Brigade 6 Field Company was to build two low-level bridges. Finally 'E' Assault Squadron had the job of making an Ark crossing.

It was possible to make a close study of the bridge sites, for the enemy,

perhaps to avoid the flame-throwers, was not holding the stopbanks. He was no doubt depending on gun and mortar fire to break up an attack before it reached his FDLs. 'E' Assault Squadron 'recce' party reported that the only suitable place for an Ark bridge was just beyond the right boundary of the barrage. A party from 8 Field company (Lieutenant Roy <sup>25</sup>) blew the bank for the Squadron before the attack commenced, but enemy fire delayed the actual laying of the bridge long beyond the timetable set down.

The reader will have noticed that the great proportion of decorations for gallantry under fire since the Senio crossing had been awarded to dozer operators. The Sillaro assault was to continue the trend. Sapper Fisker <sup>26</sup> during the afternoon of the 15th was working on the approach from Massa Lombarda to a bridge site when he came under harassing fire, which continued throughout the afternoon and became heavier as he approached the river. Fisker never left his machine until the job was finished and later received an MM.

Sapper McIntosh <sup>27</sup> was awarded a similar decoration for similar conduct when doing the same kind of job. His machine was twice put out of action by shell splinters and twice he repaired the damage and carried on. He never stopped until the approach track was made, and as soon as the bridge was over he crossed and dozed the far bank.

Incidentally it should be noted that about this time 5 Field Park Company, instead of inhabiting rear areas and despatching bridging trains as requested, became in effect a front-line unit. Major Malt considered that the place for his Tactical Headquarters was just beyond small-arms range, where he could quickly assess the bridging components likely to be required for any crossing, and that the correct area for his stores vehicles was just outside artillery range.

This followed from the fact that there was no point in having trucks and loads destroyed when they might be wanted urgently for a river or canal crossing; even the most experienced sappers with the greatest skill for improvising are useless if the components fail to arrive. The bridging train drivers had need for all the path-finding gifts the gods had laid in their cradles, for as soon as their vehicles were unloaded they had to deduce where the Corps bridge dump might have moved to since last report, and somehow get there to reload and return ready for the next

assignment. Major Malt's immediate DSO citation mentions this reversal of 5 Field Park practice and his habit of always arriving to take action when a knocked-out vehicle or a halt in traffic blocked the road, so preventing the delivery of bridging material.

Lieutenant [Harvey](#) <sup>28</sup> ( [No. 3 Platoon](#), 8 Field Company) continued a record of river crossing that had begun at [Cassino](#) by so encouraging his men to ignore spasmodic interference that their drum and fascine project was ready with both sides dozed at 1 a.m. He then organised a party to tape and minelift two routes across country for about 400 yards to a good metalled road. He also shared the next honours list with an MC.

The building party from [No. 1 Platoon](#) had the earthworks ready by 1 a.m. in spite of heavy harassing fire which Sergeant [Berridge](#), <sup>29</sup> in charge of the job, did not allow to interfere with progress. There was some delay while waiting for a replacement for a truck that an unlucky shall had wrecked, killing the driver and wounding two others. Shelling in the area was heavy at the time and there was some confusion in the RASC bridge train, but Berridge got control and soon had the components moving again. He worked with his team and held them together through a rather bad time until the bridge was finished at 4 a.m. on the 15th with one New Zealand casualty. For this and previous displays of courage and coolness Sergeant Berridge was awarded an MM.

On 9 Brigade's front 6 Field Company had many delays from enemy harassing fire and [No. 2 Platoon](#) (Lieutenant [Erickson](#) <sup>30</sup>) did not finish the job until 5 a.m. To ensure that there is no delay in the actual building of a bridge, it is of the utmost importance that the components be laid out in the proper order and sequence. In this case the laying-out area was on top of the bank. The bridging party itself was comparatively safe in the stream bed under the shelter of the stopbanks, but Corporal Crook's <sup>31</sup> assignment was to stay with the components and have them ready on demand. This he did under fire that became heavy at times; he also later received an MM.

On the left flank [No. 1 Platoon](#) (Captain [Harris](#) <sup>32</sup>) had a good run and their bridge was ready at 1.30 a.m. at a cost of two men lightly wounded:

'Platoon moved forward again. Barrage at 9 p.m. while 27 Battalion went in to attack. Meanwhile we erected a low level Bailey across the Sillaro river—usual procedure now of a bulldozer cutting through the stop bank to get our bridging trucks through. A burning Sherman tank gave Jerry plenty of clues and he shelled us wounding Johnny [Cederman](#)<sup>33</sup> and Fred [Battersby](#).<sup>34</sup> Neither very seriously hurt. Rather glad when the job was finished though.'

Sappers in both companies not employed on bridges carried out the usual approaches and forward road work in company with 27 Mechanical Equipment Company; 28 Assault Squadron crossed with the tanks and assisted with dozer work when required. Three major bridging jobs in seven nights—something would have to crack soon.

The infantry cut right through the defences beyond the Sillaro, and as soon as the tanks and 28 Assault Squadron were across they began to exploit forwards. The rate of advance was conditioned by the time it took the engineers to doze crossings over the minor waterways for the troop-carrying Kangaroos and armour. At dusk the Division had made three miles and was on the outskirts of [Medicina](#).

It was a day of comparative rest for the Field Companies, as only those not building bridges the previous night worked on the brigades' axis roads.

By the afternoon of the 17th the infantry had made another three miles and were on the near stopbank of the [Torrente Gaiana](#), about a mile beyond [Villa Fontana](#). The Torrente probably had earned its name, for unlike any of the numerous minor waterways crossed since leaving the Sillaro, it was constrained between floodbanks. Twenty-eighth Assault Squadron, which had had another day of getting wheels and tracks over ditches, closed its war diary with the comment: 'There are three fairly sticky canals in front of the [Idice](#) and we are expecting a busy day with our equipment. Weather fine.' At this point the Division again regrouped; 6 Brigade was withdrawn for a spell and the New Zealand Division now deployed 9 Brigade on the right and 43 Gurkha Lorried Infantry Brigade, which had come under command, on the left.

All sapper units came forward to the vicinity of [Medicina](#) with the exception of 27 Mechanical Equipment which, working from [Massa Lombarda](#), was maintaining

the roads forward to [Villa Fontana](#).

Future Engineer activity was predicted in 2 New Zealand Division Operation Order No. 57 issued on 17 April, codeword austin. The opening paragraph summarised the situation thus:

'The enemy is holding the line of r gaiana in the Div sector in str[ength], with elements of six bns of parachutists in the line or in close res[erve]. They are dug in on "B" stopbank, with the intention of checking our further adv to the idice line, the breaking of which would compromise his entire def posns in the bologna area.' The intention was for the New Zealand Division to cross the Gaiana and [Quaderna](#) and continue on to the [Idice](#). The Engineers were to construct at least two crossings and would be protected by a company of infantry as close cover.

It is not necessary to emphasise that assault bridging, to quote a portion of Major Armstrong's DSO citation, 'depended as much on bulldozing operations as upon actual bridge construction itself. Therefore in the crossing of the senio, santerno, sillaro, and the gaiana many bulldozers were employed on the Divisional front. Frequently under heavy shelling Major Armstrong moved from site to site, offering advice here and a helping hand there, to ensure that his machines were operated at maximum efficiency.'

It was another two-brigade operation with 9 Brigade, right, and 43 Gurkha Brigade, left. No. 225 RE Company saw to the [Gurkhas'](#) communications while 6 Field Company and 27 Mechanical Equipment Company were responsible for 9 Brigade's water crossings. Twenty-eighth Assault Squadron, less one troop under command 6 Field Company, was still with the armour. The 6 Field Company plan was for [No. 2 Platoon](#) to open the axis for Divisional Cavalry Battalion and [No. 1 Platoon](#) to do likewise for 22 Battalion.

The barrage opened at 9 p.m., first as a 'stander'; then flame-throwers, one to fifty yards of front, went into operation before the infantry opened the assault across the Gaiana. This succeeded after heavy fighting, and one by one the water barriers fell to bayonet and Tommy gun; first the Gaiana, then the Scolo Acquarolo, and finally the Torrente [Quaderna](#). At early light the infantry were between [Villa Fontana](#) and [Budrio](#), two miles beyond the [Quaderna](#).

**No. 1 Platoon**, working on the right of the main road and assisted by 27 Mechanical Equipment machines, were delayed almost from the start of the Gaiana crossing. They were under constant shellfire and the close-support infantry company lost three men repulsing a fighting patrol which had felt its way around the end of the barrage and had halted the work for some time. Lieutenant **Gilmour**<sup>35</sup> had been wounded and a sapper killed. The high stopbank, the heavy defensive fire and sniping had caused so much delay that at 3.30 a.m. the first obstacle had not been crossed.

It was decided to open the main highway, and Captain Keller, detailed to make a 'recce' of the new axis, returned for a tank to remove an enemy post that had been overrun. A reserve dozer made a crossing at the demolished bridge site and the party pushed on to the **Acquarolo**, where they found the bridge intact. The next obstacle, the **Fossatone**, was a branch of the **Quaderna** and needed a lot of work.

The area was under defensive enemy fire, and the blast of a shell that wounded Captain Keller lifted the dozer into the air and damaged its mechanism. The operator, Sapper **Blacktopp**,<sup>36</sup> was very shaken but made repairs while Keller, propped up on the side of the road, directed the work until the crossing was through. They were later decorated with MC and MM respectively. The soft-skinned machines were left at this point and an armoured dozer from an attached section of 28 Assault Squadron, driven by Corporal C. H. Anderton, took over. Owing to the lack of experienced Sherman dozer operators he had been working his machine with a minimum of sleep since he was blown up on the **Senio**, and he received a well merited MM in the next honours list.

**No. 2 Platoon** did not have quite so much enemy fire to put up with. Corporal Read, in charge of the Mechanical Equipment dozer working on that axis, lost his operator wounded, and when he thought the partly trained replacement was not operating in the darkness to the best advantage, he mounted the machine and continued working it throughout the night. When the platoon reached the **Fossatone** they found that No. 1 had also arrived at the same crossing owing to the diversion previously mentioned, and both pushed along the main road to the north fork of the **Quaderna**.

The bridge was gone, but the place was suitable for a scissors and the attached

section of 28 Assault Squadron was called up and successfully laid one. The armour was then able to get up to the infantry before any counter-attacks were mounted.

In front of [Budrio](#) the Division reorganised again, with 5 and 6 Brigades forward in anticipation of the next thrust which was intended to put the Idice River behind Eighth Army's lines.

Sixth Field Company, now in reserve, snatched a few hours' sleep before improving several crossings with drum culverts and a couple of small Baileys.

The infantry advanced again at daybreak on 20 April and met an enemy quite unprepared to receive them. German Intelligence had assured reinforcements that had been force-marched to the [Idice](#) that the enemy was still miles away. We were also said to be held up in front of [Budrio](#). This was true up to a point, but actually [Budrio](#) had been bypassed and the infantry were on the near stopbank before the defence was aware of it. A small bridgehead had been secured by mid-afternoon, and by a stroke of luck a ford capable of passing tanks over the water gap had also been found.

This was really outside the New Zealand Division's left boundary but it was no time for niceties; the support armour crossed at dusk, and armour supporting the Poles in a thrust to [Bologna](#) also used this crossing.

At daybreak on Saturday, 21 April, the forward troops found themselves in a country where bridges were unblown, roads uncratered and houses undamaged. The Americans of Fifth Army and Poles of Eighth Army were in [Bologna](#), and the enemy divisions which had managed to disengage were in head-long flight in an endeavour to put the [Po River](#) between them and destruction, while the combined Air Forces were seeing to it that the retreat was a hazardous affair.

All Engineer bridging work on the [Idice](#) was finished in the late afternoon, by which time the infantry brigades had crossed and enlarged the bridgehead and were marching against negligible opposition and, more important from the sapper point of view, over bridges and canal crossings that had been charged but not fired.

Headquarters Divisional Engineers' war diary opens on 22 April with the following:

'Fine and hot. Units all moving forward, opening, improving and maintaining routes. It is becoming difficult to fulfil all engr commitments and still keep moving fwd with stores, engr supplies.'

This was the day the Division crossed Route 64, the main highway between [Bologna](#) and [Ferrara](#) and the escape route from the fallen city of [Bologna](#). It was also the day that the New Zealand Division changed its axis of advance from west to north and at long last, after similar intentions at the [Sangro](#) and again at [Cassino](#), spearheaded the break-through.

The Reno River was now the objective, but before the last mad gallop begins let us get the sapper units lined up at the starting post.

Fifth Field Park Company, located at various villages around [Budrio](#), was preparing to shift up as a company to San Alberto, about four miles short of the Reno River, on the morrow.

Sixth Field Company, in the vicinity of [Medicina](#), advanced across the [Idice](#) under a warning order to march with 9 Brigade, a mile beyond the [Canale Navile](#).

Seventh Field Company, after finishing its job at the [Idice](#), followed the 5 Brigade axis, checked two unblown bridges across the [Scolo Zena](#), threw a 50 ft double-single Bailey across a demolition on Route 64, stopped outside [Bentivoglio](#) and put a 40 ft single-single Bailey across the [Canale Navile](#) which skirted the village.

Eighth Field Company, following 6 Brigade, threw a bridge over the [Savena Abbandonato](#), another over the [Canale Navile](#), and ended up in [San Giorgio](#), where those sappers who were not bridgebuilding worked all night on the road between the Canale and [San Giorgio](#).

Twenty-seventh Mechanical Equipment Company, which had moved daily since the assault on the Sillaro, was across the [Canale Navile](#) two miles or so south of [Bentivoglio](#). Detached from the unit were Lieutenant [Marshall](#) <sup>37</sup> and ten other ranks marched out to 7 Field Company with two D6s for work on 5 Brigade access; Lieutenant Fraser and ten other ranks marched out to 8 Field Company with two D6s for work on 6 Brigade access; Lieutenant [Clarke](#) <sup>38</sup> and nine other ranks to 6 Field

Company with a D6 and a D8 to work with 9 Brigade, at the moment in support.

Twenty-eighth Assault Squadron, which had been advancing with the leading armour, wrote: 'Today was a busy one for the Squadron. There was practically no opposition and everyone was trying to press on as quickly as possible. Both troops were flat out and three fascines were successfully used. Checking for mines and demolitions was carried out and Route 64 crossed. The whole squadron was moved forward and spent the night in the neighbourhood of [Bentivoglio](#). The roads were crammed and moving vehicles about was a trying business as everyone was trying to get forward at once.'

The infantry rode on anything on wheels or tracks the ten or so miles to the Reno River. It was shallow but wide, and the Division was told to sit down and wait for support arms as all bridges were down.

Seventh Field Company on the right flank commenced a 160 ft Bailey (120 ft double-single on a pier and 40 ft single-single) between rail and road-bridge sites. It was begun at 9 a.m. and finished at 4.15 p.m. Field Marshal Alexander and the Army Commander (General McCreery) stayed a while to watch the building, and [General Freyberg](#) was the first over as soon as the approaches were ramped by 27 Mechanical Equipment Company's dozers.

Three miles west of this, 8 Field Company had a 210 ft Bailey (110 ft double-single and 100 ft single-single continuous) ready at 8 p.m. Two miles farther west again 6 Field Company found and opened a ford, and nose to tail for miles back columns of transport converged on the [Reno](#) crossings.

Fifth Brigade was away early in the morning (24th), again on wheels for [Bondeno](#). Patrols reconnoitred the final three miles to the [Po River](#). The Po was not swift but it was wide, with a water gap ranging between four and five hundred feet. It was flanked by a flood plain and by stopbanks as high as thirty feet in places. There were of course no bridges—the bombers had seen to that.

Lieutenant Mathews <sup>39</sup> (7 Field Company) went with a patrol to look for a crossing and reported that he had found a German ferry with good approaches and in apparently good order.

Twenty-seventh Mechanical Equipment Company and 28 Assault Squadron arrived during the morning: 'On the road again at 1000 hrs and once again with a terrific stream of traffic and finally harboured up at an area adjacent to [Bondeno](#) and about three miles from the [Po River](#). We were there informed that the Squadron was to have a rest and for the first time since leaving the [Senio](#) 14 days ago the whole show was together again.'

Sixth Brigade column, moving up on the left of 5 Brigade, was halted in [Bondeno](#) by the unbridged [Panaro](#), a tributary of the Po. Either the [RAF](#) or the Partisans had removed the original crossing and German engineers had been in the process of replacing it. The brigade had a three-hour halt while 8 Field Company, making use of the uncompleted enemy structure, incorporated it in a 70 ft single-single Bailey.

Ninth Brigade, still in reserve, was concentrated south of [Bondeno](#). It had used a route to avoid the congestion and had been fortunate with its canals and ditches, of which there had been a multitude.

Fifth Field Park Company moved to San Agostino on the far side of the [Reno](#); if the Company had been busy lately—from the crossing of the [Senio](#) to the passage of the [Reno](#), inclusive, it had supplied 730 feet double-single and 1170 feet single-single of Bailey components—it was only a foretaste of what was to come.

In preparation for the bridging of the River Po, Major Malt took under command, in addition to his present strength:

237 A/Tk Battery with 12 Stormboats and 40 all ranks.

FBE Platoon from the [Polish Corps](#) and 57 all ranks.

239 GT RASC with 16 Ducks and 35 other ranks.

[1804 Bailey Bridge Detachment](#) and one Class 9 and one Class 40 support raft and 15 other ranks.

Detachment 'X' Squadron, 1 Assault Squadron, with 8 Fantails and 34 all ranks.

In the absence of air photographs, which did not arrive in time for the proper planning of the [Po River](#) crossing, the water gap was measured by compass

triangulation which later proved reasonably correct. But for bridging purposes air photos are vital in order to decide on the nature of the riverbanks and the distance of bank seat or bridge end from the edge of the water or edge of the bank.

Early plans for the first New Zealand major river crossing envisaged the employment of all three Field Companies as follows:

One Field Company plus 2 dozers: One Class 9 FBE bridge and approaches.

Two Field Companies plus 4 dozers: Approaches and landings for two Class 40 rafts and providing assistance in operating Fantails, Stormboats and Ducks.

In the case of an evening assault this work could have been completed before daylight, so enabling tanks, anti-tank guns and other support weapons to get into position for possible counter-attacks. As it happened only one Class 40 and one Class 9 raft were available. The final plan therefore was that 7 and 8 Field Companies would build and operate a Class 40 and Class 9 raft respectively, and in addition, each with two Mechanical Equipment dozers, they were to assist in operating Stormboats, Ducks, and tracked landing vehicles and to provide approaches to and from the water. Sixth Field Company was to construct the folding-boat bridge.

For the [Po River](#) enterprise the following equipment was issued by 5 Field Park Company:

6 Field Company: approximately 450 feet FBE.

7 Field Company: 8 Ducks, 6 Stormboats, 4 Fantails, 1 Class 40 raft.

8 Field Company: 8 Ducks, 3 Stormboats, 4 Fantails, 1 Class 9 raft.

The Po River in the New Zealand area, about 300 yards of deep water, posed something of the problems of an opposed seaborne landing. The enemy might have been able to re-form again in spite of all the havoc caused by the Air Force—horses dead and alive covered a wide area and all the impedimenta of a retreating army was piled in heaps along the stopbanks: men, animals and machinery killed by the rain of destruction from the air.

The actual crossing was something of an anti-climax—the mighty waterway that

could have been the scene of a bitterly opposed and hard-fought action remained undisturbed. Here is the operation as viewed by the war correspondent previously quoted:

‘po river bank, April 25—From where I stand the broad stretch of the river is seething with activity. Men and machines are streaming across in every type of river craft from assault boats to a huge tripartite Bailey raft. “Ducks” and amphibious troopcarriers ply a continuous ferry service, loaded to the gunwales with figures in battle dress. It is Anzac Day on the Po river. Here the river is at least 300 yards wide and the bank below me drops vertically into at least eight feet of water.... The banks on each side are littered with the wreckage of German barges, pontoons and planking. There are the remains of a wooden bridge just near by—a substantial structure which once led to a camouflaged road through trees to the other side. Downstream, at least one buttressed ferry landing is visible among the veils of camouflage nets.

‘A pontoon bridge grows visibly to the accompaniment of much poling and splashing which lends the scene almost the air of a river carnival. On this bank bulldozers grunt and clank on the approaches to the bridge over which will pass the main stream of the Division's traffic. The carnival atmosphere is added to by spectators on the bank—engineers waiting for more material to come up, and infantry waiting passage.

‘Up river moves a small powered assault boat in which stand the GOC, [Lieut-General Sir B. C. Freyberg](#), VC, Brigadier Parkinson and Colonel Hanson.

‘Colonel Hanson and his men were prepared to go on with the job of bridging and ferrying even if the crossing had been opposed. It is a pleasant relief to them to work under such perfect conditions, as, even so, this river constitutes the greatest natural barrier encountered by our engineers in [Italy](#). Now the work goes on with the clockwork precision of a manoeuvre.

‘All this has followed nearly two weeks of the fiercest fighting on the Italian front. There is no doubt about it now—to us there never was. The New Zealand Division was the spearhead in this battle of annihilation. Our troops were the first across the [Senio](#), the [Santerno](#), the Sillaro, the Gaiana, the [Quaderna](#) and the [Idice](#).

The New Zealand Division is one of the very few formations who went forward on the afternoon of the 9th and are still advancing without rest. Now the New Zealand Division has a new honour—that of being the first of the Eighth Army across the Po. That has been the easiest one of all.'

But to be more specific. During the eve of Anzac Day (24 – 25 April) 5 and 6 Brigades crossed the Po in assault boats without hindrance. Close behind the leading companies came the Ducks ferrying anti-tank guns, jeeps and mortars for local protection until tanks were available for the purpose.

Seventh Field Company unloaded the trucks, prepared the landing stages and then called up the Class 40 raft components—actually a Bailey bridge section on powered pontoons.

When assembled it was captained by Lieutenant Annabell, who free-ranged the first tank across the river at 10.30 a.m. There were four propulsion units to be coordinated and it was there that the training at Lido di Roma showed its value. Three tanks per hour were ferried across by this craft.

Fifth Field Park Company sent the Works Section along to lend a hand and they were employed on the far bank at the landing site.

On 6 Brigade's front 8 Field Company got the Fantails away and then began work on a close-support Class 9 raft which, when it was ready, **No. 2 Platoon** operated until dark, when **No. 3 Platoon** took over. **No. 1 Platoon** had in the meantime moved up river about a quarter of a mile and inspected the remains of an enemy heavy pontoon bridge. They built a new loading stage, salvaged a floating section from the pontoon bridge, and with the improvised raft commenced ferrying 20 Armoured Regiment tanks across. Four tanks and a dozer were safely transported when the raft, partly through becoming water-logged and partly through the falling tide, grounded on a sandbank about 3 a.m. on 26 April. This job, taking half a dozen lines to describe, took most of the day to get ready.

**No. 2 Platoon** then took over the salvage job, got the fifth tank off and replaced the section with another salvaged piece of pontoon bridge, but it was too badly holed and at midday joined the other fragment at the bottom of the river, upon which the project was abandoned.

Sixth Field Company jobs were to cut corduroy, assist with the approaches and put a folding-boat bridge across the Po between the other field company bridges. It was ready at 5.30 p.m.

The crush of traffic was terrific and it was days before all the Divisional vehicles were beyond the Po, but early in the morning of 26 April 5 and 6 Brigades were off again for the [Adige River](#), 16 miles away, the second largest in [Italy](#), and by nightfall were organised for another assault crossing.

Fifth Field Park Company took more attachments under command for the [Adige River](#) crossing: FBE from the Poles; 549 GT Company, RASC, carrying a Class 9 and Class 40 rafts; 239 GT RASC with Ducks and a detachment of 'X' Squadron with eight Fantails.

Seventh Field Company, responsible for the 5 Brigade axis, had a full and detailed programme for the [Adige River](#) crossing.

[No. 1 Platoon](#) had the job of bridging the Tartaro River at Canda. The foundations of a demolished bridge were used to build up crib piers but the site was not good and there was a lot of compressor work involved, and when it was finished in the early hours of the morning (27th) it was not very satisfactory. Twenty-eighth Assault Squadron later strengthened it.

[No. 2 Platoon](#) was called up to the [Adige](#) in the afternoon to work on tracks for Fantails and other river crossing equipment. The infantry crossed in assault boats about 8 p.m. and shortly afterwards anti-tank guns and other weapons were being ferried across to their support.

[No. 3 Platoon](#) was called out at 1 a.m. to build and operate a Class 40 raft and sent a guide to 5 Field Park for the equipment. The usual preliminary of setting out access tracks was put in hand on arrival, but rain starting at 2.30 a.m. made the tracks very sticky.

There were other complications too.

Eighth Field Company moved up on 6 Brigade axis under orders to find and

make access for Fantails, Ducks and amphibious tanks, build a Class 40 raft and put across an FBE bridge. **No. 3 Platoon** got the attached crossing craft into the water on time, but when 1 Platoon arrived at the site chosen for its raft it found 7 Field Company in the same area and on the same job. The track was made and two pontoons unloaded when rain stopped further work. **No. 2 Platoon** prepared approaches for an FBE bridge and then found that there was no bridging material available for the site.

Sixth Field Company completed the confusion by arriving in the same area to put across an FBE bridge, but the Polish bridging train got lost and failed to appear. 'Spent all night in a barn waiting for Polish bridging train to arrive. Heavy rain all night so not sorry really. No sleep for anybody.'

The Poles had in the meantime been located by spotter aircraft in a neighbouring divisional sector and brought back to their correct destination. They arrived at 9 a.m. (27th) and work began forthwith, but owing to a mishap with a D6 which sank a half-floating bay, the bridge was not ready for use until mid-afternoon.

Seventh and 8th Field Companies started to construct their Class 40 rafts soon afterwards, 8 Field Company from a new site above a steel bridge smashed beyond repair by the **RAF** and still festooned with the bodies of Germans caught in the raid. 'Teds are lying everywhere, heads off, arms off and generally messed up.'

Both ferries were ready between 8 and 9 p.m. and tanks crossed over at the rate of approximately four per hour. Seventh Company's raft worked on a wire cable but 8 Company's was operated by motors. On the first trip with a tank aboard one motor cut out and the fast current was too much for the remaining three. The ferry and tank finished up entangled in the ruins of the original bridge. The raft was extricated and the tank back on shore at 3 a.m., but no more motors were available and the raft was out of action until a ferrying cable could be obtained, which was not until first light on the 28th.

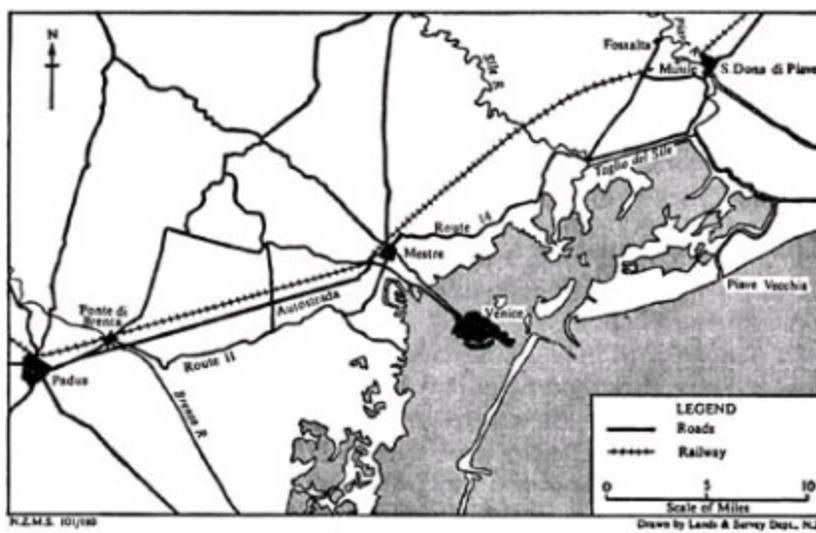
Ninth Brigade and 43 Gurkha Lorried Infantry Brigade had relieved 5 and 6 Brigades and were now miles away. Partisans in northern **Italy** had risen and the scattered German forces were faced with the unenviable position of having to fight the armed populace until their regular enemies turned up, or surrender to the

Partisans to whom the Geneva Convention meant little. If the Partigiani had a grudge against anybody, German or Italian, or even just felt like shooting somebody, that was that.

It will therefore be understood that from now on enemy formations were encountered which were willing to surrender on demand or after having made a token resistance. Those that insisted on fighting were bypassed to cool down or to be rounded up by the Partisans.

On the sapper front such a brush occurred at [Este](#), a few miles north of the [Adige](#). Twenty-eighth Assault Squadron, having no suitable equipment for the fast-flowing river, had been resting until 9 Brigade took over, when the Squadron followed the tanks in close support. A brief action cost four casualties, only one serious. 'A rush through from [Este](#) to [Padua](#) then commenced and Nos. 1 and 2 Troops went through with the tanks.'

Sixth Field Company spent the 28th between the [Adige](#) and [Este](#) on road maintenance and then set off to find 9 Brigade. An almost non-stop night and day drive through the ecstatic countryside, with all bridges intact and roads fit for fast travelling although crowded to the point of distraction, brought the company into the 9 Brigade area at [Porto Grandi](#), north of [Venice](#), in the evening of the 29th. Seventh Field Company, less two platoons, moved with 5 Brigade. Nos. 2 and 3 Platoons worked the ferry on the [Adige](#) until a runner with a recall message sent them off hunting for the brigade, supposedly somewhere near [Venice](#). Eighth Field Company operated its raft until relieved by an RE Company that evening (28th), when it moved with 6 Brigade to [Este](#), where it rested for a couple of hours before pushing on to the River Sile. 'The civilians gave the troops a warm welcome as they passed through the towns and villages and many wild looking partisans, armed to the teeth, were in evidence,' was the entry in the Company war diary.



**FROM PADUA TO THE PIAVE**  
**from padua to the piave**

Lieutenant Begbie wrote of their reception in [Padua](#):

'What a welcome. I drove the Arm'd car through and you had to be careful you didn't run half a dozen people down every few feet. Flags were waving from every building (Royalist) and the folks were wild with joy. Kissing, cheering and hand shaking, they threw garlands of flowers and leaves all over us. Now we are jammed in a small suburb named Dolo and they are swarming all over our vehicles. Not 100 yards away a lone Ted is making his last stand in a house a little way off the road. The Partizans are firing back with automatic rifles. They're pretty merciless when they get them.'

At the same time that the 6 Brigade convoy was passing [Mestre](#), a company of 22 Battalion (9 Brigade) was holding the portals of the Albergo Danieli, one of the leading hotels in [Venice](#), against all comers. [General Freyberg](#) had decided that it would make a nice leave centre for his troops and had given orders that no soldier, Yank, Tommy or Italian, was to pass inside the front door. The Partisans had herded together and mounted guard over the survivors of the German garrison in [Venice](#) and were keeping a very careful watch for an excuse to liquidate some more of them.

Twenty-seventh Mechanical Equipment Company completed the approaches to the [Adige River](#) crossings and, after the transporters that had been left behind pending completion of the Bailey pontoon bridge on the Po had reported in, joined the rush to the [Piave](#).

Twenty-eighth Assault Squadron was still with the armour, and 5 Field Park Company had got its vehicles to [Padua](#).

At first light in the morning of the 30th, [No. 2 Platoon](#), 6 Field Company, repaired and operated an enemy ferry on the [Piave](#) while the rest of the company stood by to build a folding-boat bridge as soon as the material arrived from [Padua](#).

It was the last job for the Polish bridging train, and Major Malt took no risk of its getting lost a second time.

'I brought up the Poles myself and had Lt [Wilson](#) <sup>40</sup> in the rear to make sure none of it got lost again. We were lucky to find them otherwise the Div. would have been held up through lack of bridging.'

Work began at 5 p.m. and the 300-foot bridge was passing traffic at 9.30 p.m. Lieutenant Quinn was in command of this assignment, almost the last major bridging job of the campaign. His MC citation details his outstanding example in coolness and leadership from the [Senio](#) to the [Piave](#).

Eighth Field Company moved into billets at [Musile di Piave](#) and commenced work on salvaging and strengthening enemy barges for use as floating piers for a Bailey bridge. The finished job consisted of five 50 ft single-single Bailey, two half-floating bays and three floating bays with four salvaged pontoons, two 84 feet and two 63 feet in length. The barges were strengthened by 'tomming up' from the bottom and by Bailey transoms placed across from gunwale to gunwale. Launching links were fitted between the bottom chords at the end of each spar and the top pin left out, thus giving the necessary articulation for difference in tide level and when weight came on the bridge.

Twenty-seventh Mechanical Equipment Company, besides grading a landing strip for observation planes, formed the ramps down to the river. The sappers carried on in pouring rain until midnight, by which time the dozer operators could not see their blades nor the carpenters their work.

[No. 2 Platoon](#), snatching a few hours' sleep, was called out to repair a collapsed span on a bridge over a canal. They had first to retrieve a Staghound that had gone through the decking and caused the damage. There was comment regarding

sporadic outbursts of firing well in the rear which was generally attributed to some 'Teds' being written off by the Partisans.

The general situation was that 9 Brigade was clearing up pockets of enemy, sometimes with and sometimes without a token resistance, and that the other brigades were scattered along a hundred miles of Italian highway, particularly between the [Adige](#) and the [Piave](#). The two 7 Field Company platoons were still hunting for their unit headquarters and the 200-odd vehicles of 5 Field Park Company had got up from [Padua](#) to the vicinity of [Porto Grandi](#). They were dispersed among the grape vines ready for an early start when 9 Brigade moved again.

A German coastal defence force approximately two battalions strong had decided to cut across the line of advance and march via [Austria](#) back to [Germany](#). About midnight, while they were moving quietly and with no light showing, [No. 3 Platoon](#) of 7 Field Company ran into them. Almost before they knew what had happened, the leading trucks were captured and only Lieutenant [Carnell](#) <sup>41</sup> and 21 sappers managed to get clear. The light from two burning 7 Field Company trucks disclosed the headquarters of 5 Field Park Company, which was also involved in the conflict. Six of their vehicles were soon on fire and twenty-eight surprised headquarters staff were taken prisoner.

The uproar attracted immediate attention and the prisoners were released within a few hours with the tables completely turned, but the casualties in the fracas were:

5 Field Park Company—6 wounded and 3 attached other ranks killed.

7 Field Company—5 killed and 14 wounded.

Major Malt later wrote:

'All Fd Pk was there, HQ alongside the road with unit behind them in the vineyards. We had a nasty few hours and were lucky to escape with no damage to vital bridging equipment. This scrap which was dash near the last one in the campaign came at the worst possible time for us because the unit had been in action continuously since the [Senio](#) and everybody was completely played out.'

Eighth Field Company recommenced work on their Bailey barge job at first light and knocked off at 10 p.m. with the jacking down and articulation of the span not completed.

**No. 1 Platoon**, 6 Field Company, was detached and joined 9 Brigade Headquarters for the last lap to **Trieste**. Leading the brigade, 22 Battalion has this description in its war history:

'With the war on its deathbed, the Division pressed north and east, along its last road, Route 14, skirting the head of the Adriatic Sea and leading to the port of **Trieste**. The last advance, 76 miles, was one long triumphal procession—flowers, kisses, wine, crowds half-mad with joy and affection. Ninth Brigade led the New Zealanders on this drizzling damp day of 1 May.... the Lancers and the armour pushed on, with 22 Battalion close behind, to a tremendous welcome in the large Italian shipbuilding town of **Monfalcone**, where partisans and Yugoslavs were holding processions in the main streets. The Italian flag was now giving way to the ... red star of Tito's **Yugoslavia**.' That was the limit of the day's advance.

Twenty-eighth Assault Squadron moved 18 miles in ten hours on 1 May and settled in the Town Hall at **Musile di Piave**.

Seventh Field Company moved on again with 5 Brigade that evening and thus recorded events in its war diary:

'1 May 1720 hrs. Lined up and pulled in behind **5 Bde**. Hell of a trip. Raining and very slow. Crossed Piave and had a fair run for a start but held up and pulled in to side of road at 0130.'

Fifth Field Park Company also travelled on through the night 1 – 2 May: 'All-night move as traffic was nose to tail for whole distance. Bridge across **Piave** only taking 60 vehicles per hour, the whole move of 7 ½ miles took 8 ½ hours. Moved on again at 0830 got to new location ronchi. <sup>42</sup> Good trip and good tar sealed roads.'

Eighth Field Company finished its bridge at 10 a.m. on the 2nd and packed up once more. 'Moved at 1800 hrs to new billets at **Ronchi** at MR612927 arriving at 1900 hrs. According to civilian reports the enemy in **Italy** has today unconditionally surrendered but we have no official word of this,' the Company war diary notes

languidly.

Twenty-seventh Mechanical Equipment Company moved on 2 May from San Dona di [Piave](#) to [Ronchi](#). Seventh Field Company continued its trek north in the morning of the 2nd:

'2 May 0600 hrs. Started off again and made San Georgia by 1200 hrs. Living in a casa in town. Nothing doing all day. Heard on wireless that [Hitler](#) had had it.'

On 2 May 6 Field Company, less [No. 1 Platoon](#), also moved to [Ronchi](#). Some of that platoon went to [Sistiana](#) with Divisional Cavalry Battalion, the rest with 22 Battalion into [Trieste](#).

Corporal Thornton's diary describes the last hours of World War II for the New Zealand sappers as represented by [No. 1 Platoon](#) of 6 Field Company:

'All day in one tightly packed convoy trying to get to [Trieste](#). Sundry "Teds" had to be mopped up first though. Our platoon sniped at on outskirts and eventually passed into town just after dark—first Engineers into [Trieste](#). My section removed tons of explosive from demolition chambers of a new reinforced concrete bridge near [Monfalcone](#). Last forward sapper job of the war in the 8th Army! Platoon billeted in Grand City Hotel on waterfront. A whole battalion crammed in as well. Considerable trouble between [Marshal Tito](#) of the Yugoslav Partisans and the factions in [Trieste](#) as well as the NZers. Ray Mc (pl comdr) told me all resistance in [Italy](#) had ceased that day.'

The information was true enough. Colonel-General von Vietinghoff, German Commander-in-Chief, South-West Command, and Commander in Chief of Army Group 'C', had surrendered unconditionally and signed an instrument which provided for the cessation of hostilities at twelve o'clock noon GMT on 2 May 1945.

Sapper casualties in the twenty-three day campaign from the [Senio](#) to [Trieste](#) were 11 killed or died of wounds and 57 wounded.

It is fitting that the final paragraphs of this chapter should be written by the CRE [2 New Zealand Division](#):

'I would like our history to include a word of praise for Corps and Army

Engineers with their attached RASC bridge carrying sections. They had no easy task in moving bridging dumps forward to keep us supplied in the Divisional area and then the Construction Coys had no 40 hour week job in building Line of Communication bridges of a more permanent nature to ensure that ammunition and supplies went forward without delay to the fighting Divs. We must remember that 2 NZ Div. fought its way over rivers, canals and demolitions at a terrific pace and the poor old L of C Engineers, including attached American Engineer units, had to keep up; assault bridges are not meant to carry full maintenance supplies.

'We often cursed when the Corps bridging supplies were not up but at the same time I realise full well what a fine achievement was theirs. Difficulty was sometimes encountered with Polish and Indian bridging trains owing to language difficulties. In our hurry we did not always understand each other as precisely as was really necessary and then plans would not always go right. Let us say "well done" to our supporting Engineers and bridging trains.'

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<sup>1</sup> As it happened, [Cotignola](#) was captured before 27 Bn could get there.

<sup>2</sup> [Maj J. W. Ridley](#), ED; [Wellington](#); born [Invercargill](#), 29 Apr 1919; engineering student.

<sup>3</sup> [Maj K. C. Fenton](#); [Lower Hutt](#); born [Wellington](#), 25 Dec 1924; Regular soldier.

<sup>4</sup> [Lt J. M. Logan](#); [Wanganui](#); born [Taihape](#), 23 Oct 1921; sawmill hand.

<sup>5</sup> [Lt E. C. Tapley](#); [Christchurch](#); born [Invercargill](#), 9 May 1910; company manager.

<sup>6</sup> [Capt B. J. Williams](#), MC; [Auckland](#); born Aust., 6 Jun 1905; hotel proprietor.

<sup>7</sup> The Senio operations were in fact the last in which artificial moonlight was provided for the New Zealand sappers. It is probable that the thrust was so

quick and sustained that it was not possible to move the searchlights to conform with the advance. It is, however, a point to be remembered should the necessity ever again arise.

<sup>8</sup> L-Sgt V. J. Jorgensen, MM; Feilding; born Wellington, 8 Mar 1922; shop assistant.

<sup>9</sup> Maj J. L. Lawson, m.i.d.; Auckland; born England, 19 May 1911; porter.

<sup>11</sup> Sgt B. E. Archibald, MM, m.i.d.; Wellington; born Auckland, 3 Apr 1921; apprentice motor-body builder; wounded 15 Dec 1943.

<sup>12</sup> Spr R. A. J. Hooper, MM; born Temuka, 3 Dec 1913; surfaceman; wounded 22 Mar 1944.

<sup>13</sup> Sgt H. A. Sinclair, MM; born NZ 24 Oct 1919; surfaceman.

<sup>14</sup> Lt B. W. Donovan; Tauranga; born NZ 15 Mar 1921; garage attendant.

<sup>15</sup> Sgt Sinclair was awarded the MM for gallant example and devotion to duty while lifting mines and clearing a road passage to the FDLs.

<sup>16</sup> L-Cpl A. T. Mee; Gore; born NZ 15 May 1909; farm labourer; wounded 10 Apr 1945.

<sup>17</sup> Capt F. Boxall; Dunedin; born Tisbury, Southland, 9 Aug 1908; foreman builder.

<sup>18</sup> Lt L. C. Bydder; born Wellington, 25 Apr 1908; building contractor; wounded 10 Apr 1945.

<sup>19</sup> L-Sgt C. H. Anderton, MM; Otane; born Otane, 15 Feb 1920; shepherd.

<sup>20</sup> Sgt A. M. Read, MM; Frankton Junction; born Hamilton, 23 Jul 1916; bushman; wounded 10 Apr 1945.

<sup>21</sup> See Appx IV for details of bridges built by NZ Engineers from 9 to 16 Apr 1945.

<sup>22</sup> Col Hanson, 'Engineer Notes and Lessons, 2 NZ Division Campaign in Po Valley. 9 April 1945 – 3 May 1945.'

<sup>23</sup> Cpl I. F. Strahl, MM; Kaikoura; born NZ 24 Apr 1921; clerk.

<sup>24</sup> Vide HQ NZE war diary entry dated 11 April: 'Att Aslt Sqn again mucked about by higher command. ½ 'E' Sqn passes to 78 Div.'

<sup>25</sup> Lt D. B. Roy, Wellington; born NZ 17 Oct 1912; architect.

<sup>26</sup> L-Cpl M. J. Fiskin, MM; Monowai, Southland; born Gore, 7 Oct 1917; NZR surfaceman; wounded 3 Aug 1944.

<sup>27</sup> Spr T. G. McIntosh, MM; Auckland; born NZ 9 Jul 1918; tractor driver.

<sup>28</sup> Lt W. H. Harvey, MC; Christchurch; born Christchurch, 10 Dec 1908; carpenter.

<sup>29</sup> Sgt L. V. Berridge, MM; Waiatua, North Auckland; born NZ 22 Dec 1914; blacksmith and farmer; wounded 29 Mar 1944.

<sup>30</sup> Lt R. Erickson, m.i.d.; born Wanganui, 17 Oct 1912; timber orderman.

<sup>31</sup> Cpl S. A. Crook, MM; Christchurch; born England, 26 Jul 1903; joiner.

<sup>32</sup> Capt N. J. H. Harris, m.i.d.; Salisbury, Southern Rhodesia; born NZ 12 Nov 1913; architect.

<sup>33</sup> Sgt J. Cederman; Motueka; born Motueka, 12 Oct 1920; carpenter; wounded 16 Apr 1945.

<sup>34</sup> L-Cpl F. W. Battersby; born Christchurch, 9 Feb 1921; butcher; wounded 16 Apr 1945.

<sup>35</sup> Lt R. Gilmour; Auckland; born Gisborne, 12 Nov 1911; civil engineer; wounded 19 Apr 1945.

<sup>36</sup> L-Cpl M. R. Blacktopp, MM; Wellington; born Greymouth, 19 Mar 1922.

<sup>37</sup> Lt J. A. Marshall; Westport; born NZ 1 May 1916; mining surveyor.

<sup>38</sup> Lt S. R. T. Clarke; Wellington; born Alexandra, 24 Apr 1909; carpenter.

<sup>39</sup> Lt S. J. Mathews, m.i.d.; Henderson; born Cook Is., 15 Feb 1916; poultry and fruit farmer.

<sup>40</sup> 2 Lt D. Wilson, m.i.d.; Pukekawa; born Auckland, 31 May 1914; farmer.

<sup>41</sup> Lt N. N. Carnell; Wanganui; born Nelson, 6 Dec 1911; architect.

<sup>42</sup> Three miles inland from Monfalcone.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## CHAPTER 24 – ‘BATTLED FIELDS NO MORE’

## CHAPTER 24

### 'Battled Fields no More'

The ringing down of the curtain in [Italy](#) did not go unnoticed in sapper circles, but for the most part the opportunity of a good night's sleep was what appealed most. Three weeks of continuous work and movement, with scarcely time to wash or change, is not the best preparation for a victory celebration.

The unconditional surrender in North Africa had been followed by the Italian campaign; now the unconditional surrender in [Italy](#) meant what? [Europe](#) was still fighting and the war against [Japan](#) was far from ended. Let's have a decent night's sleep!

The Yugoslav Army, or rather the dominant Communist faction under [Marshal Tito](#), for there were two bitterly opposed Yugoslav armies who fought each other when there were no Germans handy, claimed all [Italy](#) east of the Isonzo River, by right of conquest, as now part of [Yugoslavia](#).

The suggestion that the Peace Conference table was the proper place to advance such claims was not well received by [Marshal Tito](#); from [Monfalcone](#) to [Trieste](#) belonged to [Yugoslavia](#) and the New Zealand Division must withdraw west of the Isonzo River or be responsible for the consequences. In reply, 9 Brigade had elbowed its way into [Trieste](#).

[No. 1 Platoon](#) of 6 Field Company returned to [Ronchi](#) the morning after the entry of 22 Battalion into [Trieste](#), but before leaving the sappers held a 'sale of work' from the rear of their trucks which were parked along the waterfront. The 'work' consisted of items of enemy equipment that farsighted Kiwis had gathered up over the preceding few days and it was soon sold at satisfactory prices.

Meanwhile the situation had not improved. Lieutenant Begbie made this entry in his private diary:

3 May. Rested all day. Many rumours are rife. Yugoslav partisan women are in town now. Tough looking eggs if ever there were any. More Teds rolled in. Adolph and Goebbels are said to have committed suicide! Musso has had it. Church bells and

sirens were going full bore today.

4 May. We are under special orders of no fraternisation; Tito is giving trouble. The people are friendly enough but Tito is conscripting them all as his patriots. Those who don't join are shot. Our tanks are patrolling the streets and we carry arms wherever we go.

5 May. The situation is critical. We have removed all our ammo and grenades to the second floor of our school in readiness for a siege.... Churchill is supposed to have been seen going towards [Monfalcone](#) and [Trieste](#). Any little incident will set the match to the flames. Kiwis should not be mixed up in such an argument. We are too easy going.'

It was possibly because the Kiwis were 'too easy going' that day passed after day without the expected explosion, and incidents remained only incidents.

The sappers carried on cleaning up and reorganising with an eye to their defensive positions.

'Sticking around awaiting the story of what's to do. CO at conference. Company resting.' Seventh Field Company's war diary described the engineer position exactly.

Routine orders made lengthy reading for it was naturally a period of congratulatory messages. They ranged from Company Commanders to His Majesty King George VI, and included one from CO 6 Royal Tank Regiment which is certain to have been read most carefully:

Dear CRE,

I am enclosing a small gift from the Regiment. We used your bridges constantly in the first part of the battle; first when working with the Poles over the [Senio](#), next when working with the 10 Indian Div. over the Sillaro and one or two small ones between that and the [Idice](#). We used the [Idice](#) one for light traffic. Thank you very much indeed. Let's hope we operate alongside your grand Division again, if it is necessary.

Yours Truly,  
A. C. Jackson

During the period mentioned 5 Field Park Company had supplied the components for, and the field companies had erected, forty-two bridges over wet gaps ranging from culverts to major rivers. No account is taken of enemy rafts, etc., that were salvaged and put to use.

Bridging supplied by 5 Field Park Company over the period 9 April to 2 May 1945 was:

	Number	Weight	Length
Bailey	39	980 tons	2840 feet
FBE	3	130 tons	1280 feet
Pontoons		30 tons	
Class 40 Bailey rafts	3		
Close-support raft	1		

In addition, some 300 tons of corduroy were cut, delivered and later laid by the field companies.

The earth-shifting work was no less impressive. Apart from making approaches to the major bridging, much bulldozing was required on the maze of canals and ditches along the axis of advance. It has been estimated that in the period under review a total of 50,000 cubic yards of soil were moved in the construction of bridge approaches, much of the work being done under fire, and a further 20,000 yards in filling bomb and shell craters and dozing crossings over small canals. Of this total of 70,000 cubic yards, some 12,000 yards were moved under fire on the first night on the banks of the [Senio River](#).

Wireless broadcasts announcing that the war in [Europe](#) would end at 1 a.m. on 8 May produced some fancy effects with enemy flares, but the local situation was still too explosive to admit of real celebrations.

The decoration of a statue in the grounds of the Duke of Aosta's palace at [Miramare](#), now [General Freyberg's](#) headquarters, with a civilian hat and a suitcase bearing the inscription 'Going home?' expressed the attitude of the rank and file Kiwi more clearly than any introspective analysis of an end-of-the-war complex could do.

The situation remained more or less the same throughout May: traffic blocks in

the road tunnels skirting the coast were quietly and systematically removed, there was a small quota of daily leave to [Venice](#), some swimming under the protection of armed guards, inter-unit sports and local dances. Finally, there was the departure and the celebrations coincidental thereto of men, particularly from 5 Field Park Company, who had missed the earlier repatriation drafts.

Twenty-eighth Assault Squadron ended the month's diary thus:

“Nothing ever happens any more”, that is our desolate cry right now. The rumours of what the Div will do and when we'll do it are rife at the moment. Some of the boys picked up a programme from NZ last night. It seems the future plans for the Div. were expounded. Today all talk centres round [China](#) and a possible trip to England. It would seem that a time like this is the ideal one for some of these politicians to visit their “boys” and find out for the “Pipple” what these “boys” are thinking. Weather still beautiful and we continue to swim and play.’

The programme referred to was the report of a debate in the House of Representatives wherein it was suggested that the Division be withdrawn forthwith and the New Zealand war effort be devoted henceforth to the production of food. The Prime Minister in reply stated that the present plans provided for the return of up to the 10th Reinforcements at the earliest possible moment at which shipping could be made available without interference with the deployment of forces against [Japan](#). And there for the time being the matter ended.

The Yugoslav Government accepted the inevitable and on 9 June 1945 signed an agreement to withdraw from [Trieste](#) city forthwith. A trotting meeting was held the same day with the [Trieste](#) Trotting Club supplying the course, Italians the trotters, and the New Zealand Division some twenty drivers. As the course could accommodate comfortably only five thousand, admission tickets had to be rationed, and the twenty thousand armed Kiwi spectators had a typical New Zealand day out. The tote ran win, place, twin and double pools, and handled nearly three times as much as the [Trieste](#) Club's record total.

The evacuation by the Yugoslavs was closely attended by the New Zealand infantry battalions as far as the agreed boundary, where check posts were erected by the sappers on all roads leading eastwards. Seventh Field Company's diarist

noted the difference: '12 June. Tito's forces withdrew from [Trieste](#) area and now there are not so many desperate looking gentlemen with guns of all kinds wandering around the place.'

All danger having been finally removed, the sappers took the business of enjoying themselves very seriously indeed; sight-seeing parties travelled over North Italy, through the alpine passes and into [Austria](#). Happy sappers raced along the Grand Canal in [Venice](#) in fast Navy launches that set the light gondolas dancing like corks in a stream from their wakes; [Trieste](#) was in bounds and there were sculling, yachting and speedboat facilities on the waterfront. On land by day there were athletics, cricket matches and rest camps, and by night dancing, the opera, or just sitting in cafés and watching the crowds.

There was of course a certain amount of work done repairing communications, but perhaps the most specular engineer achievement of the month was the demonstration of yet another use for Bailey bridging components. A grandstand was required at Cervignano for the Divisional swimming sports and was to have a capacity of approximately 200 seats. Twenty sappers from 8 Field Company, under the direction of Lieutenant Harvey, did the job; starting work at 11 a.m., they finished it at 4 p.m. the next day. The time included several longish swimming breaks.

July followed much the same pattern, with occasions more social than military. Probably the most intimate sapper celebration took place at 8 p.m. on 4 July, when practically all Engineer officers paid a surprise visit to Colonel Hanson to 'wet' the award of a bar to his DSO.

There was, however, more than social activity to be considered, and the following extract from the 28 Assault Squadron war diary, the compiler of which could lay some claims to being a philosopher, gives a background picture difficult to equal:

'What a life is war when there is no war. We all understand of course that the morale and discipline of Troops must be kept up at all times, but the pain of it is something shocking. The 2 I/C, Heaven bless him, has a brain child he simply dotes on. This he calls the "details book". I could almost write up a war diary from his book

alone, it is so full of the stuff soldiers die of. It appears we must fight something, so as there is no enemy in sight, go into action against inertia of mind and body. The latrine men and Malaria Squads are thrust into action digging deeper and better holes and relentlessly pursuing mosquitos which do not exist. The Squadron runner is dashing frantically back and forth between Troops and HQ with this precious "details book" full of words for Troop Commanders while even the holy of holies, the Orderly Room staff is requested to produce on paper a list of their duties and which of the two of these poor creatures performs which duty. This all goes on in all units no doubt but some days are just too much for a bloke and though we try to keep these diaries from the too personal, it is difficult to write on anything than the petty things when we are so inactive.'

Towards the middle of July the Division began to pack up and make its farewells, and on the 22nd it marched out from the Eighth Army en route to a new area where it would reorganise and train for the war in [Japan](#). The Engineer Groups departed on the 24th via [Mestre](#), [Padua](#), [Ferrara](#), [Bologna](#) and [Rimini](#), then once more across [Italy](#) to the concentration area on the shores of [Lake Trasimene](#), near [Perugia](#).

On 6 August, shortly after 8 a.m., an American Super-Fortress flying at 30,000 feet dropped a small bomb on the seaport city of [Hiroshima](#) in [Japan](#). It heralded the entry of the Atomic Age; compared with this explosion, the total fire power of [2 New Zealand Division](#) was about the equivalent of a child's popgun. The bomb blotted out the city of [Hiroshima](#), for of its quarter of a million inhabitants, 80,000 were killed outright and, including the number who suffered from radioactivity and died within a year, the total casualties were 140,000.

On the same day the Engineer draft of the 8th Reinforcements, 160-odd all ranks, after suitable farewells, marched out for Advanced Base on the first leg of their journey homewards. Three days later (on 9 August) a second atom bomb was dropped on [Nagasaki](#).

A little desultory work was done on sports grounds and roads in the area and small leave quotas left for [Rome](#) and [Florence](#), but guarded statements in high places made everyone jittery. The 28 Assault Squadron diarist captured the sense of expectancy:

12 August. Today everyone is highly excited at the repeated rumours and radio statements on the likely peace with [Japan](#). Hourly we wait to hear that all is finally settled. The Sqn wet canteen which is now a well established fact is making full preparations....

14 August. Still nothing definite about peace. No one is sufficiently interested in anything else to do any work so we just wait for the expected news.

15 August. the news is here. vj day!!! all camp is gone mad. The weather is great, the news is great, drinking is great and in all ways it's a great world.

The balance of August and the following September were spent in cleaning, painting and reconditioning equipment in readiness for handing back to store or for shipment to New Zealand. In passing it might be mentioned that the Engineers were luckier than the infantry battalions inasmuch as, besides the little jobs that were always on the agenda of a technical unit, there was all the other work referred to. There was not the same amount of idle time to be filled in by exercises that, with the breath of civilian employment in their nostrils, now had little meaning.

During the first week of October the Engineers moved to winter quarters in the [Florence](#) area. About the same time it was announced that an occupation force would go to [Japan](#) and that the sapper component would be a Field Engineer Company of approximately 9 officers and 200 other ranks. On 10 October Captain Farnell (acting OC), Sergeant [Neilson](#)<sup>1</sup> and Sapper [Ellison](#),<sup>2</sup> all original members of 28 Assault Squadron, moved into Villa Aurora, the focal point of the J Force Engineers, officially 5 NZ Field Engineer Company.

Leave to England was announced for men who could finance the trip and who were prepared to take the chance of missing their turn for repatriation.

On 17 October 28 Assault Squadron marched in to 27 Mechanical Equipment Company; a week later 29 sappers marched in from that unit to 5 NZ Field Engineer Company and the balance of 5 Field Park Company marched in to 27 Mechanical Equipment Company. On 31 October 7 and 8 Field Companies marched in to 6 Field Company.

Fifth NZ Field Engineer Company (Major Hudson) was formed on 23 October

1945, mainly from single men of the 13th and 14th Reinforcements who were transferred from the existing Engineer companies, and later completed by the 15th Reinforcements from Advanced Base and [Maadi](#). Initially the Company was camped in tents along the [Arno River](#), and on 23 November it moved into the Aeronautical Academy buildings with the rest of [J Force](#). It took part in the GOC's parade and the men were later inspected and addressed by Colonel Hanson, who spoke of the sapper activities of the past campaigns and asked that they maintain a high standard as ambassadors for New Zealand.

The organisation of the Company, effective from 28 December 1945,<sup>3</sup> was Company Headquarters, a Works Platoon, Stores and Water Platoon and a Mechanical Equipment and Pioneer Platoon, with an establishment of 10 officers and 208 other ranks.

The main body of the Company remained in the Aeronautical Academy until 11 February 1946, while a detachment some seventy strong was attached to [J Force](#) Advanced Administrative Post at [Bari](#), where vehicles were being loaded on cargo ships. On 11 February the main body, with ASC, Signals and provosts, left [Florence](#) by train for Lammie Transit Camp, [Naples](#). They embarked on 19 February on the [Strathmore](#) and sailed on the 21st for [Japan](#). The New Zealand section of the 40,000 strong British Commonwealth Occupation Force arrived at the Japanese naval base of [Kure](#) on 19 March.

The description of the arrival is taken from the Company Intelligence Summary:

'March 19. Land visible at daylight. In the morning we travel up the inland Sea between Shikoku and [Honshu](#). The sea is dotted with islands and our ship slowly makes a tortuous passage. All gaze at Japanese soil with interest. The land form is rugged and angular. Though the country is steep and bush clad the many hills are small and of uniform height. The land appears to be 80% clad in unnaturally placed patches of uniformly stunted trees. In the bays are villages of closely packed timber dwellings. At 1400 hrs [Hiroshima](#) city is visible about five miles distant on the port bow. By 1500 hrs we have dropped anchor in [Kure](#). The portion of the Inland Sea by [Kure](#) port is like a big lake some two miles across and on the northern side is the town of [Kure](#). A half a dozen small commandeered Japanese boats, each with a few Kiwis aboard ply around our ship. The N Zers are members of the 9 NZ Bde Adv Party

who reached here on Mar 1st.'

On the 23rd the sappers were taken ashore by LST and driven in Australian trucks to the railway station; they travelled the 120 miles to [Yamaguchi](#) under better conditions than they had been led to expect. The Japanese third-class carriages were considered the equal of New Zealand second class in design and layout.

[Yamaguchi](#), the destination of the sappers, had at that time a population of 60,000 and was the 'Ken' or seat of government of the [Yamaguchi](#) prefecture. The barracks the Company occupied were on the outskirts of the town. They had been built in the first place for Japanese troops and were previously occupied by Americans, who had made a start with the provision of electric light, some shower stands and a chlorinated water supply. The eight large barrack buildings fringed the parade ground and were occupied by 27 NZ Battalion, 25 NZ Field Battery and the Camp Hospital in addition to the Engineers.

The American troops had not got around to doing much in the way of drainage and sanitation, words that did not seem to be in the Japanese vocabulary, and there was no lack of work for the engineers in bringing these amenities up to modern standards.

It had been indicated to the members of [J Force](#) before leaving [Italy](#) that the [New Zealand Government](#) was endeavouring to arrange for the first relief to arrive in [Japan](#) early in July and the second as soon after as was possible, depending on the allocation of shipping. The reliefs arrived as promised; they were volunteers, many curiously young for their alleged years, and the occupation duties were carried out by these men until September 1948.

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<sup>1</sup> [L-Sgt T. Neilson](#); [Timaru](#); born [Timaru](#), 15 Dec 1919; clerk.

<sup>2</sup> [Spr G. Ellison](#); born [Napier](#), 24 Oct 1919; mechanic.

<sup>3</sup> [6 Fd Coy](#) and [28 Assault Sqn](#) were officially disbanded as per [2 NZEF Orders](#) on the same day. The official dates of the disbandment of all Engineer units in being were:

20 Oct 1945: 5 Fd Pk Coy (became 5 NZ Fd Engr Coy)

8 Dec 1945: 28 Assault Sqn

15 Dec 1945: 7 Fd Coy

8 Fd Coy

28 Jan 1946: 6 Fd Coy

27 Mech Equip Coy

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## APPENDIX I — ORDER OF BATTLE — NEW ZEALAND ENGINEERS — MIDDLE EAST AND ITALY, 1939-45

### *Appendix I*

### *ORDER OF BATTLE*

### *New Zealand Engineers*

### *Middle East and Italy, 1939-45*

Unit	Abbreviation
	divisional engineers
Headquarters, 2 New Zealand Divisional Engineers	HQ Div Engrs
6 (NZ) Field Company	6 Fd Coy
7 (NZ) Field Company	7 Fd Coy
8 (NZ) Field Company	8 Fd Coy
5 (NZ) Field Park Company	5 Fd Pk Coy
27 (NZ) Mechanical Equipment Company	27 Mech Equip Coy
28 (NZ) Assault Squadron	28 Aslt Sqn
	works engineers
Headquarters, New Zealand Railway Construction & Maintenance Group	HQ Rly Constr & Maint Gp
9 (NZ) Railway Survey Company	9 Rly Svy Coy
10 (NZ) Railway Construction Company	10 Rly Constr Coy
13 (NZ) Railway Construction Company	13 Rly Constr Coy
18 (NZ) Army Troops Company	18 Army Tps Coy
19 (NZ) Army Troops Company	19 Army Tps Coy
21 (NZ) Mechanical Equipment Company	21 Mech Equip Coy
1 Works Section, also known as 25 (NZ) Field Company	1 Wks Sec or 25 Fd Coy
2 Works Section	2 Wks Sec
3 Works Section	3 Wks Sec
5 Engineer Works Company	5 Engr Wks Coy

transportation  
engineers

Headquarters, New Zealand Railway Operating  
Group

HQ Rly Op Gp

16 (NZ) Railway Operating Company

16 Rly Op Coy

17 (NZ) Railway Operating Company

17 Rly Op Coy

resources  
engineers

Headquarters, New Zealand Forestry Group

HQ For Gp

11 (NZ) Forestry Company

11 For Coy

14 (NZ) Forestry Company

14 For Coy

15 (NZ) Forestry Company

15 For Coy

postal services

Base Post Office

Base PO

Divisional Postal Unit

Div Post Unit

training units

New Zealand Engineer Training and  
Reinforcement Unit

Engr Trg & RU

Advanced Engineer Training Depot

Adv Engr Trg Dep

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## APPENDIX II — 2 NZEF ARMY POSTAL SERVICE

### *Appendix II*

### *2 NZEF ARMY POSTAL SERVICE*

(By Lieutenant-Colonel A. V. Knapp)

Although considerable experience had been gained during the 1914–18 War in connection with the conduct of Army postal activities, very little information was available in the early stages of the Second World War. The functions, etc., of most of the other arms of the Service were covered by textbooks, but little information of value was to be found so far as the Army Postal Service was concerned. Although in some ways this caused initial difficulties, later experience showed that perhaps there were advantages, in that it was possible to build up an efficient organisation without the handicap of trying to work along the lines of the more static formation which operated in the earlier war.

When a decision was made in 1939 to send an Expeditionary Force overseas, a Postal Unit was formed as one of the components of the Force. In the early stages, only a few of the personnel had had previous Post Office training, but before the First Echelon left New Zealand a reorganisation was made, and trained Post Office men were appointed to the officer and higher NCO positions. The value of this action was amply demonstrated as the War proceeded. An appreciable portion of the work performed by an Army Postal Unit is very similar to civilian Post Office activities. Army Post Offices in the field were required to carry out almost the full range of activities of a civilian post office—the sale of stamps and postal orders; the acceptance of telegrams; the acceptance of letters, parcels, etc.; and the despatch and receipt of mails.

The Postal Unit which left New Zealand with the First Echelon was in two sections: one the nucleus of a Base Postal Unit, and the other a Divisional Postal Unit. On this occasion, all the personnel of the Unit were on one vessel. This created difficulty in handling mail matter on other transports of the convoy, and also in compiling address card records. After this experience, action was taken with the

Second and Third Echelons and subsequent reinforcements to send Postal Unit personnel with each vessel.

In addition to handling all mail posted by the troops on board the transports during the voyage from New Zealand to the overseas theatre (in this case Egypt), the postal personnel had to prepare an address card for every New Zealand Forces person on board each of the transports. This card-record system was the basis of the whole working of the 2nd NZEF postal system, and it is pertinent to state here how the system worked.

As mentioned, an address card was prepared during the voyage from New Zealand for every serviceman or servicewoman who went overseas. These cards showed the surname and initials of the person concerned, his Army number, and the unit to which he belonged. The cards prepared for the First Echelon were, of course, the initial record, and as each subsequent Echelon or contingent arrived in Egypt, the records prepared on the voyage were sorted into the main record system.

All changes of address of each soldier were recorded on the cards, these changes being taken from the copies of the daily casualty returns prepared by every unit. In effect, it was possible through these record cards to trace the movements of each soldier from the time he left New Zealand shores until he re-embarked for return to New Zealand, and also the civilian address he proposed to use on his re-entry into New Zealand.

As mail matter was received at the [Base Post Office](#) in Egypt from New Zealand or any other source it was all checked against the record cards, and the latest addresses recorded on the articles before being despatched to the soldiers concerned. This was done during the whole War so far as letters and parcels were concerned, and, in the early stages, with newspapers also.

In 1942, owing to the very large volume of newspapers received from New Zealand in particular, action was taken to deliver them in the first instance to the address shown on the newspapers. Although this meant that appreciable numbers of newspapers were returned from units because the addressees had moved to some other unit or perhaps to hospital, it did save the great delay in delivery which would have resulted had everything been checked against the record cards before

despatch.

On arrival in Egypt in February 1940, the Base and Divisional Postal Units were first located at the New Zealand Base Camp at [Maadi](#). A little later, however, the Base Postal Unit (from then on known as the 2nd NZEF [Base Post Office](#)) was accommodated in part of the main [Cairo](#) Post Office building. As the quantity of mail increased, several subsequent changes of location were made, until, in May 1940, a building in Sharia Fum el Terra el Buloqia, near Kasr el Nil Barracks, was occupied. The [Base Post Office](#) remained there until the termination of the War and the return of all New Zealand troops to New Zealand. The building, which had been a garage prior to the War, had approximately 10,000 square feet of floor space, and, except at certain times, particularly about the Christmas period when very large quantities of mail were received from New Zealand, it provided quite reasonable facilities for handling the mails from units of the 2nd NZEF.

A small sub- [Base Post Office](#) was also in operation at [Alexandria](#) for a short time during 1940 to handle outward air mails to New Zealand.

In 1943, when the New Zealand Division moved to the Italian theatre of operations, an Advanced [Base Post Office](#) was set up at [Bari, Italy](#).

For some time after the arrival of the 2nd NZEF there were difficulties about the prepayment of postage on mail matter posted by the troops. The Egyptian Government regarded the New Zealand Expeditionary Force as civilians so far as postal facilities were concerned, and they insisted on the prepayment in Egyptian stamps on all correspondence posted by the troops. Although all the actual work of sorting outward correspondence was performed by the Army postal staff, the actual despatch of the mails was made by the Egyptian Civilian Post Office. Parcels posted by New Zealand personnel also had to be prepaid in Egyptian stamps and many difficulties were encountered in respect of checking of weights, postages and compliance with Customs formalities.

All inward mails from New Zealand were also received through the Civil Post Office and duty was chargeable on all articles contained in the parcels which were subject to duty according to the Egyptian Customs laws.

In addition to Customs charges the Egyptian Government also insisted upon the

payment of terminal charges on all parcels, i.e., that portion of the postage which is allocated as a delivery fee to the country concerned under the Parcel Post Agreement which happens to be in force. In regard to parcels from New Zealand for 2nd NZEF personnel, all the Egyptian Post Office did was to unload the mails from the conveying steamers and deliver them to the New Zealand [Base Post Office](#) in [Cairo](#).

In March 1941, however, by agreement between the Governments concerned, the collection by the Egyptian Post Office of postages, etc., on all mail matter, including parcels, despatched by the various Empire Army Postal Services, was abolished. Each Force provided its own stamps from its Home Country and letters, parcels, etc., requiring postage were prepaid in the stamps of the Service handling the mail.

At this time there were British, Australian, South African, Indian and New Zealand Army Postal Services operating on Egyptian soil, all using stamps of their respective Home countries. To avoid the complicated arrangements which would have been necessary if, say, postage prepaid in New Zealand stamps on correspondence for the [United Kingdom](#) had to be accounted for with the British Army Postal Services, a 'gentleman's' agreement was entered into between the various services to the effect that each would accept mail matter prepaid in stamps of any of the services concerned. It will no doubt be appreciated that this action saved an inestimable amount of accounting, especially as frequently British units would be served through New Zealand Field Post Offices, South African through British Field Post Offices and so on. Although no special statistics were ever taken it has been estimated that the 'balance of trade' was about equal between all the services.

As soon as the new system came into operation, the New Zealand Army Postal Service handled all their own mails. Outward mails were despatched direct from the [Base Post Office](#) to the airport or ship and inward mails were handled in the same way. To all intents and purposes the New Zealand Army Postal Service (also the other Empire Services) became an independent Postal State. The only control which the Egyptian Government retained was the right to examine parcels for tobacco, which was one of the few items which was still regarded as liable for Customs duty.

This right of examination did not prove onerous in any way and little, if any, duty on tobacco was ever collected from the troops. Later (in 1943) agreement was reached with the Egyptian Government that tobacco for troops could be imported free of duty provided it was not resold to civilians and Customs examination ceased on troops' parcels.

During the period that mail was required to be passed through the Egyptian Civilian Post Office postage had to be prepaid on all types of correspondence. When the Services commenced handling their own mails all articles up to 2 oz. in weight for despatch to New Zealand by surface means were accepted free. Postage was still required on air mail correspondence, parcels and other articles over two ounces in weight.

In addition to normal postal business cables, EFMs (Expeditionary Force Message—a special low-rate cable) exchanged between New Zealand Service personnel and New Zealand were also handled by the New Zealand Army postal service. This service was operated direct with the Marconi Radio and Telegraph Company of Egypt, S.A.E. Cables, EFMs, etc., were accepted at all Field Post Offices, whence they were despatched by mail to the [Base Post Office](#), which in turn delivered them to the Marconi Company for transmission. Delivery of inward messages to the troops was made by the Company to the [Base Post Office](#) and onward despatch was made by mail.

All messages for despatch through the Marconi Company telegraph systems were listed at the [Base Post Office](#) before being handed over to the Company and accounting was on a monthly basis.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## APPENDIX III — 3 SECTION, 9 NZ RAILWAY SURVEY COMPANY, AND THE WADI HALFA EXTENSION, 1941

### *Appendix III*

### *3 Section, 9 NZ Railway Survey Company, and the Wadi Halfa Extension, 1941*

(By Major T. H. F. Nevins)

To relieve the concentration of shipping at Suez supplies were coming in through Port Sudan. From here they were transported by Sudan Railways to Wadi Halfa and then by barge down the Nile to Shallal, where some were again loaded into railway wagons. Engineering and other stores for Qassassin and depots on the Ismailia Canal went through the Aswan Dam locks and completed the journey to the Delta by water. During low Nile, trouble was experienced with sand banks below Wadi Halfa and the first part of the river journey was unreliable for about three months each year.

Orders were therefore received to locate a railway downstream from Wadi Halfa to Toshka, a river distance of about 63 miles. In addition a 'recce' was to be made for a line to link the 3 ft 6 in. gauge Sudan Railways with the standard gauge Egyptian Railways at Shallal. This link was to be preferably on the eastern side of the river, but an alternative route was also to be investigated on the west bank where the terrain was easier. The key to the western route was the bridge over the Nile near Wadi Halfa and for this purpose a detailed survey was to be made of the Second Cataract some seven or eight miles above the town.

No. 3 Section, less Lieutenant Rushton and with Captain Dibble and Lieutenant Miller attached, was to proceed to Wadi Halfa to locate a line to Toshka following the river flats along the Nile. It was also to survey a bridge site at the Second Cataract so that piers could be located on islands of rock.

No. 1 Section was then nearing the end of the Qena- Safaga job and Captain Halley and part of the section were withdrawn to start work with Lieutenant Rushton

at [Shallal](#). Here the difficulty was to break out through the [Nile](#) escarpment into the more or less open country of the Nubian Desert. A feasible route was found, Lieutenant Rushton rejoined 3 Section at [Wadi Halfa](#) and Captain Halley carried out a rapid 'recce' of the remainder of the route on the eastern bank to [Wadi Halfa](#). He then had his vehicles ferried over the [Nile](#) and returned along a possible railway route on the left bank to Aswan. The greatest difficulty he encountered was obtaining permission from the Egyptian authorities guarding the dam to allow his party to cross the [Nile](#) by the roadway over the dam.

At [Wadi Halfa](#) Captain Dibble and three sappers camped at the Second Cataract and proceeded with the bridge survey. This seemingly difficult job Dibble turned into a simple one by establishing a vertical base line and triangulating onto the rocks below from the top of Abu Sir, a high promontory overlooking the Cataract. A possible bridge site was found where all piers could be founded on rock above water level but the bridge would need to be built on a curve.

In the meantime the rest of the section had been laboriously locating a line through the intensively cultivated plain. Not only had villages to be avoided but irrigable land was so scarce that it also had to be disturbed as little as possible and much of my time was consumed in placating the civil authorities in this respect. The line was therefore mostly located along the foot of the escarpment where it had to avoid extensive burial grounds on the outskirts of each village. The final straw that nearly broke the camel's back was when the [Sudan](#) Antiquities Department arrived and insisted on deviations to avoid ancient tombs and the remains of an early Christian church.

At GHQ it had been envisaged that the railway would follow the almost continuous narrow bench of flat land along the river all the way to [Toshka](#), but detailed examination revealed that, from the Egyptian border northwards, this land was under water when the Aswan reservoir was full, what is known locally as 'high dam'. After passing Debeira therefore, the route had to be taken up the escarpment onto undulating desert at grades that would be regarded in New Zealand as normal but which were twice as steep as the [Sudan](#) Railways 'mountain section' in the Red Sea Hills. About this time Captain Dibble returned to [Cairo](#) and Lieutenant Miller was evacuated to hospital. A more promising route was found starting from a passing loop some 30 miles south of [Wadi Halfa](#) (Station 4?). Lieutenant Rushton took

command of this work and I went to discuss the situation with the [Sudan](#) Railways authorities.

I wanted to know why we had to go to [Toshka](#) and if some nearer point would be equally satisfactory. The Traffic Manager told me he had been asked what would solve the low [Nile](#) navigation trouble and had replied that it would be nice to have rail as far as [Toshka](#). I therefore set out to find what were the limits of the navigational difficulties. In this quest I received much willing assistance from the railway authorities, who also operated the river steamers and barges. After days on the river in a launch and much questioning of river pilots and village Omdahs, I found that the worst length was the first 15 miles from [Wadi Halfa](#) and that after that, navigation at low [Nile](#) gave little trouble.

Politically the railway extension was not popular and I was called to an interview by the Governor-General, Sir Herbert Huddleston. He said a rail connection with [Shallal](#) was most undesirable as it would increase Egyptian participation in the [Sudan](#) administration, and he was not even happy about the limited penetration into Egypt as far as [Toshka](#). He was also very concerned about the cultivated land that would be occupied by the railway. I was able to tell him that I believed a railway to Faras would solve the navigational trouble. This was an accostage in the [Sudan](#) just south of the Egyptian border. As for loss of cultivated land, the reports were much exaggerated and only about 10 acres would have to be sacrificed.

Reactions to the suggestion of a terminal at Faras were not encouraging. GHQ tersely told me to do what I was told and locate a line to [Toshka](#). Lieutenant Rushton by then had completed this but it involved 120 miles of new construction on steep grades and without the watering facilities available at [Wadi Halfa](#). However, the sceptics agreed to inspect the Faras proposition; first the [Sudan](#) Railways officials, then Q from HQ [Sudan](#) and finally D. Tn from GHQ. Each was won over and the men were brought back to complete the 20 mile [Wadi Halfa](#)-Faras survey. Most of this had been located during the first abortive survey down the [Nile](#) and the work was completed in time for Lieutenant Rushton and the ORs to return to [Almaza](#) for Christmas. I remained at [Wadi Halfa](#) to assist the [Sudan](#) Railways with the construction.

In surveying their line across the high desert to [Toshka](#) Lieutenant Rushton and

his men put up some phenomenal performances. Most days five miles were traversed and levelled and on good days over eight miles were covered. This was done during the hot weather when light conditions precluded surveying after about 1300 hours. Work was organised so as to reduce walking to a minimum and staves and instruments were moved on by vehicles which kept up an almost continuous movement along the line. At [Toshka](#) and at Faras, where contour surveys were required for the accostages, the men carrying the levelling staves were mounted on donkeys and galloped from point to point like knights of old, or perhaps more truly like Don Quixote on Rosinante.

A year or so later Colonel Simner told me that, when settling up Transportation finances in the [Middle East](#), it was found that [Sudan](#) Railways had made no claim for their expenditure on the extension to Faras. They said they had had experience of one season's operation and were so satisfied that they proposed to take it over as a part of the permanent railway system.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

**APPENDIX IV – EXTRACT FROM ROYAL ENGINEERS TRAINING  
MEMORANDUM – SECTION 43.—NEW ZEALAND ENGINEERS IN ITALY**

## *Appendix IV*

### *EXTRACT FROM ROYAL ENGINEERS TRAINING MEMORANDUM*

#### *Section 43.—NEW ZEALAND ENGINEERS IN ITALY*

##### *General*

1. Before the assault of the R *Senio* and during the subsequent operations, NZE consisted of the following:

( Three field companies of normal British War Establishment.

a)

( Assault squadron, NZE, consisting of two troops each equipped as follows:

b)

3 Arks

3 AVsRE

3 Valentines (Scissors bridge)

2 Sherman dozers

1 Honey tank (recce)

2 Dingoes

and HQ vehicles

( Mechanical Equipment Company, NZE, consisting of two platoons each equipped  
c) as follows:

2 D8 angledozers

2 D6 angledozers

1 Mechanical shovel

1 Compressor

1 Tractor-drawn grader

2 Dingoes (recce)

The field companies were allotted to infantry brigades in the normal way while the assault squadron and mechanical equipment company were under command of

the CRE, and allotted by him to forward units as required.

## ***Local bridging method***

2. **2 New Zealand Division** developed their own methods for providing assault tank crossings of R Senio, Santerno and Sillaro—narrow beds with high floodbanks—which they used almost exclusively instead of relying on the Ark as did other divisions. **8 Indian Division** also used this method on several occasions.

3. **2 New Zealand Division's** methods relied on securing the near floodbank at dusk, the far bank being carried by infantry assault after dark. As soon as the latter operation was accomplished all material for the crossing which had been dumped under the near bank was carried over the levee by hand. The bridge itself was a 50-ft SS Bailey, spanning the water gap a few feet above water level. It was erected as separate single girders on an FBE raft, the end panels having their bottom pins out. When complete the girders were lifted bodily to the horizontal by man power and the bottom pins inserted. Transoms were then positioned and the bridge decked down. This bridge when over 40 ft long was only class 30, but was sufficient for the Sherman tanks with which the New Zealand Armoured Brigade was equipped.

4. **2 New Zealand Division** claimed that their method (35 minutes to one hour) was as quick if not quicker than using Arks since, while the bridge was being built, the blowing or dozing of the near bank was in progress and could be continued right up to the complete bridge. The first vehicle across was an unarmoured dozer to prepare the exit on the far bank.

5. By working almost in the river bed when the water level was low, the sappers were well protected by the high floodbanks and suffered very few casualties, but the same could not be said of the infantry covering parties exposed on the top of the far levee.

6. **8 Indian Division** copied **2 New Zealand Division's** method, but since they were to be supported by Churchill tanks, construction had to be DS to give the necessary class 40 classification. Furthermore, in order to cut down dozing on the higher flood-banks on their sector, the bridge was built some 8 ft above water using either an FBE trestle or a crib pier on the FBE raft. The resultant bridge was

therefore 60 ft to 70 ft long and, being DS, took considerably longer to construct.

## *Lessons learned as a result of operations in Italy*

7. **Protection.**—A winding river gives ample opportunity for enemy pockets to be by-passed by the attack or to remain in action on the flanks, especially at night. Adequate infantry cover must be provided for the bridge sites to protect the engineer recce and working parties.

8. **Attached troops.**—If additional Engineer troops are brought under command they must be left for the entire operation, or, failing that, adequate warning must be given of their intended removal. Engineer planning has to look so far ahead that programmes are completely upset if troops are removed at short notice.

9. **Sherman dozers.**—These did excellent work, well forward and often under fire, with the Assault Engineers, and succeeded in breaching obstacles under conditions where enemy action would have prevented a soft skinned bulldozer from working. Some clutch trouble was experienced and it was felt that a modification is required to produce 100 per cent efficiency.

10. **Flexibility.**—The first task for the bridges was to get armour forward to the leading infantry; therefore the broad picture of the progress of bridges had to be constantly studied from the point of view of getting tanks forward as quickly as possible. A hold up on any one bridge might necessitate altered timings and the switching of units onto other routes and bridges. It was therefore most important that the complete RE effort should be under the direct control of the CRE, who could best interpret the broad picture in terms of the forward movement of essential vehicles.

### 11. **Administration**

( The principle followed was to have bridging equipment as far forward as the a) priorities laid down by division allowed, and the Engineers aimed at holding their Bailey equipment forward of the gunline.

( Division accepted the CRE's priorities for Arks, AVsRE and bulldozers. b)

( Corps Bailey bridging dumps were located as far forward as possible. The method  
 c) of replenishment was simply that a bridging truck, when emptied, went direct to  
 the corps dump and re-filled. This system worked admirably owing to the  
 initiative and efficiency of the drivers.

( The use of wireless was most valuable to maintenance parties on forward tracks  
 d) for reporting on the state of tracks and forecasting future maintenance  
 requirements, and to the Engineer Assault recce parties for briefing and  
 summoning the maintenance parties.

12. **Air photographs.**—Air photographs and information supplied by  
 interpretation units were of the greatest assistance to the Engineers in the selection  
 of bridge sites and assessment of obstacles. Bridge sites were selected from  
 photographs and their subsequent location never varied by more than a few feet. It  
 was considered that all Engineer staff officers should be trained in the study of air  
 photographs from the Engineer point of view, with special attention to the  
 determining and checking of vertical distances.

#### 2 NZ ENGINEERS BRIDGES BUILT 9 Apr – 16 Apr 1945

Date	Place	Coy	Bridge	Remarks	Start	Open
9/10 Apr	Senio	7 Fd Coy	Woodville	30 ft S/S LL	Enemy shelling (work start 2120)	2330 0230
9/10 Apr	Senio	6 Fd Coy	Seymour	40 ft S/S LL	Enemy shelling (much bulldozing)	2325 0230
9/10 Apr	Senio	8 Fd Coy	Raglan	60 ft S/S LL	Slight shelling 2300	2325 0230
9/10 Apr	Senio	28 Asslt Sqn	Seymour	Scissors	Placed 0120, abandoned owing to deep mines at	— 0330
9/10 Apr	Senio	7 Fd Coy	Woodville	100 ft D/S	Heavy shelling, casualties	2140 0100
9/10 Apr	Senio	8 Fd Coy	Raglan	100 ft D/S	Slight shelling	
11 April	Lugo Canal	7 Fd Coy		70 ft D/S	Straightforward	1330 1730
11 April	Lugo Canal	28 Asslt Sqn	Ark			
11/12 Apr	Santerno	6 Fd Coy	Spalding	40 ft S/S LL	Enemy interference 1st recce 1740	0140
11/12 Apr	Santerno	E Asslt Sqn	Double Ark		1st Ark in at 2030; much dozing 2nd Ark 0050	0253 0445
12 Apr	Santerno	7 Fd	(Piers)	120 ft	Some mortaring	0100 1000

		Coy		D/S		
12 Apr	Santerno	8 Fd		110 ft	Strengthened to Cl 40 by	0800 1430
		Coy		D/S	2000	
12 Apr	Scolo	8 Fd		60 ft		
		Coy		S/S		
14 Apr	Trattura	8 Fd		50 ft	Road demolition	1120 1220
		Coy		S/S		
15/16 Apr	Sillaro	6 Fd	Sydney	30 ft	Enemy interference, some	2302 0130
		Coy		S/S LL	casualties	
15/16 Apr	Sillaro	6 Fd	Riverton	30 ft	Enemy interference, some	0012 0500
		Coy		S/S LL	casualties	
15/16 Apr	Sillaro	8 Fd	Wallsend	40 ft	Enemy interference, some	2253 0500
		Coy		S/S LL	casualties	
15/16 Apr	Sillaro	8 Fd	Rosewood		Drum and fill. Some	2245 0210
		Coy			casualties	

Note.—This table does not include all the Arks and Scissors bridges placed by assault squadrons.

LL ? Low level. This table is incomplete in some details, but is included to give an idea of the work done in the time.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## GENERAL

### *General*

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## LOCAL BRIDGING METHOD

### *Local bridging method*

2. 2 New Zealand Division developed their own methods for providing assault tank crossings of R Senio, Santerno and Sillaro—narrow beds with high floodbanks—which they used almost exclusively instead of relying on the Ark as did other divisions. 8 Indian Division also used this method on several occasions.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## LESSONS LEARNED AS A RESULT OF OPERATIONS IN ITALY

### *Lessons learned as a result of operations in Italy*

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8. **Attached troops.**—If additional Engineer troops are brought under command they must be left for the entire operation, or, failing that, adequate warning must be given of their intended removal. Engineer planning has to look so far ahead that programmes are completely upset if troops are removed at short notice.

9. **Sherman dozers.**—These did excellent work, well forward and often under fire, with the Assault Engineers, and succeeded in breaching obstacles under conditions where enemy action would have prevented a soft skinned bulldozer from working. Some clutch trouble was experienced and it was felt that a modification is required to produce 100 per cent efficiency.

10. **Flexibility.**—The first task for the bridges was to get armour forward to the leading infantry; therefore the broad picture of the progress of bridges had to be constantly studied from the point of view of getting tanks forward as quickly as possible. A hold up on any one bridge might necessitate altered timings and the switching of units onto other routes and bridges. It was therefore most important that the complete RE effort should be under the direct control of the CRE, who could best interpret the broad picture in terms of the forward movement of essential vehicles.

### 11. **Administration**

( The principle followed was to have bridging equipment as far forward as the a) priorities laid down by division allowed, and the Engineers aimed at holding their Bailey equipment forward of the gunline.

( Division accepted the CRE's priorities for Arks, AVsRE and bulldozers.

b)

( Corps Bailey bridging dumps were located as far forward as possible. The method  
c) of replenishment was simply that a bridging truck, when emptied, went direct to the corps dump and re-filled. This system worked admirably owing to the initiative and efficiency of the drivers.

( The use of wireless was most valuable to maintenance parties on forward tracks  
d) for reporting on the state of tracks and forecasting future maintenance requirements, and to the Engineer Assault recce parties for briefing and summoning the maintenance parties.

**12. Air photographs.**—Air photographs and information supplied by interpretation units were of the greatest assistance to the Engineers in the selection of bridge sites and assessment of obstacles. Bridge sites were selected from photographs and their subsequent location never varied by more than a few feet. It was considered that all Engineer staff officers should be trained in the study of air photographs from the Engineer point of view, with special attention to the determining and checking of vertical distances.

#### 2 NZ ENGINEERS BRIDGES BUILT 9 Apr – 16 Apr 1945

Date	Place	Coy	Bridge	Remarks	Start	Open
9/10 Apr	Senio	7 Fd Coy	Woodville	30 ft S/S LL	Enemy shelling (work start 2120)	2330 0230
9/10 Apr	Senio	6 Fd Coy	Seymour	40 ft S/S LL	Enemy shelling (much bulldozing)	2325 0230
9/10 Apr	Senio	8 Fd Coy	Raglan	60 ft S/S LL	Slight shelling 2300	2325 0230
9/10 Apr	Senio	28 Asslt Sqn	Seymour	Scissors	Placed 0120, abandoned owing to deep mines at	— 0330
9/10 Apr	Senio	7 Fd Coy	Woodville	100 ft D/S	Heavy shelling, casualties	2140 0100
9/10 Apr	Senio	8 Fd Coy	Raglan	100 ft D/S	Slight shelling	
11 April	Lugo Canal	7 Fd Coy		70 ft D/S	Straightforward	1330 1730
11 April	Lugo Canal	28 Asslt Sqn	Ark			
11/12 Apr	Santerno	6 Fd Coy	Spalding	40 ft S/S LL	Enemy interference 1st recce 1740	0140
11/12	Santerno	E Asslt	Double		1st Ark in at 2030; much	0253 0445

Apr	Sqn	Ark		dozing 2nd Ark 0050	
12 Apr	Santerno 7 Fd Coy	(Piers)	120 ft D/S	Some mortaring	0100 1000
12 Apr	Santerno 8 Fd Coy		110 ft D/S	Strengthened to Cl 40 by 2000	0800 1430
12 Apr	Scolo 8 Fd Coy		60 ft S/S		
14 Apr	Trattura 8 Fd Coy		50 ft S/S	Road demolition	1120 1220
15/16 Apr	Sillaro 6 Fd Coy	Sydney	30 ft S/S LL	Enemy interference, some casualties	2302 0130
15/16 Apr	Sillaro 6 Fd Coy	Riverton	30 ft S/S LL	Enemy interference, some casualties	0012 0500
15/16 Apr	Sillaro 8 Fd Coy	Wallsend	40 ft S/S LL	Enemy interference, some casualties	2253 0500
15/16 Apr	Sillaro 8 Fd Coy	Rosewood		Drum and fill. Some casualties	2245 0210

Note.—This table does not include all the Arks and Scissors bridges placed by assault squadrons.

LL ? Low level. This table is incomplete in some details, but is included to give an idea of the work done in the time.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## APPENDIX V – ANALYSIS OF PROMOTIONS, CASUALTIES AND AWARDS IN A FIELD COMPANY, NEW ZEALAND ENGINEERS

### *Appendix V*

### *ANALYSIS OF PROMOTIONS, CASUALTIES AND AWARDS IN A FIELD COMPANY, NEW ZEALAND ENGINEERS*

From a copy of the original embarkation roll of 8 Field Company, NZE, 2 NZEF, with the help of Base Records, the following 'vital statistics' of the Company have been compiled. The Company's strength on embarkation, and including 1st Reinforcements, was 261 all ranks, comprising 211 sappers, 18 Lance-Corporals, 13 Corporals, 6 Lance-Sergeants, 5 Sergeants, 1 Staff-Sergeant, 1 Warrant Officer Class II, 4 Second-Lieutenants, 1 Captain and 1 Major.

The various promotions of these 261 were:

25 sappers promoted to L-Cpl

21 sappers promoted to Cpl

10 sappers promoted to L-Sgt

10 sappers promoted to Sgt

1 sappers promoted to S-Sgt

1 sappers promoted to 2 Lt

1 sappers promoted to Lt

2 L-Cpls promoted to Cpl

2 L-Cpls promoted to L-Sgt

4 L-Cpls promoted to Sgt

1 L-Cpls promoted to S-Sgt

1 L-Cpls promoted to Lt

2 Cpls promoted to L-Sgt

5 Cpls promoted to Sgt

1 Cpls promoted to S-Sgt

3 L-Sgts promoted to Sgt

2 Sgts promoted to WO II

1 Sgts promoted to Lt

1 S-Sgt promoted to WO II

1 WO II promoted to WO I

2 2 Lts promoted to Lt

2 2 Lts promoted to Capt

1 Capt promoted to Lt-Col

The casualties of these 261 were:

Killed in action 13

Died of wounds 9

Wounded once 47

Wounded twice 2

Wounded thrice 1

Prisoner of war 32

The awards and decorations earned by the original 261 were:

DSO 1

MC 1

MC and bar 1

DCM 1

MM	4
MID	8

As 8 Field Company did not take part in the campaigns in [Greece](#) or [Crete](#), it may be that the casualty figures are not quite as heavy as those of the other Field Companies. However, bearing in mind that these figures are based on the embarkation roll only and do not take into account the total turnover in the Company, they could be indicative of what happened to the original strengths of the Companies.

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## ROLL OF HONOUR

### *Roll of Honour*

#### KILLED IN ACTION

Capt A. F. Allen, m.i.d.	18 February 1944
Capt C. B. Hornig	6 March 1944
Lt E. T. Belhamine, BEM	25 July 1944
Lt F. M. Dahl	17 November 1944
Lt J. R. M. Hector, m.i.d.	20 May 1941
2 Lt J. Galloway	26 July 1942
Sgt E. A. Allen	23 October 1942
Sgt G. B. Bartholomew, DCM	26 October 1942
Sgt A. C. McIntosh	28 November 1943
Sgt A. B. Robinson, m.i.d.	3 February 1941
Sgt A. D. Sugden	18 February 1944
Sgt I. D. Thomson	26 June 1942
Sgt A. M. Ziman	20 May 1941
L-Sgt G. H. De Thierry	27 June 1942
L-Sgt L. P. Evans	18 December 1942
L-Sgt H. J. Kain	8 December 1943
L-Sgt G. A. Murray	22 July 1942
L-Sgt T. A. O'Malley	26 June 1942
L-Sgt W. R. Smeaton	2 December 1943
L-Sgt W. D. Warren	18 April 1941
Cpl C. L. Andrew	7 March 1944
Cpl A. M. Eagles	31 May 1941
Cpl W. Fodie	19 April 1945
Cpl A. H. Forsyth	24 December 1940
Cpl R. E. Hutchinson	18 January 1943
Cpl V. W. Kench	10 April 1943
Cpl J. Nielsen	25 June 1942
Cpl W. B. Perrie	29 October 1942
Cpl T. E. Reeve	18 May 1941
Cpl A. E. Richards	27 December 1942

Cpl N. L. Shirreffs	1 August 1944
Cpl A. L. Shruballs	27 December 1942
Cpl R. C. M. Yeatts	10 April 1942
L-Cpl T. G. Aiken	21 May 1941
L-Cpl C. C. Boswell	26 April 1941
L-Cpl R. Clark	28 November 1943
L-Cpl W. J. Dallas	28 November 1943
L-Cpl W. T. Headifen	27 November 1941
L-Cpl J. D. Jones	20 July 1942
L-Cpl W. M. R. Poole	6 January 1944
L-Cpl J. A. Radley	25 April 1941
L-Cpl R. G. Sturgeon	3 October 1944
L-Cpl A. J. Thomas	28 June 1942
L-Cpl J. V. Turley	26 April 1941
Spr V. J. Adlam	26 April 1941
Spr V. Anderton	2 November 1942
Spr J. R. Andrew	21 December 1942
Spr V. Arthur	20 May 1941
Spr J. A. Ashurst	30 November 1941
Spr A. F. Augustine	17 August 1944
Spr R. H. Baff	20 May 1941
Spr J. Bagen	2 June 1941
Spr W. C. Baillie	28 July 1944
Spr H. V. Baird	28 November 1943
Spr G. E. Barter	9 June 1944
Spr R. A. B. Bonney	26 July 1942
Spr R. J. Burke	23 March 1943
Spr R. A. Butler	26 May 1941
Spr A. S. Cammock	26 April 1941
Spr A. Chalmers	20 December 1943
Spr J. W. Cheale	17 August 1944
Spr E. R. G. Chirnside	2 November 1942
Spr C. S. Clark	1 May 1945
Spr E. R. Clark	26 July 1944
Spr D. Clayton	26 June 1942
Spr P. Cohen	2 December 1943
Spr C. B. Columb	1 December 1941

Spr A. L. Cooke	1 May 1945
Spr G. N. Coutts	29 March 1944
Spr M. R. Crowe	20 December 1942
Spr M. A. Day	19 May 1945
Spr R. F. Dorset	3 February 1941
Spr J. K. Douglas	26 May 1941
Spr J. F. Dowdle	28 November 1943
Spr A. Eaton	18 December 1942
Spr J. L. Evans	18 January 1943
Spr J. C. Farmer	27 May 1941
Spr A. G. Figgins	9 April 1941
Spr C. P. Fitzgerald	16 March 1944
Spr B. C. Gahagan	1 May 1945
Spr N. S. Galyer	23 May 1941
Spr D. McD. Gardiner	18 January 1943
Spr E. T. Glover	18 April 1941
Spr P. E. Gosse	20 May 1941
Spr A. L. Grant	23 March 1943
Spr F. E. Gray	24 November 1941
Spr R. H. J. Haines	24 March 1943
Spr P. C. Hamilton	17 April 1941
Spr C. D. Hardgrave	28 November 1943
Spr J. R. Harris	10 April 1945
Spr M. Harris	20 July 1942
Spr I. K. Harvey	20 July 1942
Spr J. A. Hogg	29 March 1943
Spr A. E. Hollis	26 July 1942
Spr W. Hotop	28 November 1943
Spr W. J. Howard	29 March 1943
Spr D. J. McN. Hume	28 November 1943
Spr F. L. Hyde	26 April 1941
Spr W. P. Isbister	15 July 1942
Spr P. R. Isitt	2 May 1942
Spr T. B. Johnston	26 April 1941
Spr L. M. Jones	2 May 1942
Spr A. A. Jury	26 May 1941
Spr E. H. Kells	23 September 1944

Spr V. B. King	21 May 1941
Spr D. Lamont	12 June 1944
Spr M. F. Little	December 1941
Spr S. Lord	23 May 1941
Spr C. T. S. Loveday	24 October 1942
Spr H. A. Loveday	2 November 1942
Spr J. W. Lyall	27 June 1942
Spr E. C. Lye	10 April 1943
Spr E. B. G. McCormack	30 March 1944
Spr J. McCreanor	18 December 1942
Spr C. McCurran	26 May 1941
Spr H. McKay	29 November 1941
Spr M. McKeeney	26 July 1942
Spr C. S. MacWilliam	2 November 1942
Spr A. Marriner	21 May 1941
Spr H. P. Martin	26 May 1941
Spr R. H. Mathewson	21 May 1941
Spr L. C. Meachen	15 July 1942
Spr D. L. W. Mills	25 June 1942
Spr W. Mitchell	20 May 1941
Spr R. A. Moore	26 June 1942
Spr E. Murphy	27 November 1941
Spr M. Murphy	27 December 1942
Spr H. R. Northey	28 November 1943
Spr T. O'Brien	28 November 1943
Spr J. E. O'Connell	3 February 1941
Spr R. J. Painter	8 March 1943
Spr J. W. B. Palatchie	10 May 1942
Spr L. L. Perry	23 October 1942
Spr R. A. F. Perry	23 March 1943
Spr P. C. Petty	23 October 1942
Spr A. W. Pickering	28 July 1942
Spr C. E. Piercy	2 June 1941
Spr T. Pitoni	21 April 1945
Spr J. Prince	25 July 1944
Spr G. R. Quinlan	24 October 1942
Spr A. S. H. Rate	3 February 1943

Spr E. W. Richards	26 June 1942
Spr G. Richards	5 December 1941 *
Spr R. D. Rogers	27 June 1942
Spr E. T. Rowntree	21 May 1941
Spr M. D. Sadler	17 April 1941
Spr B. S. Sagar	8 December 1943
Spr H. F. Samson	26 May 1941
Spr G. W. Sharpe	18 May 1941
Spr J. N. Sharpe	3 February 1941
Spr H. S. Small	22 March 1943
Spr A. T. Smith	20 July 1942
Spr H. N. Smith	26 June 1942
Spr H. T. A. Smith	20 July 1942
Spr R. D. Smith	22 May 1941
Spr D. Soutar	26 May 1941
Spr D. E. Spiers	18 April 1941
Spr J. T. Stanley-Joblin	15 July 1942
Spr T. J. Staunton	28 November 1943
Spr R. S. Stewart	5 December 1943
Spr H. Stringfellow	23 September 1944
Spr W. Sullivan	28 June 1942
Spr L. A. Tait	27 November 1941
Spr W. T. B. Thomson	27 June 1942
Spr A. G. Thornton	26 April 1941
Spr L. C. Tilsley	18 January 1943
Spr W. J. Tolchard	20 April 1943
Spr K. A. Tomsett	1 May 1945
Spr G. M. Twiss	20 July 1942
Spr T. G. Walker	4 July 1942
Spr H. Ward	18 February 1944
Spr E. S. Warmington	20 May 1941
Spr E. B. Warren	29 March 1944
Spr I. Watt	29 March 1943
Spr K. Wehipeihana	31 May 1944
Spr E. E. Weir	27 December 1942
Spr I. R. White	17 April 1941
Spr W. A. White	1 August 1944

Spr J. C. T. Williams	1 May 1945
Spr J. Windsor	23 October 1942

### DIED OF WOUNDS

Maj H. C. S. Woolcott	24 October 1942
Lt G. K. Miller	25 October 1942
2 Lt T. J. Higginson, MM	30 March 1944
2 Lt D. F. McFarlane	3 December 1941
Sgt W. F. Day, MM	11 August 1944
L-Sgt D. G. Campbell	15 January 1943
Cpl J. W. Sankey	27 May 1941
Cpl F. R. Shannon	28 May 1941
Cpl H. E. Thompson	22 April 1941
Cpl H. R. Tregoning	23 March 1944
L-Cpl R. G. Barratt	20 April 1943
L-Cpl D. G. Berryman	21 April 1945
L-Cpl W. Hardwick	27 June 1942
L-Cpl N. J. Hill	18 January 1943
L-Cpl E. H. Kerr	22 May 1941
L-Cpl A. P. Lindsay	28 December 1942
L-Cpl R. A. McGowan	4 October 1944
L-Cpl S. A. Manttan	17 November 1943
L-Cpl R. S. Moreland	29 November 1941
L-Cpl P. G. H. Pearse	2 December 1944
Spr D. A. Bailey	28 March 1942
Spr W. V. Batten	22 December 1941
Spr J. R. Beal	15 July 1942
Spr T. A. Blackmoore	26 April 1941
Spr L. J. Corbett	27 May 1941
Spr N. B. Corner	29 June 1942
Spr F. N. Dalziel	26 June 1942
Spr F. C. Davidson	27 November 1941
Spr H. G. Delaney	25 October 1942
Spr C. F. Dette	23 March 1944
Spr N. G. Dingwall	7 May 1945
Spr W. J. Dobbin	15 November 1942
Spr J. Dutton	23 December 1942

Spr R. W. Ellicott	26 June 1942
Spr W. C. J. Erickson	2 June 1941
Spr F. S. Fuller	8 March 1942
Spr D. L. Galloway	27 October 1942
Spr R. E. Gaskin	15 July 1942
Spr S. J. Gavan	28 March 1942
Spr R. D. Gilberd	30 July 1942
Spr G. G. Gilchrist	18 April 1941
Spr R. J. Goodison	13 June 1941
Spr G. R. Goodland	26 April 1941
Spr B. F. Grant	7 April 1945
Spr W. Greenway	29 July 1944
Spr J. R. Holland	8 March 1942
Spr M. H. J. Hubbard	27 May 1941
Spr G. F. Humphrey	17 August 1944
Spr T. Kearton	30 May 1941
Spr F. B. Kelk	2 December 1941
Spr T. O. Lynch	26 May 1941
Spr W. J. McCown	8 July 1941
Spr R. McCulloch	14 July 1942
Spr R. F. McLennan	2 April 1942
Spr R. L. McTagget	29 November 1943
Spr R. M. Machen	27 June 1942
Spr E. H. Martin	20 July 1942
Spr W. R. Martin	16 December 1941
Spr M. W. P. Meyer	3 August 1944
Spr V. W. Morgan	23 March 1943
Spr T. D. F. Muir	26 August 1942
Spr D. S. M. Munro	27 April 1941
Spr W. E. O'Brien	29 November 1943
Spr C. M. Poppleton	24 December 1942
Spr A. Price	2 June 1941
Spr R. V. Revell	8 December 1941
Spr G. E. Robinson	28 December 1942
Spr J. C. Saunders	14 April 1945
Spr H. Shaw	22 May 1941
Spr W. Tootell, m.i.d.	28 May 1941

Spr L. C. Trickett 7 October 1944

Spr W. R. Walker 29 March 1942

Spr B. H. Yeates 24 March 1944

DIED ON ACTIVE SERVICE

Lt I. S. Neil 22 May 1941

Sgt C. Campbell 12 June 1943

Sgt C. J. Herbert 1 February 1941

Sgt J. H. Schroder 5 February 1943

Sgt G. A. Thomson 22 June 1945

Cpl W. J. D. McElhinney 10 June 1943

L-Cpl A. M. Finlay 19 June 1941

L-Cpl A. H. Turner 26 November 1941

Spr P. H. Adamson 3 October 1942

Spr H. T. Anderson 20 June 1942

Spr S. W. Bagby 21 September 1942

Spr R. Baxter 27 December 1942

Spr F. T. Beale 1 February 1942

Spr J. J. Bean 6 July 1942

Spr E. Y. Bolton 1 April 1941

Spr A. J. Brady 18 November 1940

Spr H. J. Bredesen 15 April 1942

Spr W. Crichton 26 June 1942

Spr M. J. Crosby 3 February 1941

Spr H. Dowdell 25 May 1943

Spr L. J. Entwistle 10 December 1940

Spr G. T. Gibbs 5 October 1941

Spr G. S. Goodall 25 February 1945

Spr R. E. Groves 28 November 1940

Spr E. G. Haines 3 April 1942

Spr C. J. Hennessy 13 July 1942

Spr R. C. Hogg 29 June 1941

Spr S. D. L. Irwin 3 June 1941

Spr R. T. Kelly 20 September 1943

Spr H. S. B. Leighton 25 October 1941

Spr M. D. McGeorge 12 June 1940

Spr W. E. Melton 15 November 1941

Spr A. J. Nesus 19 May 1943

Spr E. P. A. Newton	8 June 1941
Spr J. G. Norton	1 October 1945
Pte T. J. Robinson	26 November 1941
Spr J. J. Ryan	29 April 1943
Spr H. J. Shepherd	11 July 1942
Spr S. C. C. Southwood	9 July 1942
Spr J. A. Tillard	12 October 1942
Spr H. E. Webster	31 July 1943

KILLED OR DIED WHILE PRISONERS  
OF WAR

Cpl J. J. Bartosh	23 August 1941
Cpl J. R. Kirby	24 March 1945
L-Cpl E. G. Smith	4 January 1943
Spr K. L. Adams	21 August 1941
Spr M. E. Brown	9 July 1942
Pte C. R. Leeks	28 January 1943
Spr A. McL. Lowther	12 July 1943
Spr G. H. Newman	15 April 1943
Spr L. H. Tobin	19 January 1943

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\* Drowned off [Tobruk](#) in sinking of [Chakdina](#).

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## SUMMARY OF CASUALTIES

### *Summary of Casualties*

	Offrs	Other ranks
Killed in action	6	174
Died of wounds	4	69
Killed or died while prisoners of war	—	9
Died on active service	1	40
Wounded	63	611
Wounded and prisoners of war	1	47
Prisoners of war	12	323
	—	—
	87	1273

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## HONOURS AND AWARDS

### *Honours and Awards*

#### BAR TO DISTINGUISHED SERVICE ORDER

Col G. H. Clifton, DSO

Col F. M. H. Hanson, DSO

#### DISTINGUISHED SERVICE ORDER

Lt-Col C. E. Barnes

Lt-Col G. H. Clifton

Lt-Col F. M. H. Hanson

Maj J. N. Anderson

Maj G. K. Armstrong

Maj A. R. Currie

Maj G. A. Lindell

Maj L. C. E. Malt

Maj D. S. G. Marchbanks

Maj L. F. Rudd

Maj D. U. White

#### OFFICER OF THE ORDER OF THE BRITISH EMPIRE

Col L. F. Rudd

Lt-Col J. E. Anderson

Lt-Col F. M. H. Hanson

Lt-Col A. H. Sage

Maj F. W. Aickin

Maj R. H. Packwood

Maj R. T. Smith

Maj D. V. Thomas

MEMBER OF THE ORDER OF THE BRITISH EMPIRE

Maj K. Christie

Maj D. A. Clarke

Maj A. V. Knapp

Maj D. S. G. Marchbanks

Maj R. O. Pearse

Capt K. O. Tunncliffe

Capt J. B. Wallace

Lt A. N. Sexton

W O I L. R. Baigent

S-Sgt M. G. Neal

BAR TO MILITARY CROSS

Maj R. C. Pemberton, MC

Maj H. M. Reid, MC

## MILITARY CROSS

Maj H. M. Reid

Maj C. F. Skinner

Capt G. K. Armstrong

Capt C. E. Barnes

Capt A. Edmonds

Capt E. Farnell

Capt J. B. Ferguson

Capt J. A. Goodsir

Capt A. A. Keller

Capt G. S. Menzies

Capt P. W. de B. Morgan

Capt R. C. Pemberton

Capt B. J. Williams (ASC attached)

Lt M. A. Andrew

Lt D. F. Brown

Lt F. E. Foster

Lt R. E. Hermans

Lt A. G. Hunter

Lt D. G. MacNab

Lt R. W. Morris

Lt R. M. Page

Lt R. A. Pickmere

Lt L. T. Skipage

Lt J. W. Standish

Lt A. Veart

2 Lt J. G. Gowan

2 Lt W. H. Harvey

2 Lt D. McCormick

2 Lt S. M. F. Martin

2 Lt G. A. O'Leary

2 Lt E. G. Prosser

2 Lt R. J. Quinn

Rev. J. K. Watson (Chaplain attached)

#### DISTINGUISHED CONDUCT MEDAL

S-Sgt J. A. Redpath

Sgt G. B. Bartholomew

Sgt J. Brown

Sgt W. E. Dudeck

Sgt E. J. A. Fraser

Sgt J. K. Lawrence

Sgt D. G. MacNab

Sgt E. J. E. McQueen

L-Sgt L. A. W. Davis

L-Sgt R. J. Roberts

L-Cpl R. E. Milligan

Spr F. Fenton

## MILITARY MEDAL

S-Sgt J. A. Redpath

S-Sgt E. J. Webb

Sgt B. E. Archibald

Sgt L. V. Berridge

Sgt F. S. Dacey

Sgt W. F. Day

Sgt A. J. Duckworth

Sgt J. C. Farnham

Sgt H. A. Heley

Sgt J. Ross

Sgt R. B. Smith

L-Sgt E. H. Elliott

L-Sgt T. J. Higginson

L-Sgt K. F. McLauchlan

L-Sgt K. J. O'Brien

L-Sgt H. A. Sinclair

Cpl C. H. Anderton

Cpl W. P. Cottrell

Cpl S. A. Crook

Cpl L. R. Duncan

Cpl V. J. Jorgensen

Cpl E. K. Madigan

Cpl A. M. Read

L-Cpl M. R. Blacktopp

L-Cpl C. R. Goodwin

L-Cpl R. H. Horsfall

L-Cpl R. W. Nicol

L-Cpl H. Padlie

L-Cpl R. J. Quinn

L-Cpl K. E. Twomey (Divisional Signals attached)

L-Cpl A. A. Wilson

Spr N. E. Andrews

Spr G. E. Armstrong

Spr L. R. Beal

Spr J. R. Bodley

Spr L. Dolheguy

Spr M. J. Fiskén

Spr L. W. R. Funnell

Spr W. P. Gourlick

Spr R. N. Green

Spr W. A. Gregory

Spr H. R. Griffiths

Spr R. A. Hermon

Spr R. A. J. Hooper

Spr A. F. Hughes

Spr T. G. McIntosh

Spr R. S. Natusch

Spr I. F. Strahl

Spr L. Taylor

Spr A. W. Willis

Spr L. C. Wilton

## BRITISH EMPIRE MEDAL

Sgt J. R. Atkins

Sgt W. G. Bailey

Sgt J. F. Cheadle

Sgt C. M. Wilson

L-Sgt E. T. Belhamine

L-Sgt T. V. Carpenter

L-Sgt M. R. Waddell

Cpl C. F. Larcombe

Cpl I. R. Summers

L-Cpl R. M. Bicknell

L-Cpl A. B. Penny

#### UNITED STATES BRONZE STAR

Lt A. L. King

#### GREEK MILITARY CROSS

Lt-Col A. Edmonds

# NEW ZEALAND ENGINEERS, MIDDLE EAST

## COMMANDERS, NEW ZEALAND ENGINEERS, 2 NZEF

### *Commanders, New Zealand Engineers, 2 NZEF*

Lt- Col F. P. Heath	27 Sep 1939–11 Aug 1940
Lt- Col L. F. Rudd	11 Aug 1940–5 Sep 1940
Lt-Col G. H. Clifton	5 Sep 1940–18 Oct 1941
Lt-Col F. M. H. Hanson	18 Oct 1941–2 Sep 1942
Lt-Col J. N. Anderson	2 Sep 1942–1 Oct 1942
Lt-Col F. M. H. Hanson	1 Oct 1942–11 Apr 1944 *
Lt-Col J. N. Anderson	11 Apr 1944–23 Jul 1944
Lt-Col R. C. Pemberton	23 Jul 1944–30 Aug 1944
Lt-Col J. N. Anderson	30 Aug 1944–12 Nov 1944
Col F. M. H. Hanson	12 Nov 1944–6 Jan 1945
Lt-Col C. Clark	6 Jan 1945–2 Feb 1945
Col F. M. H. Hanson	2 Feb 1945–15 Jan 1946

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\* Promoted Colonel 17 Sep 1943, when he was appointed Chief Engineer, 2 NZEF, in addition to CRE, 2 NZ Division. From 9 February to 27 March 1944 he was Chief Engineer, NZ Corps, with the temporary rank of Brigadier. He held the same rank from 6 January to 2 February 1945 while serving as Chief Engineer, 5 Corps.

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

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# NEW ZEALAND ENGINEERS, MIDDLE EAST

## [BACKMATTER]

This volume was produced and published by the War History Branch of the Department of Internal Affairs

Editor-in-Chief M. C. Fairbrother, cbe, dso, ed

Sub-Editor W. A. Glue

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This book was printed and bound by Coulls Somerville Wilkie Ltd., and distributed by Whitcombe & Tombs Ltd.