

Z Location

or Survey in War

J. T. WHETTON & R. H. OGDEN

**The Story of the
4th Durham Survey Regiment
Royal Artillery**





Z LOCATION OR SURVEY IN WAR

THE STORY OF THE 4th DURHAM SURVEY REGIMENT, R.A., T.A.

(Second Edition)

By

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and

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with a Foreword by

LIEUTENANT GENERAL SIR BRIAN G. HORROCKS
K.C.B., K.B.E., D.S.O., M.C.

*To the men who formed and in World War II served with
the Regiment and in memory of those who died for their
country in battle.*

First edition published by R. H. Ogden

1978

Second edition published by Jim Whetton

2004

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ABBREVIATIONS USED

Z Location. The accuracy of the location of a hostile battery made by sound ranging or flash spotting was categorised as Z, A, B, C or Area, the most accurate being a Z Location which was within 50 metres. Hence the title of this history.

A.G.R.A. Army Group Royal Artillery. A grouping of the medium and heavy artillery usually under direct command of a corps. This group also included field regiments on occasion. The commander of the group was called C.A.G.R.A. and later the counter battery organisation was included in his command.

A.P. Advanced Post.

B.P. Bearing Picket.

B.R.A. Brigadier, Royal Artillery.

B.T.E. British Troops in Egypt.

C.B.O. Counter Battery Office or Organisation, or Counter Battery Officer, the commander of this organisation.

C.C.M.A. Corps Commander Medium Artillery - an appointment and title used earlier in the war but later abandoned. It was superseded by C.A.G.R.A. referred to above.

C.C.R.A. Corps Commander Royal Artillery (already described).

C.C.S. Casualty Clearing Station.

C.O. Commanding Officer. This relates specifically to the commander of a regiment, battalion or similar basic unit.

Cpl. Corporal.

C.R.A. Commander, Royal Artillery. The senior artillery officer on the staff of a division.

C.S.M. Company Sergeant Major.

D.R. Dispatch Rider (a motor cyclist).

F.D.L.s Forward defended localities or the front line.

F.S. Flash Spotting.

Gnr. Gunner. The equivalent of the rank of private in the infantry.

H.B. Hostile Battery.

L.A.D. Light Aid Detachment. The section in a regiment responsible for the transport repair and maintenance.

L/Cpl. Lance Corporal.

L.C.G. Landing Craft Guns.

L.C.I. Landing Craft Infantry.

L.C.T. Landing Craft Tanks.

L.C.T.(R) Landing Craft equipped with rockets.

L.S.T. Landing Ship Tanks (much larger than a L.C.T.)

M.O. Medical Officer attached to a regiment or battalion.

N.C.O. Non Commissioned Officer.

O.C. Officer Commanding. The officer commanding any unit other than the regiment. Such units, for example, are batteries, troops, sections, etc.

O.P. Observation Post.

O.R.s Other Ranks. This is used in the expression "Officers and O.R.'s".

P.S.I. Permanent Staff Instructor.

Q.M. Quartermaster.

R.A. Royal Regiment of Artillery.

R.A.F. Royal Air Force.

R.A.M.C. Royal Army Medical Corps.

R.E.M.E. Royal Electrical and Mechanical Engineers.

R.Q.M.S. Regimental Quartermaster Sergeant.

Sgt. Sergeant.

S.R. Sound Ranging.

T.A. Territorial Army.

FOREWORD

by

**LIEUTENANT GENERAL SIR BRIAN G. HORROCKS, K.C.B., K.B.E., D.S.O.,
M.C.**

When towards the end of 1936 Captain J.T. Whetton, M.C., Lecturer in Mining, Surveying and Applied Geophysics, accepted the formidable task of forming a new Survey Company, Royal Artillery, at Gateshead, he could have had little idea of what a major part his unit was destined to play in the destruction of the enemy forces during the 2nd World War.

I doubt whether any other unit in the British Army contributed more to our ultimate victory.

This is no exaggeration on my part, because Survey Units are Corps Troops and the 4 (Durham) Survey Regiment served under my command for long periods - particularly in Europe.

I have no intention of going into the technicalities of the vital role played by the Flash Spotting, Sound Ranging and Survey elements of the Counter Battery Units, because these "mysterious rites", as they seemed to us laymen, have been very well and simply described by the authors, Lt. Col. Whetton, D.S.O., M.C., O.B.E., T.D. and Lt. Col. R.H. Ogden, M.C., T.D., in this excellent History.

In many a lecture after the War I have said this, "Although I am an infantryman, and proud of it, in my opinion, the Royal Regiment of Artillery did more to win the last War than any other arm of the Service, and the core of the R.A. was the fantastic accuracy of their Survey Units. This enabled me, as a Corps Commander, to switch the fire of several hundred guns in a matter of minutes, and thus bring down a devastating concentration on some vital sector of my Corps front. Neither the Germans, the Russians, our U.S. allies nor the French (supposedly masters in the art of handling artillery) ever came up to the high standard set by the British".

I can remember to this day sitting with my Brigadier Royal Artillery, Stewart Rawlins, on the top of Mt. Pincon, the most important tactical feature in Normandy, and literally blasting our troops out of the Normandy beachhead.

Those fine Infantry Divisions, the 50 Northumbrian and the 43 Wessex, had been fighting in the thick Normandy Bocage for many weeks; not only were they physically exhausted but they had also suffered heavy casualties - as always, among the leaders of all ranks. When we heard over the air that our advance was held up by tough enemy resistance we would halt our infantry and tell them to be prepared to launch another assault in X minutes. I would then switch the whole of the Corps Artillery on to the point of resistance - a ten minute concentration was usually enough. The next message we received was always to the effect that our troops were advancing again.

Just one more example. During the Battle of the Reichswald, when XXX Corps, forming part of the Canadian Army, was given the task of advancing in a south-easterly direction between the Rivers Rhine and Maas, we were 100,000 strong and the initial fire plan was based entirely on Survey. At Zero hour every weapon on the Corps front - 1,000 field, medium and anti-aircraft guns, machine guns, anti-tank guns (the Pepper Pot it was called) - opened up on the known German positions, which had been carefully surveyed. This came as a complete surprise to the enemy, and the German gunners dived into their slit trenches and bunkers. Suddenly, our fire stopped and complete silence reigned along the front. Those elements of the German artillery which had not been destroyed now opened fire once more. Their positions were at once accurately surveyed and a few minutes later the British Artillery, plus the Pepper Pot, opened up again. The effect was devastating - our leading troops met practically no resistance at all in the

initial assault. They reported that the enemy seemed completely bemused by our initial bombardment.

At the beginning of the last War, Survey Units were still very "rare fish" indeed. When, in December, 1940, the 4th Regiment arrived in the Middle East they discovered that they were the only Survey Regiment in this theatre of war, and consequently were constantly in demand, sometimes batteries by themselves, sometimes the whole Regiment. They first saw active service in Eritrea, and subsequently played a notable role in all the major battles fought by the Western Desert Force and then by the 8 Army. They also took part in our unfortunate intervention in Greece, followed by Crete.

I first met them in the Battle of Alam Haifa at the end of August 1942, when Rommel's last attempt to capture Cairo was defeated. They were active from Alamein on, with their OP's always well forward: their last battles in the Middle East were in Sicily, from where, after three years' active service, they were brought back to the UK in preparation for the landings in Normandy.

From D-Day onwards I am glad to say they were always with XXX Corps, and I honestly do not know how we should have got on without them. They travelled many miles along the Club Route, from Normandy to the Baltic, and fought many battles on the way. The only unit I can think of which saw almost as much fighting was the famous 50 Division, with which they had "grown up" in Northumberland and Durham before the War.

Theirs is a remarkable record of service, very well described by the Authors, Lt. Col. Whetton and Lt. Col. Ogden, and I hope the History will be widely read. Every man who served in the 4th Survey has the right to hold his head high, knowing that he did more than his share in winning the last War.

Brian G. Horrocks Lieut. General
Manor Farm, East Compton, Shepton Mallet, Somerset.
18th July, 1976.

PREFACE TO FIRST EDITION

God and the soldier all men adore
In times of trouble, and then no more.
When war is over and all things righted,
God is neglected and the soldier slighted.*

This account is the story of a Territorial Army Unit of the Royal Regiment of Artillery from its inception as a Survey Company in 1937 to its demobilisation as a Regiment after World War 2 in May, 1946.

During the Western Desert campaign in the Middle East, the Eighth Army published a weekly paper called 'The Crusader'. In it, there frequently appeared a cartoon entitled "Little Known Units of the Western Desert". Copies of three of these cartoons appear on the following page. These cartoons were, of course, skits on units which were rarely, if ever, seen in the Western Desert; but the description, in the true meaning of the words, might well apply to the 4 Survey Regiment since its operations, in the Desert and in other theatres of war, were little publicised and only really well known to other units with whom the Regiment worked. These were largely limited to the other Artillery Regiments involved in the various actions. Survey work, of course, does not fall into the romantic category, as does that of the Royal Armoured Corps or such units as the Airborne Divisions. Because of this, it is felt that this history should commence with a brief explanation of the tasks and role of a survey regiment and how these developed from the original concepts and experiments undertaken by a group of enthusiasts during the Great War of 1914-1918. This is done in Chapter 1, which is to all intents and purposes a layman's guide to artillery survey.

To conclude this Preface, the authors wish to record their thanks to the many who assisted in writing this narrative, who are too numerous to mention individually. The exception to this, however, must be to thank Mrs. Elizabeth Jones and Mrs. Irene Baron, both of Bolton, for the long hours they have devoted to typing and associated work in connection with this story.

In endeavouring to record the events of 30-35 years ago, with usually only one's memory as a guide, and as no serious attempts were made (nor could they be made) to maintain private diaries, there may well be some disparity of views. However, it is hoped that those connected with the Regiment will find it a reasonable account of the Regiment's history and that others might find the description of the Regiment's contribution to the overthrow of the enemy of some interest.

* Attributed to an embittered sentry who long ago inscribed these lines on an old stone sentry box at Prince Edward's Gate, Gibraltar. (James Morris, Pax Britannica P.408)

Little Known Units of the W.D.

by Brian Robb



No. 4 — No. 701 Misinformation Post.

Little Known Units of the W.D.

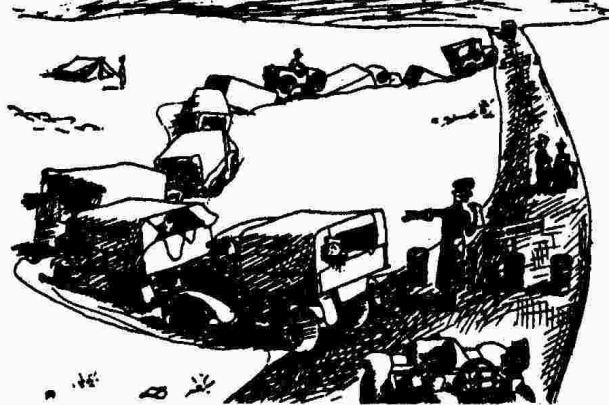
by Brian Robb.



No. 7. — No. 3, 648, 450, 648 Field ABSTINENCE Centre.

Little Known Units of the W.D.

by Brian Robb



No. 15. — 178rd Extraordinary Diversion and Traffic Reduction Post.

Three examples of Little Known Units



A pair of surveyors taking readings at a survey station at El Alamein

The structure over the theodolite is a beacon, which is portable and erected over the survey station to enable the station to be identified at a distance from other stations.

PREFACE TO SECOND EDITION

The first edition of this book, published by Lt. Colonel Bob Ogden, is now out of print. This second edition was produced with the kind permission of Mrs Ogden by scanning the original into a computer. (Researchers should note that page numbering has changed as compared with the first edition). I was also encouraged to publish this edition by the late Tom Fairmington, then General Secretary of the Regimental Old Comrades Association who, as noted below, has written his own fascinating account of being a prisoner of war and escaping from his captors in Italy.

It should be noted that the massive task of completing the original manuscript and getting it into print fell to Bob Ogden, as Lt. Colonel J T Whetton fell ill before it was completed. Inevitably, therefore, much of it reflects Bob's personal experiences as O/C 'Y' Survey Troop and, from late 1944, as Commanding Officer of the Regiment after J T Whetton was wounded and invalided out of the Army. Thus it may be seen that the chapters on the Eritrean experience, (ch 6), the Western Desert, (ch 8) and Operation Crusader, (ch 10), focus heavily on the activities of 'Y' Troop, while chs 20 – 23, on the final stages of the war in Europe, were completely entirely by Bob Ogden.

Some personal reminiscences have been produced by other former members of the Regiment and these help to enlarge on the Whetton-Ogden account. In addition, they provide human insights which are relatively limited in the more formal and technical descriptions of the two Commanding Officers. They help us to understand especially the experiences of "other ranks", including the great comradeship and humour which helped to combat the horrors of war.

The accounts which I have been able to enjoy are by Captain Hank Hayley, his Sergeant and great friend, Vic Gray, Sergeant Tom Fairmington, Captain Geoff Boaz and Surveyor Class 1 Kenneth Brooke. Detailed references to these accounts are given in Appendix III. The first three accounts end prematurely, as the authors all became prisoners of war at Tobruk in June 1942. Geoff Boaz's pamphlet refers only to his short spell as Regimental Adjutant, while Ken Brooke's account is incomplete. Thus, unfortunately, I have not been able to trace reminiscences covering the end of the Desert War or the war in Europe, though the Regiment was fully engaged in the latter from D Day in June 1944 until its work in post-war Germany in late 1945.

Also shown in Appendix III are references to Public Records Office documents describing the work of the Regiment. I have consulted these in preparing a biography of J T Whetton, who began his working life as a coal miner, served in both World Wars, then became Professor of Mining at Leeds University. The chapters of this biography referring to World War 2 will be first published on the internet later this year. It is hoped that this biography will help to explain and further document how members of the Regiment, of all ranks and specialisms, fully deserved the very high reputation which they achieved.

Jim Whetton
August 2004

CHAPTER ONE

THE DEVELOPMENT OF ARTILLERY SURVEY AND THE ROLE OF THE REGIMENT IN THE FIELD

Artillery survey can be described as the practical application of the techniques of co-ordinate geometry to the use of artillery in war, with the objective of increasing its effectiveness.

The idea of co-ordinating individual guns of an artillery regiment by land surveying methods dates back many years but the first time survey was used in warfare to any great extent was in the Great War { of 1914-1918. The development of the techniques of field surveying in artillery matters is described in detail in a book entitled "Artillery Survey in the First World War".* The original concepts were advanced by a group of enthusiastic amateurs who had rallied to the call of Kitchener in 1914. One of the major units undertaking specialist work within the British Army is the Regiment of the Royal Engineers. Amongst their multifarious duties is that of map making, in the same way as the Ordnance Survey in peacetime produce the one inch to the mile maps (or more recently their metric equivalent) for hikers, and at various other scales for many purposes. The Ordnance Survey is, of course, basically a branch of the Royal Engineers.

An Army cannot operate without maps and, as maps of the battle area are rarely available for the army, these have to be prepared virtually on the spot. This work is done by the Royal Engineers, who carry out field surveys of the battle area, setting up survey stations at appropriate points in the area, these points becoming part of major and minor triangulations and identified by reference to a rectangular grid decided upon for the area concerned. This is similar to the National Grid which applies to Great Britain and to which reference is made on all Ordnance Survey maps.

From this brief comment on this facet of the sappers' work, it can be seen that if artillery gun regiments are fixed on the local grid it will be possible to co-ordinate the fire of all of them, thereby considerably increasing their effectiveness in hitting the enemy. Similarly, if enemy targets could also be fixed on the grid by being given co-ordinate references, the guns could fire accurately on to these targets, because the ranges and bearings of the targets from the guns would be accurately known. As the job of fixing the enemy targets must be undertaken using remote methods - the enemy do not allow our surveyors into their area! - the accuracy of the fix of a target can vary depending on the process used to determine the fix. The accuracy of the fix, of course, will in turn determine the effectiveness of the fire of our artillery. This process will be referred to later.

During the Great War the potentialities of the survey work of the Royal Engineers was realised by the small group of amateurs, to whom reference has already been made. At the beginning of the 1914-1918 War the mapping service was abysmally small, but it soon became apparent that this should be increased to meet the demands made upon it. In 1914 a Ranging Section, Royal Engineers, was formed to fix the position of aircraft when over hostile targets - an operation designed to improve the accuracy of the location of the enemy targets. The importance of survey information for many uses, but mainly for map making, was quickly realised and in 1915 the Ranging Section became the First Ranging and Survey Section. This service was further increased and developed into three Field Survey Companies dealing with surveying and map making, together with two new developments, namely the location of enemy guns by flash spotting and sound ranging. These new techniques involved the location by grid references of enemy artillery by the flash and sound of their gunfire. These companies, by mid-1918, became battalions, each some 800-1000 strong - but still remaining in the Corps of Royal Engineers. The element of artillery activity which developed over the period by the use of these new techniques, namely the destruction of enemy guns by our artillery, was one of the most potent in the ultimate

* These references which occasionally appear in the text refer to books which are listed in Appendix III - Bibliography.

defeat of the enemy. Apart from the initially devastating effect of this policy, it resulted in enemy artillery units refraining from ranging or direct registration on allied targets, a process explained below, to the considerable benefit of the allied forces and the reduction in effectiveness of the enemy artillery. It was after the Great War that artillery survey operations were handed over to the Royal Regiment.

When the 1914-18 War started, the method usually adopted by the artillery was to fire over open sights, i.e. at a target that could be seen from the gun. This was largely abandoned, particularly when the static phase in the War commenced and what is known as indirect fire had to be adopted. This technique involved the establishment of observation posts (O.P.s) to direct the gun fire by the process of registration, that is firing a number of ranging shots on to the target before the whole battery or regiment fire at it. This, of course, enables the enemy to take any protective steps possible, either by moving or going to ground until the shelling is over. This process was most commonly used throughout the Great War - and in World War II when it was not possible to use more sophisticated methods, such as during a rapid advance when these methods cannot be introduced quickly. Of course, in very fluid battles, where very quick action is necessary, firing over open sights has to be resorted to. This situation frequently occurred in the Western Desert during World War II. The effectiveness of the observation post process, however, was always limited and, to overcome this, small detachments of survey personnel frequently accompanied forward mobile groups to provide a more accurate means of enemy gun location and neutralisation.

The importance of co-ordinating the guns of a regiment has been appreciated for many years. The organisation of a gun regiment, which includes a survey section whose duty it is to fix the location of individual gun troops making up the regiment, reflected this. During World War II one of the jobs of the survey regiments was to provide, in the areas of the gun regiments, information and survey data which would enable the gun regimental survey team to determine the position of their guns on the rectangular grid being used in the theatre of war concerned, thereby enabling all the artillery in the field of operations to be co-ordinated. This information was provided on a metal stake fixed in the ground, called a "bearing picket", which, in addition to giving the co-ordinates of the point and the height above sea level, indicated the grid bearings to identifiable points visible from the bearing picket.

The flash spotting process involved setting up three or more observation posts across the front (normally a Divisional front, but usually in practice a Corps front). Five O.P.s were usually necessary, the positions of which were determined by field survey methods. Each of these O.P.s was manned by a flash spotting section consisting of eight men who manned the O.P. 24 hours a day during the action. The O.P. was equipped with a binocular theodolite, by which the bearings of gun flashes from the O.P. were obtained, and it will be seen that, if the bearings to a gun flash are obtained from two, but preferably three or more O.P.s, the gun flash can be located by a process of intersection. The whole working of a flash spotting base was controlled at a Flash Spotting Headquarters, the techniques adopted ensuring that the flash from a single gun is identified and those from other guns eliminated.

As will be appreciated, to obtain good results it was generally essential to locate the F.S.O.P.s very close to the forward defended localities (F.D.L.s), that is to the front line held by the infantry. When possible the enemy attempted to frustrate flash spotting location by siting his guns in a position where the flashes were concealed behind rises in the ground, or other physical features. Latterly in World War II, the enemy used flashless propellant for the same reason.

Flash spotters could also range a gun regiment on to an enemy target. This was done by the aiming gun firing air burst ammunition, the F.S.O.P.s observing the air burst and giving the gun regiment the necessary corrections to hit the target. The air burst ranging technique was also used for calibrating the guns of the field and medium regiments to correct for wear on the barrels.

As mentioned above, F.S.O.P.s when in action were occupied day and night. The F.S.O.P. drill

included the preparation of a sketch showing the important features that could be seen from the O.P. This was known as the panorama and it enabled the observers at night to explain to the relieving pair what enemy activity there was in their field of view.

In locating guns by sound ranging methods, the sound ranging troop laid out microphones along the battle front - probably five microphones, each at intervals of about a mile, the position of each one being fixed by survey. Each microphone was connected by wire to a piece of apparatus known as a recorder in the Sound Ranging H.Q. This machine recorded the moment the sound waves from the enemy gun reached each microphone. This record was in the form of a tape which photographically reproduced the activation of the microphones and which enabled the time differences between the sound reaching each microphone to be measured. From this information it was possible, by means of a string board, known as an asymptote board, to get an intersection on the enemy gun position - if everything worked well. As the whole system was powered by 6 volt batteries, it was not possible to keep it running continuously and, therefore, it was necessary to energise the whole apparatus when a discharge from an enemy gun was heard. This was achieved by locating advanced posts just behind the F.D.L.s and a mile or so in front of the line of microphones. When the observer in the advanced post (A.P.) heard a gun report he would press a key which operated a relay in the recorder and activated the system, so that, when the sound of the report reached the microphone line, this would be in operation.

The recording of the sound waves from the report of a gun itself was fraught with many difficulties of which one was the variations in the result coming from the atmospheric changes. To be able to make the appropriate correction for these changes, an R.A.F. Meteorological Section was permanently attached to the Regiment. This Section was commanded by a Flight Lieutenant (usually called "Met") and consisted of about six airmen. It was equipped with a complement of apparatus for assessing the local meteorological conditions which would affect the sound ranging readings.

Despite corrections for meteorological conditions, location by sound ranging was not in itself a very accurate process. It was, however, possible to record the burst of a shell from one of our own guns in the same way as the location of the firing of an enemy gun. If these two operations were carried out within a fairly short time interval, the meteorological conditions similarly applied to each explosion and could be ignored. By comparing the microphone time intervals from the film record of the two explosions on an instrument called a "comparator", corrections for range and bearing could be given to the ranging gun to bring our fire on to the enemy battery. Frequently, because of this facility, a troop or battery of, usually, a medium gun regiment was in direct telephone communication with S.R. troop.

A further problem was that two bangs are heard when one is being fired at by an enemy gun (or even a friendly gun, for that matter). When this occurs there is, first, a very sharp, fairly high frequency crack which is the effect of the shell passing through the air at a speed faster than sound (this phenomenon has since become known as breaking the sound barrier when related to aircraft exceeding the speed of sound). This crack is followed by a much lower frequency thump which is, in fact, the gun discharge and this is the basis of the hoped for location. The first crack was known as the "shell wave" and its recording on the recorder would not result in any location whatsoever because the crack can be heard at any point along the trajectory of the shell over the extent of the trajectory when the shell is moving at a speed faster than sound. A shell wave was always easily heard, whilst the low level thump afterwards could be missed in the general noise. The very definite recording of the shell wave and the comparatively weak response of the gun report always presented difficulties in interpreting the photographic record from the recorder. However, with experience the S.R. gunners became very adept at recognising the shape of the shell wave records on the film and from these tracing the much fainter gun reports by relating these to the larger shell wave profiles.

As will be realised, the whole operation of sound ranging was a very delicate business and it always amazed others in the Regiment that the sound rangers could set up their complex

machinery in appalling conditions and get good results. Communication between microphone and recorder was usually by wire and another hazard was the cutting of the signal lines to the microphones by enemy shelling and other activity, which necessitated a permanent line repair section being on the job. This, of course, also applied to the flash spotting troops as well as to signal lines for normal communications. Radio link was later introduced, the radio link sets transmitting to the recorder the current surge in the microphone as a radio signal. These radio facilities enabled much quicker deployment which was especially useful in fluid warfare conditions. It was, however, not so reliable as wire. Radio link was also provided between the A.P.s and the recorder.

The story attached to the invention of the microphone used during the last War is of interest. Whether it is true or not is not really known, but it is amusing. The microphone used is known as a hot wire microphone, i.e. the electrical charge passing through the circuit warmed a fine platinum wire in the microphone and, when the air movement resulting from the gun report cooled the wire, the change in resistance activated a galvanometer in the recorder, the movement of which was recorded on the film strip. It was alleged that the concept of this microphone design came to one of the survey officers in the 1914-1918 War, who was sitting on the usual thunderbox in the front line when he noticed that, when a gun went off, there was a distinct movement of air between his bottom and the thunderbox. So the hot wire microphone was born!

Later in World War II a specially designed four pen recorder was developed to locate mortar fire and this was followed by the use of radar for the same purpose.

Having described in simple terms the individual duties of the various troops and batteries forming the survey regiment, it is necessary to put this into the context of the counter battery organisation of a corps of which it formed part. Although the organisation changed as the War progressed, a description of the final arrangement adopted will best illustrate how the various parts of the Regiment were integrated, the relationship of the work of the survey regiment with the other gun regiments, and the larger picture of the tactical battle and particularly the contribution the Regiment made to its success.

Apart from the work of the survey element of the Regiment in co-ordinating the artillery arm, described earlier in this chapter, the data coming from the F.S. and S.R. troops formed part of the information collected by an organisation known as the Counter Battery Office (C.B.O.). Within each corps area there was a grouping of corps artillery (generally consisting of medium and heavy guns, but occasionally 25 pounder field gun regiments) known as the Army Group Royal Artillery, or A.G.R.A. for short. This had its own organisation directly under corps command, which was superimposed on the corps area. In this organisation was the C.B.O., which collected all the information about the enemy artillery. The information came from a number of sources, of which the F.S. and S.R. were probably the most important. Other information came from aerial photography and sources, such as artillery O.P.s, and even from agents infiltrated behind enemy lines. The information produced by the C.B.O. - in the form of schedules of hostile batteries (H.B.s) - was then used by the A.G.R.A. and the divisional artillery when set piece attacks were to be made. At the start of the battle, hostile batteries previously located were fired upon and, of course, as the battle progressed further hostile batteries were located and neutralised as soon as possible.

The above description gives some idea of the role of a survey regiment in battle, and there is no doubt that the Regiment's contribution considerably improved the effectiveness of the artillery arm. It was surprising to learn, during the course of the War, that the Germans did not possess a similar unit, at least on the Western Front. This, it was believed, was because the major objective of the Germans was to kill men and not neutralise weaponry - in the knowledge that our major deficiency was in men and not in equipment, whereas on the Russian Front equipment was the main target.

At this point, it might be of interest briefly to describe the organisation within the 4 Survey

Regiment. The total strength of the Regiment amounted to about 800 men, fully mobile with the appropriate motor transport and equipped with a wide range of surveying apparatus.

As has been stated, the Regiment was intended to be a Corps unit covering, ideally, a two-Divisional Corps front. At the beginning of World War II it was organised into three batteries; one a survey battery one an F.S. battery and one an S.R. battery, each battery comprising an H.Q. and two troops. In addition, the survey battery organisation included a separate H.Q. survey section. Control of these batteries was effected from Regimental H.Q. to which was attached a R.E.M.E. Light Aid Detachment (L.A.D.). Other attachments included the R.A.F. Meteorological Section referred to earlier, a small medical section under a R.A.M.C. officer and, usually, a chaplain.

When the Regiment was posted overseas, apart from a single survey troop which had arrived in the Middle East earlier, the 4th was the only survey regiment in the whole command. In view of this, it was necessary to spread the limited survey resources over a very wide area. At one time one survey troop and one sound ranging troop were in Eritrea whilst the balance of the Regiment was in Greece!

Although so dispersed, the contribution made by the various elements was considerable, but not so effective as it could have been as a complete unit. However, the need for this dispersal resulted in the provision of a "survey presence" which, so far as practicable, embodied all the specialisms. The unit which developed from this situation was what was called a composite battery, i.e. a battery comprising three troops, one a survey troop, one an F.S. troop and one an S.R. troop. This arrangement enabled greater flexibility to be achieved in the particular situation which was faced in the Middle East and it became clear that this was by far the most satisfactory arrangement for a normal battle. The composite batteries formed out of the needs of the desert warfare in the Middle East were retained in the subsequent campaigns in Sicily and North West Europe. For these later campaigns, therefore, the Regiment consisted of two composite batteries made up of three troops each, which were known initially as No. 1 and No. 2 Composite Batteries, later as A4 and B4 and finally 47 Battery and 48 Battery. The survey battery H.Q. Survey Section was transferred to R.H.Q. and, later, increased in strength to a H.Q. survey troop. Incidentally the accuracy of the location of a hostile battery made by sound ranging or flash spotting was categorised as Z, A, B, C or Area, the most accurate being a Z location which was within 50 metres. Hence the title of this history!

In any description of a survey regiment it must be remembered that, in addition to the tradesmen surveyors, there were many others whose contribution to the regiment's technical role was absolutely vital. These included the motor mechanics, fitters m/v (motor vehicle) and drivers i/c (internal combustion) whose valiant efforts, especially in the tough and arduous conditions in the Desert, kept the Regiment mobile. Then there are the cooks who did wonders with monotonous rations. The ways bully beef and biscuits could be served were numerous. They did a tremendous job to keep the troops properly fed which was particularly difficult in the Western Desert. Apart from the limited rations, the equipment for cooking presented many difficulties. One major worry was the noise created by the equipment issued, known as a No. 1 Cooker, which was really a cross between an immense primus stove and a flame thrower. The noise was so loud that the cooks and their assistants could not hear approaching enemy aircraft - with the continued anxiety which this engendered!

There were clerks responsible for the administration - the making of proper returns so that rations, stores and equipment, as well as pay, were properly received. The dispatch riders (D.R.s) had vital work passing survey data from the field teams to computing centres and messages between the regiments and other formations. There were those whose duties were to look after the officers, the batmen. Officers must keep their minds continually on the job, especially when in action - this is vital if the allied effort is to be that one little step ahead of the enemy - the batmen's job in this respect is an absolute necessity. Support to the Regiment also took the form of attachments from other corps. Mention has been made of the R.A.F. meteorologists. Others

belonged to the Army Catering Corps, who were the backbone of the catering service in the Regiment, and to the R.E.M.E. who, when this Corps was formed early in the War, manned the L.A.D. as stated earlier. If a vehicle was so badly damaged that it was beyond the capacity of the L.A.D. it was sent back to base for major repair. This was known as being B.L.R.'d -beyond local repair.

Two other attachments must be mentioned. The first is the Medical Officer (M.O.), a member of the Royal Army Medical Corps (R.A.M.C.), in whose hands the health of the Regiment rested, with the able assistance, of course, of the Medical Orderlies under his control. In action, the M.O. and his orderlies manned what was called the Regimental Aid Post to which, if practicable, all wounded or sick personnel were taken. He was also responsible for evacuating the seriously wounded to the Corps Casualty Clearing Station (C.C.S.) using the Field Ambulance Company. The M.O. who joined the Regiment when it first went overseas and who served with the Regiment throughout the Middle East campaign, was Captain Donald Sanderson, R.A.M.C. The second attachment was the Chaplain or Padre, who was always a tower of strength to everyone in time of trouble. The Chaplain who was with the Regiment longest, including the whole of the Middle East campaign, was the Rev. Father Gaffney.

With the description in this Chapter in mind, the subsequent pages of this book describe the history of the Regiment from its inception to the end of World War II. Before concluding this Chapter, however, it might be of assistance to the reader to give a brief description of the organisation of the Army when in action and to explain some of the titles given to various commanders and to certain units.

The basic unit of the Army is the Regiment or Battalion. This operational unit is broken down into smaller units; batteries and troops in an artillery regiment; companies, platoons and sections in an infantry battalion. In action the largest grouping is an army group, for example 21 Army Group in the North West European Campaign. This consisted usually of two armies, 1 Army and 2 Army. 8 Army was the army in the Middle East. The army is broken down into army corps, such as XXX Corps and XIII Corps, with which the 4 Survey Regiment operated. An army corps consisted of two or more divisions; divisions such as the 4 Indian Division, the 50 (Northumbrian) Division and the 7 Armoured Division. The division is also broken down into brigades, normally three in one division. The strength of the division and its constituent brigades is made up of battalions of infantry, which is the basic unit at the sharp end of most attacks, supported by Ack Ack Regiments and many others. The majority of regiments and battalions in the British Army have some provincial connection, such as the Manchester Regiment, these units, in time of peace, recruiting soldiers from their areas of allegiance. Divisions also have a regional allegiance, such as the 51 (Highland) Division. A division has its own complement of field artillery under the Commander Royal Artillery (C.R.A.) who is responsible to the Divisional Commander.

Going further up the hierarchy of command, Corps H.Q. contains, amongst others, a brigadier, the C.C.R.A., who is responsible for the medium artillery under the command which is deployed as required by the Corps commander (who is a Lieutenant General) and for co-ordinating the Divisional artillery under Corps command. The survey regiment is under the command of the C.C.R.A. and, because of this, is normally considered to be a corps unit. Within the Corps H.Q. is the A.G.R.A. and the counter battery organisation.

Therefore, in the theoretical ideal situation, the formation for a battle of some magnitude would involve an army of, say, two army corps, each of which would have under command two or three divisions. Probably, as at Alamein, there would be a third corps which would contain the bulk of the tank regiments to follow up the success of the infantry corps. The divisions in such a corps would be armoured divisions such as the famous 7 Armoured Division. In a set up of this size, there would be at least two survey regiments, one to each of the infantry corps. This, however, rarely occurred during the initial stages of the war, the Regiment normally serving two or even three corps in the Middle East. The situation more nearly approached the theoretical ideal in North West Europe.

CHAPTER TWO

THE CREATION OF THE 4 SURVEY REGIMENT

In 1936, the services generally, due to a succession of pacifist majorities in central Government from the end of the 1914-18 war, were at a very low ebb both in equipment and manpower. With the rise of Hitler, and the presence and drive of a few strong personalities in the Government of the day, some impetus was given to recruiting and to the expansion of the Territorial Army. There was, however, a great shortage in military hardware and equipment. Much that did exist consisted of the "left-overs" from the previous war - as far as those in the Territorial Army could understand from regular service men.

In 1936 there was only one regular survey unit in the Royal Regiment of Artillery. This was the 1 Survey Company, R.A., stationed at Larkhill on Salisbury Plain. In the Territorial Army a year or two earlier, a signal section in Bristol was changed into a Survey Unit R.A. This was later designated as the 3 Survey Regiment R.A., T.A. In 1936, members of this unit were few and there was a lack of equipment but, as it was reasonably close to Larkhill, the regular unit was able to assist with training and instruments.

Towards the end of the year, there were rumours circulating in the regular unit that another T.A. Survey Unit was to be formed, probably in the north of England and that permanent staff instructors would be required. In December, 1936, Sgt. B.A. Curtis of the 1 Survey Company R.A. was informed that he was being posted to Gateshead as P.S.I. (Permanent Staff Instructor) of the new unit to be formed. Lt. G.D.H. Flowerdew was also informed that he was being posted as Adjutant.

One Saturday morning in 1936 a telephone call came from Col. K.L. Appleyard (later Major General), General Manager of Birtley Iron Company and Commanding Officer of the Territorial Army Royal Engineers Unit on Tyneside, for Capt. J.T. Whetton, M.C., Lecturer in Mining, Surveying and Applied Geophysics in the Mining Department of Armstrong College, Newcastle-upon-Tyne, informing him that a Survey Company R.A. was to be formed in the Durham T.A. Association and asking whether he would accept command of it. The Secretary of the Durham T.A.A., Capt. George Long, then took over and invited him to dinner the following Monday evening to talk the matter over and, after a meeting with Col. J.K. Gordon, D.S.O., R.A., Commanding Royal Artillery, 50 Infantry Division, the Unit was formed with Capt. Whetton in command. It was only after much thought about his commitments in teaching, research and other interests, that Capt. Whetton accepted the formidable task of forming the new Unit, to be called the 4 Survey Company R.A. The initial task was to attract recruits with sound technical training, particularly in mining, surveying, civil and mechanical engineering and man management and, indeed, men with knowledge of pure science, especially in physics, and others of professional standing.

On 1st January, 1937, Capt. Whetton and Capt. Flowerdew, who had been promoted to Captain on his appointment, with Capt. Long selected a property, No. 152 Coatsworth Road, Gateshead on Tyne, as a suitable temporary headquarters for the Unit.

On 22nd January, 1937, Sgt. Curtis reported to the C.O., who drove him to Gateshead for a preview of what was to be the H.Q. and Training School for the next 25 years. It was an empty house at the end of a terrace. As the C.O., Adjutant and P.S.I. had no previous knowledge of T.A. methods or procedures, the Unit literally made a start from scratch and, in consequence, the C.O. requested H.Q., T.A., Durham to send someone as soon as possible to advise him as to the requirements of the new Unit. Next morning, the T.A. Secretary and Chief Clerk arrived and made notes of the various needs - office furniture and equipment, stationery and requisites for lecture rooms and indoor training - and by the next weekend most had been delivered and installed.

The C.O. had circularised local offices, colliery and engineering firms as well as students, former

students and other suitable young men in Durham and Northumberland about the new Unit, the type of training and its purpose. This was the first recruiting drive.

By the 9th February, 1937, several recruits with survey experience in civil life had attested, along with others anxious to serve their country, many of whom attained high rank in the Regiment.

On 16th February, 1937, a class was started for prospective officers, as many graduates of the Mining, Electrical, Civil and Mechanical Engineering Departments of Armstrong College had joined the Unit. In the 18th February, 1937, issue of the London Gazette, Capt. Whetton's posting to command from 1st January, 1937, was confirmed and he was promoted Major. On 26th February, 1937, Capt. (Brevet Major) A.C.H. Robinson, D.S.O., Physical Education Master at the Newcastle-upon-Tyne Royal Grammar School, was posted to the Company. A week or so later, the London Gazette announced the appointment as 1st Lieutenant of A. Wedgwood and R.W.C. Cawthorne to the new Company.

The original intention was to have training periods on two evenings a week but, because of the diverse occupations, distances from H.Q., attendance at evening classes, etc., training periods were arranged for Monday, Tuesday, Thursday and Friday evenings. To qualify for a Territorial Army Bounty, a modest sum of up to £5, the recruit had, in the first year, to attend forty drills (a drill comprising one hour's attendance) as well as attending the Annual Camp. In succeeding years, the requirement was twenty drills and attendance at Camp. In the case of most of those who joined the Unit, the total of drills generally exceeded one hundred in any year. Their keenness and zest for training was most rewarding for any instructor.

As theodolites and other equipment were not available at the outset, much of the training was in survey and trigonometrical problems and the methods of drill in computing survey problems and recording the results. The C.O. was kindly given permission by Professor Granville Poole, Head of the Mining and Surveying Department, Armstrong College, to have the use of a few theodolites, dials and other surveying accessories with which to instruct in the basic principles and, shortly afterwards, the Unit was issued with a more modern 5" vernier theodolite, a No. 6 director and a couple of steel measuring tapes.

The formation of the Unit enjoyed considerable support from the local press, mainly the "Newcastle Journal", which gave it good coverage. The first article in the Journal appeared on 5th March, 1937, from which the following is an extract:

"There is in process of formation a most interesting unit, the 4 Survey Company, Royal Artillery, with headquarters at Gateshead. This is one of the most highly technical units in the Territorial Army, and already many young mining students from Armstrong College and former graduates have joined. I am able to state that command has been given to Major J.T. Whetton, M.C., M.Sc., lecturer in mining, surveying and applied geophysics at the Mining Department of Armstrong College. Major Whetton had a remarkable military career during the first world war, finding his adventures far afield in almost uncharted parts of Russia. He held an important post in command of a skiing Company in the 6 Yorkshire's during the period that the Allied Forces were in Russia, doing much survey and reconnaissance work for troops operating in unknown country".

Other articles appeared dealing with the development of this local Survey Company and describing the interesting work with which it was concerned. One of the articles referred to the first annual inspection, as follows:

"When Colonel J.K. Gordon, D.S.O., C.R.A. of the 50 (Northumbrian) Division, carried out the first annual inspection of the 4 Survey Company, Royal Artillery, (T.A.) at Gateshead (on 21st July, 1937), he spoke to all the officers and men and expressed great satisfaction with the progress made by all ranks. In a subsequent letter to Major J.T. Whetton (Commanding Officer) he wrote, 'I am very pleased with the progress made and

the general tone and keenness of all ranks in this unit'.

Colonel Gordon saw survey work in the field being carried out. One party was fixing two inaccessible points by angle measurement from the ends of a measured base. This work was checked by measurement and was found to agree closely with the calculated distance. In war these inaccessible stations may be within enemy territory, and the information obtained would be of the utmost value to our artillery in subsequent operations. Additional work was also being carried out with theodolites and the use of a theodolite in conjunction with a plane table".

Early in its life, the Company was also visited by Colonel Dendy, D.S.O., M.C., Colonel Royal Artillery, Northern Command, who saw further training being carried out. He expressed great interest in the rapid progress of the unit and promised to press for the delivery of the most up-to-date equipment available.

The Company quickly adapted itself to the application of civilian technical knowledge to that of artillery survey needs. An excellent core of well trained engineers, surveyors, architects and those in other branches of science and technology, many of whom had specialised in mine surveying, building and civil engineering work, both in the private sector and in local government, as well as from other professions such as banking, commerce, teaching and other walks of life, had been recruited and were training so as to be ready for the first camp commencing on 24th July, 1937. This was to be held at Larkhill, Salisbury Plain, with quarters adjacent to those of the regulars of the 1 Survey Company, R.A., to which the C.O. had been attached for a period earlier in the year, where he received a very warm welcome and derived great benefit from the attachment.

Towards the end of April the strength of the Company was about twenty men, and the C.O. had persuaded about six, all in some way connected with surveying, to accept a commission. Training was being concentrated on giving a trade test for Surveyor R.A. to most of the Company before going to camp. Passing a "trade test" indicated that the gunner had achieved a certain standard of technical competency and made him eligible for extra pay as a specialist.

In April, an Army pensioner from the 1 Survey Company at Larkhill was appointed to act as a caretaker-cum-quartermaster and he and his family were allotted temporary accommodation in the basement of No. 152. As a result, the Company Sergeant Major (C.S.M.) Curtis (to which rank Sergeant Curtis had now been promoted) was relieved of the task of finding cleaners, indenting and issuing clothes, stores, etc. and was able to devote more time to training.

Initially the training area was a plot of ground, roughly the size of a football pitch, situated immediately to the rear of No. 152. Later on, as the evenings became lighter, the unit had the use of the grounds of the Ravensworth Castle estate, situated two to three miles from the H.Q.

From the outset, recruiting had been selective, bearing in mind the technical role of the unit and, as time passed, it became apparent that the strength of the unit had a preponderance of surveyors and none of the very necessary personnel to undertake driving, cooking, clerical work and general services. Selection had, therefore, to be modified somewhat. Recruiting steadily continued and the members rose by three or four each week, many of whom were brought in by those already enlisted.

About this time, the officers of the Company surveyed a camp area near Whitby, fixing targets, etc. for the 50 Division. The scheme was started and completed one beautiful sunny Sunday. Arrangements were now beginning to take shape for attendance at the first annual camp. In the meantime, recruiting continued and the first trade test for Surveyor R.A. was held early in July.

With the written examinations there was no problem and these were completed in a week; the practical, however, with only two theodolites, a director and a couple of plane tables took longer and more difficulty was experienced in arranging the timetables. However, the tests were completed and the Company now had about ten surveyors R.A. and had appointed N.C.O.s up to

the establishment of a survey troop.

And so to the first annual camp, held in the summer of 1937. By this time the unit was approximately forty strong, with about six officers in addition. The T.A. Association of Durham made all the arrangements for the transportation of the Unit by rail and bus to Larkhill where the Unit was welcomed by the regulars who entertained, catered and accommodated it. Here it was possible to borrow more of the types of instruments with which the Company was eventually equipped. Lectures and demonstrations in both flash spotting and sound ranging were given. The two weeks passed all too quickly with map reading and small survey reconnaissance's and exercises. All personnel returned to Gateshead with greater understanding and wider horizons and, if this were possible, a greater zest than ever, bringing to its end the first season of an entirely new unit in the Territorial Army. When this camp came to an end, the C.O. remained at Larkhill, joining the 1 Survey Company on manoeuvres with the Regular Army.

After the return from camp, with the payment of bounties and expenses, it could be said that the first session or year of the new unit had ended. The second one began about mid-September.

Recruiting steadily went ahead and the training for further trade tests, drills, etc. continued but now, with the assistance of qualified members to help with the instruction, greater progress was made. The keenness of the members never slackened. The numbers had doubled. The formation of two survey troops was under way, though more instruments, etc. were still awaited. In April, 1938, Sgt. A.E. Calder was posted from Larkhill as P.S.I. for flash spotting, and so began the formation of the Flash Spotting Troop.

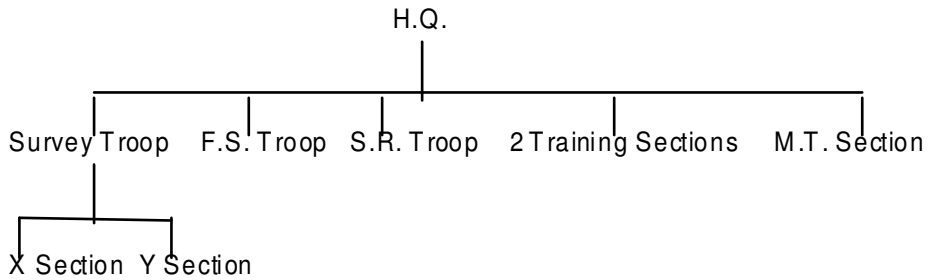
With the growth of the unit, more accommodation and facilities for training were soon needed and plans, suggestions and layouts for a new Drill Hall began to emerge. One of these designs, incorporating a flat roof, was produced by Sgt. T. Day, an architect in civilian life. Preparations and programmes for further trade tests to take place before the second annual camp in 1938 took up a lot of time, but the tests were completed prior to Camp. The third P.S.I., Sgt. 3.S.F. Watson, joined the Unit from Larkhill and training generally became more intense in all fields, with No. 152 almost bursting at the seams on drill evenings, even though, in finer weather, the outside facilities of Ravensworth Park were fully utilised. Sergeant Watson's arrival enabled the formation of a second sound ranging troop to be embarked upon.

Once again the 1st Survey Company at Larkhill were the Unit's host at the 1938 Camp, and, with the loan of instruments from them, this intensive period of training passed all too quickly. Camp completed, outstanding expenses and bounties settled, a short break followed and the Unit was then into what was to be the final season before the outbreak of war.

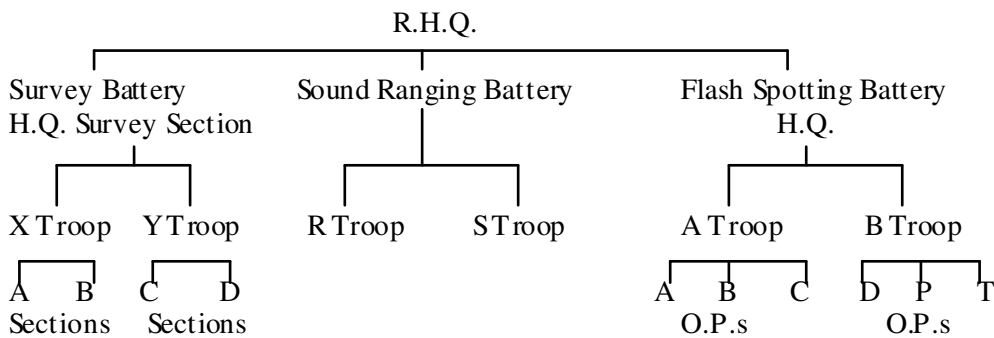
Sometime in the summer of 1938, the C.O. accompanied the Secretary of Durham T.A. Association to the Treasury and the War Office to press the urgency of meeting the need for a modern drill hall and produced the plans drawn up by Sgt. Day, emphasising the advantages of a flat roof similar to one already in use over part of the Mining Department at Armstrong College. This form of construction was a considerable advantage as it provided space for fifty pairs of surveyors to undertake practical surveying work, thereby significantly increasing training facilities. By this time, some sound ranging and flash spotting instruments and other apparatus had been received which enabled the Unit to carry out field operations in conjunction with the gunners. The plans for the new drill hall were finalised and building was begun towards the end of the year.

At this time the Munich episode accelerated the recruiting and a further P.S.I. for the sound ranging troop was to join the Unit. On 15th November, 1938, the Company expanded to become a Regiment. Requests were also received to nominate a number of officers and N.C.O.s to form a training cadre for a second line survey regiment. This was designated the 6 Survey Regiment and its formation began in Newcastle in the late spring and early summer of 1939. With the worsening international situation, an embodiment programme had to be prepared and the selection made and briefing of key personnel in the event of war.

SURVEY COMPANY R.A. (1937 – November, 1938)



SURVEY REGIMENT R.A. (November, 1938 to 1940)



The organisation of the Unit changed with the expansion from a Company to a Regiment. The Chart above illustrates the two organisations. Early in 1939, a regular Army Lt. Quartermaster, Lt. Q.M. Burini, was posted to the Regiment. More instruments and equipment began to arrive and recruiting went ahead, training became more intense and concentrated.

During a weekend training period by one of the survey troops, the following rhyme, written, if memory serves, by a Gunner 3, Wilkinson of 'X' Troop, displays the humour and spirit of every one of the Regiment's members then and throughout its existence. The denouement of the poem rests on the dill that was employed when measuring a base, that is the distance between two survey points, using a metallic tape. The tape, about 100 feet long, was marked in feet on one side and in metres on the other. The drill for this process involved measuring the distance in one direction in feet and then measuring it in the other direction in metres, the two results passing to the computing centre to check that the two measurements agreed.

The Tapes Toil on Tinkler

On Tinkler when the sun was set,
 Cis and Pete stood with their feet all wet,
 Their eyes were popping and their mouths agaping
 They'd just been told - "You're both on taping".
 Let me explain, why they looked so squeamish,
 The Troop was doing a traverse to Beamish.
 But to my tale - the pair were standing.
 When across the fell came a voice commanding,

"Don't lounge there looking so happy
Get started now and make it snappy".
So off they started with hell of a rush
Blazing a path thro' bog and brush.
With cries of "On" and "Pull it hard",
Our lads swept onwards yard by yard.
Then there occurred one of those unforeseen hitches,
Pete lost the button from the back of his breeches,
In the face of disaster, he didn't lose hope
But saved the situation with a large hank of rope.
After taping what seemed to be hundreds of miles
Pete turned to Cis with his face wreathed in smiles
For there on a hilltop was their ultimate goal,
A blue and white flag on a black and white pole.
In far, far less time than it takes to relate,
They were up on that hilltop, eating their bait.
As soon as they'd eaten their sandwich of meat,
Cis said to Pete "Now we'll go back in feet."
On hearing these words Pete started to swoon,
Swaying like a reed in a roaring typhoon.
He frothed at the mouth and quacked like a duck,
Then fell to the ground and rolled in the muck.
Now poor Cis didn't know what this was about,
So he shook his mate's head to try to find out,
But all he could get from poor crazy Pete,
Was, "Cis came in metres and I came in feet".

Incidentally, Tinkler refers to Tinkler Fell, a somewhat hilly part of the Ravensworth Castle Estate in County Durham, where, as mentioned earlier, much of the field work training was carried out.

The new drill hall in Elmgrove Terrace was by this time approaching completion. It was August again, and so to what was to be the last annual training Camp for the 4 Survey Regiment before the outbreak of war.

The 1 Survey Regiment once again acted as hosts to the Regiment. This time the Survey Battery was equipped with theodolites, other instruments and apparatus of its own. The Flash Spotting Battery and, more so, the Sound Rangers, were more dependent on the hosts for instruments and exercises, etc. The training, intense as ever, seemed to have greater urgency and a feeling of expectancy - the possibility that war was not far distant.

Camp over, the Unit returned to Gateshead. The new Drill Hall was taken over, setting up and settling in going along smoothly. This time there seemed to be little likelihood of a brief respite before training was resumed. In the early part of that year, 1939, survey schemes, inclusive of flash spotting and sound ranging, were carried out at Otterburn, targets and bearing pickets being fixed for the Divisional Gunners in the practice camp areas. Other important survey activities were the fixing of gun sites on the coast of Northumberland and Durham for field, heavy and anti-aircraft Regiments, and similar data were provided along the Yorkshire coast to the Billingham area of I.C.I.

This brings to a close the peace-time activities of a territorial unit which was to cover in action almost every sphere of the war from Ethiopia, through the whole North African campaign with the Western Desert Force and the 8 Army, Greece, Crete, Sicily, including service in the 9 and 10 Armies, and, from D-Day, with XXX Corps in 21 Army Group, to the final day in Germany.

In the last summer camp, the officers and senior N.C.O.s in the Regiment included the following:-

Regimental H.Q.

C.O.	Lt. Col. J.T. Whetton
2 i/c	Maj. A.C.H. Robinson*
Adjutant	Capt. G.D.H. Flowerdew
	Lt. Hussey
	Lt. T. Day
M.O.	Capt. Dougal RAMC
M.O.	Capt. Minns RAMC*
Chaplain	Rev. Pritchard
	Lt. Westcott
Q.M.	Capt. Q.M. Burini
R.S.M.	R.S.M. Curtis
R.S.M.	R.S.M. King*
	Sgt. Blaiklock

Flash Spotting Battery

O.C.	Capt. L. Kellett
	Lt. W.W. Wilson
A. Tp Commr.	Lt. E.M. Fisher
B. Tp. Commr.	Lt. W. Bailey
	Lt. N.L. Brammall
	Lt. T.W. Slater
B.S.M.	B.S.M. Calder
	Sgt. B. Abbot
	Sgt. S. Thompson
	Sgt. L. Thompson

Sound Ranging Battery

O.C.	Maj. R.W.C. Cawthome
Tp. Commr.	Lt. 3. Kemsley
	Lt. J.F. Bird*
	Lt. D. Scarratt*
B.S.M.	B.S.M. Batty
	Sgt. Cornell
	Sgt. Inness
	Sgt. Ainsley

Survey Battery

O.C.	Maj. A. Wedgwood*
X Tp. Commr.	2/Lt. W.R. Kirk
Y Tp. Commr.	2/Lt. R.H. Ogden
	2/Lt. 3. Dobson
	2/Lt. D.A. Burnett
	Sgt. Forest

The list given above is clearly far from complete having been compiled from memory by Lt. Col. L. Kellett and one or two more. The names with an asterisk are those who were transferred to the Regiment's second line unit, the 6 Survey Regiment, R.A., which was formed in the Autumn of 1939. In this move, Maj. Cawthorne took over the command of the Survey Battery from Maj. Wedgwood and Maj. Fewkes joined the Regiment, taking over command of the Sound Ranging Battery.

After the evacuation of Dunkirk, the value of survey regiments was questioned in Army command circles and this temporary reaction resulted in the 6 Regiment being disbanded except for one survey troop which was sent to the Middle East under command of Capt. J.F. Bird with Denis Scarratt and John King as subalterns. This questioning of the potential of the survey regiments did not last long and, by the middle of 1940, a number of new regiments were formed, but the 6th was never re-formed.

CHAPTER THREE

THE FIRST PERIOD OF THE WORLD WAR - SEPTEMBER, 1939, TO NOVEMBER, 1940

The telegram ordering embodiment was received quite late on the evening of the 1st September, 1939, when no drills were being held. R.S.M. Curtis (later Major, Battery Commander and Second in Command) took the message to the C.O.'s home and both proceeded to call on the homes of the selected key personnel to set in motion the calling up of all members. It was an unforgettable experience driving around a deserted and silent Newcastle district, knocking on doors in the wee sma' hours like messengers of doom, and pondering on the outcome of it all.

The succeeding days were indeed hectic. Medical examinations, vaccinations, inoculations, finding accommodation for billeting, drawing stores, bedding, equipment, etc. - all had to be done as quickly as possible.

An amusing incident during the inoculations against typhoid (known as T.A.B.) is perhaps worth recording. One member had heard of men fainting in the course of this operation and determined that such would not happen to him. The file of men, each carrying his medical history sheet to be completed as his inoculation was given, approached the M.O. The drill was to move forward on receiving the inoculation. Our hero concentrated all his attention upon his own sheet, reached the medical team and received his jab. Relieved at not fainting but still concentrating, he just stayed put and did not march off. He was immediately given a second jab by the M.O., also concentrating on his needle. Still no movement and the M.O. was about to deliver a third when he recognised the arm and said "How long have you been here?" It was ascertained that only two jabs had been administered, but it was now the M.O.'s turn to worry, as the first T.A.B. could cause some trouble, the two at one go would be no picnic. In those days the inoculation warranted forty-eight hours excused duties. However, after a few painful days our man made a good recovery and no-one faded away.

Mobilisation continued according to plan. A number of young officers were posted to the Regiment from the reserve of officers by the War Office. Additional technical equipment arrived as well as small arms - .303 Enfield rifles for all men and .38 revolvers for officers together with a complement of Bren guns, Lewis guns and Boyes anti-tank rifles.

Everyone in the Regiment will remember the morning of Sunday 3rd September, 1939, when, at 11 o'clock, the Prime Minister, Mr. Neville Chamberlain, announced over the radio that Great Britain had declared war on Germany in consequence of that country's attack on Poland. No sooner had the Prime Minister finished his speech when an air raid warning was sounded. Everyone dashed down the shelters in the Drill Hall at Coatsworth Road, pausing to take a final look at Gateshead before the holocaust commenced! In the event, of course, nothing happened - it was a false alarm - and when the all-clear sounded the old town was still intact!

Shortly after war was declared, the 50 (Northumbrian) Division, in which the Regiment had been under command, moved from the north of England and was replaced by the 23 Division and the Regiment came under command of this Division until May, 1940. During this period the Regiment carried out survey work at Otterburn for the extension of the artillery range there. The operation will be remembered by those who took part in it for the appalling weather conditions which prevailed and the total unreliability of the civilian transport that had to be hired for the Regiment.

The Regiment then moved to Bromham, Wilts., and came under command of IV Corps. Lt. General Claude Auchinleck was the Commanding General, with Brigadier Charles Allfrey as the Corps Commander Royal Artillery (C.C.R.A.) and Brigadier Brian Wainwright, Corps Commander Medium Artillery (C.C.M.A.). The C.O. knew Brigadier Wainwright very well, since he had met him when he was doing research for the School of Survey, Larkhill, just prior to the War.

Shortly after joining IV Corps, the Regiment took part in a Corps scheme across country towards Marshfield and Bristol. In this scheme all Batteries and the Regimental Headquarters were in action. Colonel Howard Greene, former Commander of the 1 Survey Company R.A., was the referee for the survey operations the Regiment undertook for the Divisional and Corps artillery regiments. This followed the peace-time method of providing survey data. But rapid survey in the forward areas, by maps spots and azimuth observations, gave great promise for fast moving operations of the future. The Regimental effort must have been satisfactory as the C.O. was earmarked to take command of the survey operations for an exercise of one of the overseas divisions. However, the Dunkirk evacuation intervened and the scheme was cancelled.

At this stage, the Regiment had come under orders to move to France with IV Corps and much of its transport had been made ready for loading on to ships. The move was, however, cancelled and the Regiment was posted to II Corps for a brief time to be in readiness to proceed to France and join the Highland Division which was still fighting. This intended movement was also cancelled and the Regiment rejoined IV Corps in its concentration area in the Chiltern Hills and within easy reach of Corps Headquarters at "Latemour House", near Chesham, Bucks, this last change of command involving the Regiment in moving from Bromham to Penn Street also in Buckinghamshire.

The administrative moves of the Regiment were accompanied by the task of painting each vehicle - and there were some 200 of them -with the sign of IV Corps. This was a black elephant on a red background. The move to II Corps involved removing these signs and painting on the II Corps sign of a red fish on a blue and white striped background, indicating water. The return to IV Corps meant reinstatement of the elephants!

Prior to this happening, whilst the Regiment was at Bromham, an urgent message was received from the C.C.M.A. Brigadier Wainwright for the C.O. to attend a conference at his Headquarters. It transpired that a train-load of officers and men, survivors from Dunkirk, would be arriving and the Regiment was required to accommodate 500. At a hasty conference, the C.O. arranged for the necessary extra tentage to be erected adjoining the Regimental Headquarters Camp, for necessary additional uniform, boots and other kit to be obtained, the additional rations to be made available (Lt. Tommy Day arranging with a local milk distributor to provide quantities of this necessary item), for bathing facilities to be provided with the help of a local building contractor and for the pay clerk to draw funds from the Command Paymaster so that each soldier would have enough money to last him for a week.

When the men arrived later the same day, all the necessary details of each man were obtained from him - name, number and regiment - and by 5 p.m., after pay parade, the men were allowed out from Camp until 11 p.m. The officers were accommodated in the Regimental Mess. Many telephoned the War Office and left in the evening for their homes but one officer per unit was detailed to remain in charge of his men to conduct them to their Regimental Depots.

The following day, Sunday, there were Church and Chapel parades and then the men had a free day. By the following Monday evening and early Tuesday morning all who had arrived on the Saturday had been entrained for their Depots. The whole operation represented a model of speed and efficiency and many of these men, who had all survived the evacuation from the Dunkirk beaches, expressed their appreciation of the expeditious way they had been dealt with, of the welcome that they had received and of the arrangements made for their well-being.

Shortly afterwards, Lt. Day was appointed Officer in Charge of an advance party, consisting of three officers and five O.R.s, to establish a camp site in the IV Corps area at Penn Street, near Amersham, Bucks. One sunny summer's day the party arrived in the forenoon and, the same evening, the village had its first air raid alarm. Penn Wood, beside the lovely village green, was large enough, however, to give cover against aircraft for a whole Division, if necessary, and a tented camp was established in the wood, leaving the village green quite clear. The Regiment arrived one week later. R.H.Q. was housed in a small cottage overlooking the village green,

which was used as a parade ground.

When the Regiment arrived, the residents at Penn Street were somewhat concerned about the intrusion of so many troops into their small community, but they quickly adopted and took to their hearts this fine body of Territorial Army soldiers. The Village Hall, made open to the Regiment by the local Ladies' Committee, was of a high standard and the volunteers in daily attendance were magnificent in looking after the welfare of the men by organising concerts, dancing and other social activities. The billeting of officers in the village was a special privilege and the Regiment responded by inviting their landlords and ladies as guests to the Officers' Mess. The 'local', known as the "Hit and Miss", also provided a special room for such entertainment.

This period at Penn Street was very active. A flash spotting base was set up at Dover to locate enemy guns across the Channel on the northern coastline of France. Sound ranging bases were also set up near Dover and Romney Marsh, but these were never occupied. Survey was carried out in Norfolk for the gunners defending air fields and the coastline in this area. The results of this work were also used by the R.E. Survey in their map production. During this period after Dunkirk, IV Corps was responsible for defensive positions over a large part of the eastern, southern and western coastlines and a large map supply base was set up adjacent to R.H.Q. stocking maps of these areas.

In September, 1940, the Regiment was taking part in manoeuvres in the vicinity of Cambridge when an invasion scare occurred. This was on the 7th and during the period when the enemy was contemplating the "Sea Lion" invasion operation. The warning was given by the code word "Cromwell". One H.Q., on issuing this code word to a regiment, was met with the reply, "Cromwell? No, I don't think we have anyone of that name in this Unit. - Oh! CROMWELL!"

The Regiment was alerted by this code word at about 0200 hours on the 8th and ordered to return to Penn Street as rapidly as possible. This necessitated striking tents and loading vehicles on a jet black night. The C.O. went ahead leaving the conduct of the convoy to the Survey Battery Commander, Major Cawthorne who, by failing to make any concessions to the calls of nature, caused some of the troops a little embarrassment!

During this period, route maps, similar to those of the Automobile Association, were made by the Regiment, detailing routes from the Chilterns to the coast to the north, the south, the east and west. All these routes were reconnoitred and checked by the Regiment prior to the production of each route map. These were important for troop movement, D.R.'s, etc., since the local authorities had removed all sign posts for security purposes. Large scale exercises were also carried out on a Corps basis, which proved to be most useful when the whole Corps moved towards the coast on a night exercise during the threatened "Sea Lion" invasion.

During the raids on London, low flying enemy aircraft were reported and search parties sent out to look for enemy personnel, alleged by air raid watchers to have baled out in the vicinity of Penn Street, but nothing was found. Experimental "Molotov Cocktails" were made under the direction of IV Corps experts and a successful type was invented by the Regiment.

Defensive positions were surveyed on the south and east coasts for the IV Corps artillery units, providing them with survey data and bearing pickets. During this operation, 'Y' Troop had an interesting and pleasant time when they stayed for some three weeks at Ickworth House, Bury St. Edmunds, the home of the Marquis of Bristol. Captain Flowerdew, who had met the Marquis and Marchioness some time earlier at, it is believed, a garden party, made contact with them when the Troop was in the Bury St. Edmunds area. They generously offered part of Ickworth House for billeting the officers and men of the Troop - that part of the house which was vacant, the family living in one wing. The Marquis also kindly invited the officers to dinner each evening and, at the termination of their stay, they reciprocated by inviting the family to dinner at a local hostelry, and to the cinema. This was an Odeon cinema, the Manager of which told the officer arranging the party that Odeon policy did not allow for seats being reserved. On hearing who the guests were to

be, the whole circle was reserved!

During this period the strength of the Regiment was doubled, the newcomers being successfully integrated into the Regiment. Most of the new officers were from universities and the soldiers from London and the southern counties. The mixture of "Londoners" and "Geordies" provided a first-class unit, both parties having a ready sense of humour. By now the Regiment was over 800 strong.

In late September of 1940 the weather conditions became so bad that the camp in the wood had to be abandoned and everyone moved into billets in High Wycombe. The men were all housed under cover in empty factories, the local football ground and other buildings and the officers in private houses. Regimental H.Q. was also set up in some empty houses. The proprietor of the Red Lion Hotel gave the Regiment the use of a small dining room as a Mess, which was much appreciated.

Lt. Day did a fine job as Billeting and M.T. Officer during this period and the Regiment was well received by the local community, who helped in getting black-out material, etc., for the billets. This comparatively peaceful existence, however, was shortly to come to an end.

CHAPTER FOUR

THE REGIMENT MOVES TO THE MIDDLE EAST

There was much speculation during October, 1940, when a large force was being built up for more active service abroad in the Middle East and the Regiment was given embarkation leave. Early in September, an advance party under the command of Major Flowerdew, who had been promoted to 2nd-in-command of the Regiment, left for the Middle East.

After a month of preparation (almost to the day) on November 7th, 1940, things began to move very quickly towards their ultimate objective. An inspection of the Regiment in Field Service Marching Order (F.S.M.O.) was undertaken and the Regiment was ready to move. On Friday, 8th November, the officers of the Regiment bade farewell to the C.C.M.A. at a dinner in High Wycombe: on Saturday night the advance party (H.Q. Section and Y Troop) received orders to move with the stores the following evening: all Sunday was spent feverishly getting stores to the railway station: that evening, the advance party marched off to the station en route for an unknown port.

During this month, Fit. Lt. N.W. Bradshaw joined the Regiment to command the small Meteorological Section which had been assembled and which consisted of R.A.F. personnel. The duties of this Meteorological Section were described in Chapter 1 of this narrative.

On the departure of the advance party, the rest of the unit became more and more impatient to "get on with the job". On Monday, 11th November, the Regiment was honoured by a visit from the Corps Commander, Lt. Gen. Nosworthy, and Brigadiers Studdart and Wainwright - C.C.R.A. and C.C.M.A. respectively. Just before midnight on Wednesday 13th November, the Regiment paraded in its various billets. It had been raining all evening and this turned to sleet later. At midnight, the Regiment marched to the station through the driving sleet - a long sinuous column. It stands to their credit that, although they were marching through sleet with the unaccustomed F.S.M.O., carrying sea life belts, and many still under the effects of vaccinations and inoculations, only four fell out. All were crowded on to the train with the usual last minute rush after they had been standing on the platform for half an hour.

Incidentally, each man also carried a large pith sun helmet. All felt that the security which surrounded the move was somewhat compromised by this display!

The journey to the port - code letter "L" which turned out to be Liverpool! - was uneventful and without a break except for a short stop at Sheffield for tea and a pie in the fair dawn of Thursday morning. After a meal on the station in Liverpool, the Regiment slowly boarded what to most was a really large liner, the "Reina del Pacifico", a Pacific Steam Navigation ship of 17,700 tons and, what is more to the morbid mind, the ship upon which Ramsay Macdonald died. The small advance party had embarked all the Regimental equipment - having been billeted in a drill hall in Liverpool during the few days before the Regiment arrived. (When the advance party arrived, the billeting officer of the Liverpool area informed the three officers that he had arranged for them to be billeted in a small house adjoining the drill hall. The officer commanding the advance party, however, decided that, as this was likely to be the last time for many many months that they would be enjoying civilisation, they would stay in the Adelphi Hotel which, of course, turned out to be a really first class 'billet'!)

The officers' accommodation was provided in the first class cabins. These had not been adapted in any way because, it was understood, this was the ship's first voyage as one of His Majesty's Transports and there had been no time to do anything about them. On the other hand, conditions for the men were very congested, but the O.C. Ship, a Lt. Col. Preston, on being approached about this, said that, although the accommodation was uncomfortable, it was necessary and that the arrangements were in accordance with the instructions received from the Prime Minister!

On the Friday, the ships were towed into mid-Mersey to await the formation of the convoy and, at 1100 hours on Sunday, 17th November, 1940, with all in the Regiment feeling like pioneers approaching the unknown, the ship weighed anchor and slowly made its way out of the River Mersey with five other liners and escort.

The next day, four more ships joined the convoy - a total of ten ships - together with a very strong escort. Zig-zagging all the way, the ships sailed on a northerly course. Ships, such as the Andes, Duchess of Atholl, the Strathnaver, the Strathaird and the Orcades, which made up the convoy, became familiar friends over the ensuing weeks of the voyage. An interesting event was the appearance in the escorting Royal Navy fleet of two or three of the narrow-funnelled destroyers which the USA had let England have as part of the Lease-Lend Agreement. The antics of the destroyers during the heavy weather in the north Atlantic were amazing: the little ships seemed to go over to such an angle that their funnels looked horizontal and frequently they disappeared entirely from sight in the troughs of the waves. How the sailors hung on to the dipping decks, one will never know! In the distance, on the horizon, larger Naval vessels were seen, one of which appeared to be an aircraft carrier.

For the first few days of the voyage, many people were incapacitated with sea-sickness whilst the ship lived up to its name of the "Rolling Reina" or the "Pitching Pacifico". During this initial period the Regiment settled down to its duties of guarding the ship against fire and other damage, whilst the Australians, who were also on board, were in charge of A.A. defence. The ship's Adjutant, Lt./Quartermaster and R.S.M. were provided by this Australian unit. For a while, little happened to break the days' routine except boat drills, the shedding of a few destroyers from the escort, and the gaining of an hour.

The course of the convoy seemed to be due west into the North Atlantic until some point was reached when the course changed to due south. It was not long after that that the grey days and rough seas of the North Atlantic were left behind and the weather steadily improved.

As soon as warmer climes were reached, the ship was continually escorted by hundreds of flying fish, which leapt out of the now very blue sea just in front of the prow. A number of porpoises were also seen. A surprising phenomenon was the brilliance of the phosphorescence along the side of the ship as it swept through the water. One felt that the light emitted would be sufficient for the enemy to locate the convoy during the hours of darkness.

November 23rd was a notable day in that the order to change to shorts came along and many "peculiar" beings appeared in tropical kit of all shapes and sizes. By now, the Regiment had fallen into a routine of lectures from 0900 to 1000, P.T. from 1000 hours to 1100 hours and between 1300 and 1430 hours, lectures on deck followed by lectures inside until 1600 hours. This routine was broken at regular intervals by the sounding of the "Boat Stations" alarm.

Probably one of the most boring jobs the officers had was to censor letters written by the troops who seemed to be most prolific in their correspondence - no doubt due to the uneventful life they were leading on board. On one occasion the writer stated to his loved one that, at any rate, the ruddy officer would have to seal up his envelope. The officer concerned requested the troop sergeant to send the man to his cabin and, on his appearance the officer instructed him to seal the envelope - without any further comment!

One way in which the Australians passed their leisure time on board was to play a game known as 'Two Up'. A number of Aussies, probably 20 or 30, would form a circle in the centre of which one of them would toss two pennies into the air. The remainder would bet on the chances of the coins turning up two heads, two tails or one head and one tail. The amount of money that continuously changed hands during the game was truly amazing. Frequently the individual wagers amounted to £20 or £30 or more!

Wednesday, 27th November, made its name in that a fire was started by a short circuit in the wiring, but this was quickly dealt with. That evening the whole ship "got together" for a concert.

Misty hills were sighted on 27th November and many had their first sight of the "Dark Continent". Shortly afterwards the Convoy Commander, who was sailing in the leading ship, the "Duchess of Atholl", gave a signal which resulted in the whole convoy making a very sharp turn to starboard. The whole manoeuvre, involving such large ships, was most impressive. This drew the comment from the Captain of the Reina, "What does he think he is commanding - a flotilla of bloody destroyers!" The reason for the manoeuvre was never disclosed, but it was rumoured that an enemy submarine had been located in a position somewhat uncomfortably close.

By about 0930 hours, the ship passed the boom to its first anchorage, from which many interesting sights were to be seen - this was Freetown, Sierra Leone. Bum-boats clustered round the ship selling fruit. The C.O., however, arranged for fruit to be bought ashore, to sell at cost price to the men, to ensure that the men had their fruit without the risk of infection.

In spite of this, the bartering with the occupants of the bum-boats carried on until the ship weighed anchor on Sunday, 1st December, at 1600 hours and, once more, our only sight was that of the convoy ships. During the stay at Freetown an interesting sight one day was the arrival and subsequent take off of an Imperial Airways Sunderland flying boat - no doubt on one of its scheduled passenger flights.

December 3rd produced a scare: a case of meningitis. The patient was moved to the stern of the ship, occupying a camp bed on the rear gun platform. Here a somewhat ancient naval gun was mounted. This single gun was the only real weapon on the ship capable of making any realistic defence if the ship were attacked. Each of the convoy liners was similarly equipped. This meningitis case did what other efforts had failed to achieve - it made the ship's staff "sit up" and be more congenial, one result of which was that the congestion below decks was relieved by men being allowed to sleep on deck - an arrangement which, for some unknown reason, had up to this moment, been forbidden in spite of the tropical and equatorial weather. The men, however, had to be wakened at 0530 hours to enable the crew to swab down the decks! Arousing the men at this hour was the job of the Orderly Sergeants and Orderly Officers. Of this group, the ship's Orderly Officer was probably the hardest working in having to visit the guards at every hour during the night and report to the bridge. Orderly officer duty was allocated to different officers each day.

At about this time there was some trouble with the food: hot stew appeared far too regularly, according to the men, for a hot climate. As a result more cold cooked meats were put on the menu and from 5th December for six days, mineral waters issued.

On the night of Monday, 9th December, the convoy passed the Cape light and, on 12th December, appeared off Durban harbour. The Reina del Pacifico, with three others, had gone ahead of the other six ships to get refuelled quickly. However, the Reina was unlucky and had to wait until the last of all the ships because of the case of meningitis on board. Eventually, on Friday, 13th December, the Reina was moored alongside the Strathnaver and shore leave was given into Durban, where many were "adopted" by the local inhabitants and taken to their homes and to see the sights and the surrounding country. Three enjoyable days were spent in this delightful city. The Edward Hotel will be remembered by many. It was during this short period that the officers became aware that their R.A.F. comrade, Fl. Lt. Bradshaw, was a past master at getting a party going.

Monday morning heralded the departure amid sighs of regret, although the men were prepared for it, since Sunday's shore leave was limited to a route march in the morning. Excitement reigned on board during that evening owing to the rushing of the shore picket by Australians and Tank personnel. Six of these men were left in Durban. The Regiment was now on the last lap of its journey.

Whilst in Durban it was learned that the de-gaussing apparatus had gone wrong three days out of Liverpool and was not yet in working order. This apparatus was designed to protect the ship against magnetic mines.

Christmas was approaching and a Sports and Boxing Meeting was arranged for Saturday 21st December. The Regiment did well in the sports, being first equal with the Australian 1 Anti-Tank Regiment, winning the relay, overhead ball and deck tennis singles, but with boxing things did not go so well.

When the convoy was just north of Madagascar, the ships appeared to be riding sideways to the large rollers coming in from the Indian Ocean. It was, as usual since the North Atlantic had been left behind, a beautiful day and everyone possible was on deck - some playing deck tennis - when the ship heeled over to such an extent that many fell down the sloping deck and into the rails. The ship then keeled over in the other direction and it was strange to have what might be called a bird's eye view of the decks of the ship next door. The ship swayed in this alarming way for three or four times and then settled down to its normally steady course. The rollers causing the movement were not very obvious to the eye, but it was apparent that the distance between them - their periodicity - somehow was in sympathy with the balance of these large ships, with the frightening consequences just described.

The voyage had, by this time, taken some six weeks and the men were getting a little apprehensive about whether or not there would be any war left in the Near East after the recent successes in the Desert. In the outcome, of course, they need not have worried.

In the late afternoon of 24th December, a concert was held, but the biggest success was a sing-song in the evening - here the Regiment were justly proud of the pianist and main vocalist, Sgt./Sur. W. Gabriel, who belonged to the unit. Later on the same evening, Christmas Eve was celebrated very definitely in the usual way. The men's Christmas Dinner was very good and fully appreciated by all. Afterwards, many officers were invited to meet members of the Sergeants' Mess. The officers' Christmas Dinner menu is reproduced on the following page which gives some idea of the luxury enjoyed by the officers on this voyage. The return voyage, some three years later, was vastly different! The evening of Christmas Day was marked by the sighting and passing of Djibouti and the island of Perim, with its lighthouse.

In the following days, excitement grew amongst all on board as they neared their destination and began to pack their baggage. In the last few days a series of sports events were held. Saturday, 28th December, brought the first view of Egypt, in the form of the mountains of Sinai and the Red Sea Hills, from the Gulf of Suez.

Just before arriving at the port of destination, the Regimental Quartermaster Sergeant, RQMS Radford, who was an experienced regular soldier and had served overseas before the war, was asked by the C.O. to give a talk to the officers about conditions in the Middle East. He commenced his talk by saying that after a short time in the area one finds one needs a bit of 'pineapple'¹. This was not understood by the audience until he went on to explain that, if this need were felt, he advised using the brothels in the Sharia El Burkah in Cairo, where there would be a regimental aid post fully equipped with all the necessary preventatives and medical equipment! The C.O. was shocked that his young officers should hear of such things and quickly brought the talk to a conclusion!

During the voyage, the men of the Regiment made many friends in units that were to fight in the Middle East theatre of war, units such as the 4 Royal Tank Regiment, the 1 Australian Anti-Tank Regiment, the New Zealand Engineers and many others. It was also about the last time that all members of the Regiment were continuously together and this did much to forge strong links of friendship between the original Geordie members and those who had joined after the move from Gateshead.



Officers' Dinner Menu, Christmas, 1940 H.M.T. Reina Del Pacifico

CHAPTER FIVE

ARRIVAL IN THE MIDDLE EAST

The Regiment arrived at Port Tewfik (Suez) on 29th December, 1940, and were welcomed by Brigadier Dibb, B.R.A., British Troops in Egypt, the Regiment coming under command of G.H.Q., Middle East. The Brigadier gave an assembly of the officers information on the Forces in Egypt and on the Western Desert advance. He also warned them to be careful in Cairo hotels, restaurants, dance halls, etc., about conversations with strangers who might be members of the Intelligence Branch of our enemies.

He arranged an appointment for the C.O. to meet Brigadier, later Major-General A. Maxwell, M.C., R.A., at G.H.Q., Middle East. This somewhat lengthy meeting - it lasted about two hours - was of the utmost importance, dealing with the formation of the Regiment, standard of training, transport, readiness to move into action at short notice and the use of independent troops and smaller units to meet the needs of the forces in action and in various areas of the command where survey might be needed in the future.

On 31st December, 1940, the Regiment disembarked and entrained for Cairo, then continued on to Beni Yusef, a hutted camp about five miles out of the city, within easy reach of the Western Desert, and in the vicinity of Mena and the Pyramids. This location was within the Nile Valley which presented a lush green appearance - being watered continually from the river, which was controlled by a complex dam arrangement known as the Delta Barrage. South of Cairo and the Delta itself, the valley is about six miles wide; at its edges the land rises somewhat, probably some 50 feet, and the desert starts immediately. The fertile valley is, of course, intensively cultivated by poor villagers, called fellahin - a stark contrast to the wealthy city Egyptians in Cairo and Alexandria. The fellahin lived in what were literally mud huts. An interesting tradition is that, when a farmer/landowner dies, his land is divided equally amongst his children, the parts being indicated by what appeared to be small concrete cubes about 6" square, fixed in the ground at each corner of the plot. Some plots were quite small and it was possible to envisage that, if the tradition continued for many more years, the whole valley would be entirely covered with concrete cubes!

The Beni Yusef camp was dominated by the great pyramids of Giza -but it was interesting to note that in other parts of the Desert, at the slightly higher level than the valley, were other smaller pyramids. There must have been ten or more scattered about the Desert, to be seen from Beni Yusef.

On arrival at Beni Yusef, the Regiment was welcomed by the 2 i/c, Major Flowerdew, who had commanded the advance party to the Middle East. Major Flowerdew, always smartly turned out, met us in his service dress uniform (that is, with polished belt, etc.), but resplendent in a rakish pair of suede boots. This was the first introduction to the famous desert boots worn by many officers and other ranks in the Desert.

At Heliopolis - a suburb of Cairo - there was a Meteorological Station, and the C.O. arranged for a team of gunners from the Regiment to use these facilities and be trained in meteorological work. This enabled the Regiment to have two meteorological teams each consisting of half of R.A.F. men and half of gunners: both were the responsibility of Fl. Lt. N.W. Bradshaw, the R.A.F. officer attached to R.H.Q. In addition to carrying out his meteorological duties both for the Regiment and for the Corps Counter Battery organisation, "Met", as Fl. Lt. Bradshaw was called, gave enthusiastic support to all matters of social welfare within the Regiment.

It will be recalled that a Survey Troop from the 6 Survey Regiment R.A., consisting of men recruited and trained in the 4 Survey Regiment, had preceded the 4 Survey Regiment to the Middle East, under command of Captain J. Bird (also originally in the Regiment). This Troop was involved in General Wavell's successful attack launched against the Italians holding Sidi Barrani

in December, 1940, which took the British troops to Agedabia - a place to become well known in Middle East military history. Almost immediately after disembarkation, a small group consisting of the C.O. and Battery Commanders, Majors Cawthorne, Kellett and Fewkes left Beni Yusef for the Western Desert and joined up with Captain Bird's Survey Troop. They were able to observe the capture of Tobruk. This first Western Desert advance was under the command of Lieutenant General Richard O'Connor, commanding British Troops in Egypt (B.T.E.) - it was the first taste of real action in the War experienced by members of the Regiment. Captain Bird was awarded the Military Cross for his work in this advance.

During the advance into Libya, General Wavell decided to withdraw the 4 Indian Division from his Western Desert Force, and to send it to the Sudan to operate against the Italians at Kassala on the borders of Eritrea. The Division was, in consequence, relieved by the 6 Australian Division in the Desert on 12th December, 1941, and moved to the Sudan. Subsequently, because of enemy threats in the Balkans, General Wavell was ordered to send a fighting force to Greece, largely as a political gesture to that country, and 1 Armoured Brigade, with supporting units, was withdrawn from the Desert and was in Greece by 27th March.

On the return of the 4 Survey party from the Western Desert, the C.O. reported to the M.G.R.A. at G.H.Q. and received orders to prepare a troop capable of surveying and flash spotting for the Eritrean theatre of war. 'Y' Troop, commanded by Captain R.H. Ogden, was despatched, leaving Cairo on 13th January 1941, followed shortly afterwards by 'R' Troop (Sound Ranging) under command of Captain John C. Balfour. Both Troops returned to Egypt on the successful conclusion of the campaign in the following April. The experiences of these Troops are described in the following Chapter. The remainder of the Regiment was selected to serve with the Anzac Force, consisting of Australian and New Zealand Regiments, which followed 1 Armoured Brigade into Greece, together with Regiments such as the 7 Medium Regiment, R.A., the 64 Medium Regiment, R.A. and others, mostly regular army British units that had already served in the first Western Desert offensive with much distinction. This campaign is described in Chapter 7.

No. 1 Survey Troop, Captain Bird's independent troop, was posted to the 4 Survey Regiment for the Greek operations and remained in the Regiment until after that campaign, when it was transferred to the 9 Army. Johnny Bird left the Regiment in November, 1941, to take up an appointment with G.H.Q. Middle East in Cairo.

It was surprising how quickly the troops became acclimatised to the conditions in Egypt. It was not long before they abandoned the large sun helmets with which they had been issued in U.K. and learned such tricks as drying used tea leaves and swapping the result with the locals for fresh eggs and oranges.

CHAPTER SIX

THE ERITREAN CAMPAIGN

The C.O. had received orders to prepare a survey troop and sound ranging troop for service in Eritrea and decided that these would be 'Y' Survey Troop and 'R' Sound Ranging Troop. The movement of the two troops was to be included in what was referred to as the Third Flight of the 5 Indian Brigade of the 4 Indian Division, and the move had the code name "Emily II(d)". 'Y' Troop was the first to move, followed by 'R' Troop.

Immediate activity ensued to get 'Y' Troop ready for moving and on the 11th January 1941 a small advance party under Bdr. Buglass, consisting of seven men with three motor cycles and 10 tons of equipment, left Giza Railway Station, Cairo, travelling by train and then by steamer up the River Nile to the new area of operations. The Troop itself, taking the transport and personal equipment only, followed on 13th January, also from Giza Station by train for a transit camp at a small village near Aswan called Shelal. Here the Troop left the train and, under the guidance of the 18 Field Company Sappers and Miners, a group of Rajputana Rifles, a recovery Detachment of the 17 Workshop Company I.A.O.C. and an Ambulance Detachment of the 14 Field Ambulance, left Shelal on the 16th January to cross the Nubian Desert to Wadi Haifa.

The Troop comprised three officers and 36 O.R.s equipped with nine 15 cwt. Ford trucks, a water truck and one 3-ton Chevrolet. The water truck consisted of a 160 gallon tank mounted on a 15 cwt. Bedford truck. They had been painted with a camouflage of brilliant red and white, which was in stark contrast to the pale blue-green and beige camouflage of the Western Desert vehicles. One wondered what temperatures the Troop was to experience in this new theatre of war!

Crossing the Nubian Desert - the first leg covered some 312 miles -was the first introduction to the Troop of driving across the desert sand and it was fortunate that they were in the company of such an experienced group as the 18 Field Company and the other units of the 4 Indian Division. This Division had been in the Middle East since early in 1940 and had been the major component in the Allied victory in the Western Desert under General Wavell. It was under command of Major General Sir Noel Beresford-Pierce.

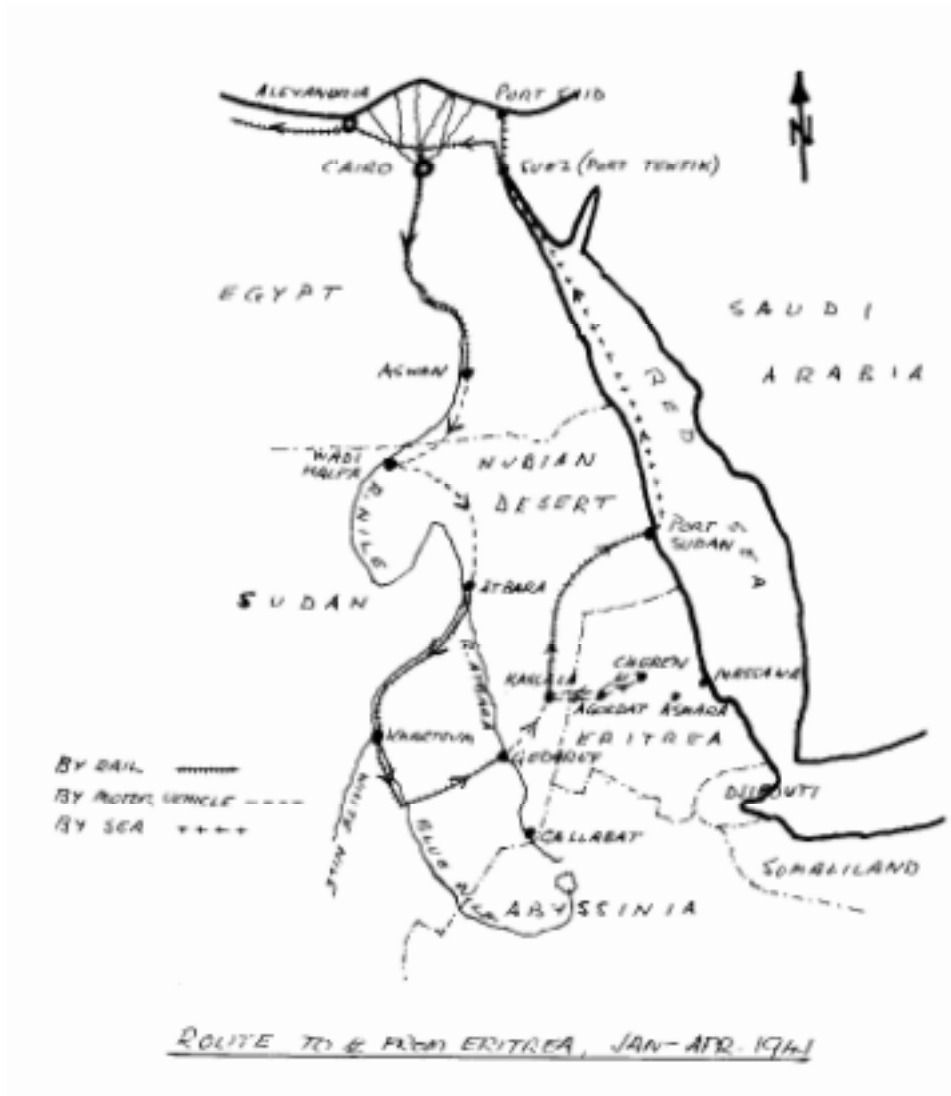
Every driver was issued with a movement order which described the route across the Desert. This movement order largely consisted of a schedule of distances between "identifiable" points - mostly indicated by 4 gallon petrol tins known in the Middle East as "flimsies", which were set up in the Desert along the route to be followed. The sort of directions on the movement order were as follows:

"Tin marked 6 - general direction south for 13.5 miles to tin marked 7".

It was really surprising that the group managed to find such a small item in the wilderness of this desert. The most important aid was, of course, the tracks of earlier groups which had crossed the desert. One feature, in an area of completely unrelieved sand (some parts were covered with tufts of scrub), was a lone fig tree, which presented an amazing green splash in the infinite yellow of the sand. Why this tree was growing seemed a mystery - there was no evidence of water about anywhere. It just emerged inexplicably from the sand.

The going for much of the route was very soft sand and the advice given by the experienced sappers was to go all out and certainly not to slow down or stop until some solid ground was reached. This resulted in some really exciting driving! The trucks, apart from personal equipment, were loaded entirely with petrol in 4-gallon flimsies. The need to drive fast meant a very rough ride, especially over sand ridges, and resulted in quantities of petrol being lost due to leakage. The logistics of this part of the move required that 100% more petrol be carried than the mileage of the route to be covered demanded, just to meet this leakage problem. It was a wonder no trucks caught fire during the trip! The Allies had not yet picked up the German idea of using really

robust containers - these were used later in the Western Desert, initially captured from the enemy and thus known as "Jerricans", but similar cans were subsequently provided by the Americans.



This trip across the desert also introduced the Troop to equipment to assist the vehicles out of the soft pockets of sand. These were sand mats and sand channels. The I.A.O.C. Recovery Detachment did a tremendous job in rescuing stragglers bogged down in the sand and it became routine, at every sun-down, to check that all were present and correct.

The first encounter with a mirage was also experienced - a most interesting phenomenon. Trucks in a group, many miles away, would appear as vertically elongated objects, the image frequently inverted, and appear like a group of tall trees. These tall trees would get shorter and shorter as one approached them until, when they were very close, they became apparent as trucks. The inversion of the image, of course, frequently reflected the sky below the horizon, thereby giving the impression of a lake, with reflections on it, in the middle distance.

At Wadi Haifa the Troop bivouacked at a transit camp, some staying at what is known as a Rest house. These Rest Houses were provided at infrequent intervals on certain roads in the Sudan to assist travellers. The accommodation was quite modern, but there were no facilities at all in the

building - one had to provide oneself with the necessities of life! From Wadi Haifa the Troop moved to Atbara, another desert crossing of some 300 miles, where it entrained for Khartoum. On the 3rd February the Troop passed through Khartoum and pushed on to a small settlement called Gedaref, in south west Sudan. Camp was established in a small, wooded area, known locally as the "Garden of Eden". It was, however, far from this, there being at least two dead camels in the area, which smelled abominably.

It should be noted that during the train journey the reception extended to the Troop at each railway station en route was tremendous - the white settlers providing cigarettes, drinks and food for all. The movement instructions at this time were very imprecise and, in an attempt to find out the position, the Troop commander came across the advance party, which had established itself, with the Troop's stores, at a small railway halt called Kashm El Girba. The advance party were found swimming in the River Atbara with a machine gun at the ready in case any crocodiles approached the bathing area!

Orders were received in due course from the C.R.A. 4 Indian Division to report to his H.Q. near Cheren, and the Troop left Gedaref on the 13th February, arriving at Cheren on the 15th. The Troop Commander reported to the C.R.A., Brigadier Mirlees, who enquired about the administrative efficiency of the Troop. The Troop Commander replied that it was O.K. - in fact, he said, "We even cook our own food". The C.R.A.'s reply to this is unprintable!

On arrival, it was thrilling to hear the 25-pounders blasting off, not on range practice but really in anger. The area consisted of a narrow valley between steep and high mountains, the valley well-wooded, largely with olive trees. The local fauna, especially the birds, were brilliantly coloured and of infinite variety. The snakes were interesting, as were also the termites, which made short shrift of anything made of timber or cloth left on the ground. If an officer's wooden trunk left on the ground was lifted, all the contents were left behind. Chameleons were plentiful and one, which became a Troop pet, travelled many miles on the cylinder head of one of the Norton motor cycles where, to everyone's surprise, it seemed very happy - suitably coloured, of course, to match the rusty cylinder head!

'Y' Survey Troop was followed by the arrival in the Cheren area on the 21st February of 'R' Sound Ranging Troop. This Troop followed a similar route to 'Y' Troop except that from Aswan to Khartoum it went by steamer on the River Nile, thereby avoiding the desert crossings. Immediately the two troops had settled in, work started to fix the gun regiments and deploy a sound ranging base.

The C.R.A. asked Captain Ogden if 'Y' Troop could do some flash spotting and, although they were only really equipped for survey work, this was organised. It was clear, however, that the only time this could work would be at night as the Indian Division did not hold the high mountainous ridge surrounding Cheren. There were only one or two gunner O.P.s in this position, but these were not adequately sited for flash spotting work. It was, therefore necessary to climb the ridge behind and locate on to sky reflections. Three O.P.s were established at about 2,000 feet above the valley - a fourth O.P. was established later. Communication was the greatest problem and this was achieved using wireless sets borrowed from the Sound Ranging Troop. The sets were run off 6-volt accumulators; this required the night shift to carry half a dozen or so accumulators up the mountain in the heat of the afternoon to man the O.P.s throughout the night, when it was very cold, and carry the whole lot down again in the morning. In temperatures of over 100 F in the shade this proved to be a really hard task. Unfortunately the Italians did not fire at night until 17th March, shortly after the first major attack by the 4 Indian Division on the heights held by the enemy. The flash spotting base was, however, deployed and ready to come into action should night firing occur, and so commenced a fairly successful period of flash spotting considering the difficulty of getting really accurate bearings off sky reflections. The period before the 17th March, had been used to train the surveyors in flash spotting drill and use of radio communications so that when the opportunity first presented itself the troops were at highest efficiency.

As expected, however, the location of hostile batteries by sound ranging was much more effective in this mountainous area than the somewhat amateur efforts of a radio-linked flash spotting base manned by a Survey Troop and relying solely on sky reflections.

On one occasion, when fixing forward bearing pickets for the 5 Indian Division artillery in an area known as Happy Valley, 'Y' Troop Commander with L./Bdr./Sur. 3.S. Thomas reconnoitred a forward position in which survey data was to be provided for a night advance of the gun regiments, and they were glad of the protection afforded by a large baobab tree. These trees, which were dotted about the valley, were about 10 ft. in diameter, and both were pinned behind one by the Italian gunners, who used them as a target for some two hours, until they tired of the sport. One of his subalterns, Lt. D. Burnett, asked another gunner officer on reconnaissance what was happening up ahead, and he replied, "The Italians are playing silly buggers with your C.O.!" On this occasion the Italians used shrapnel and this was the only time that this type of ammunition was experienced throughout the whole war.

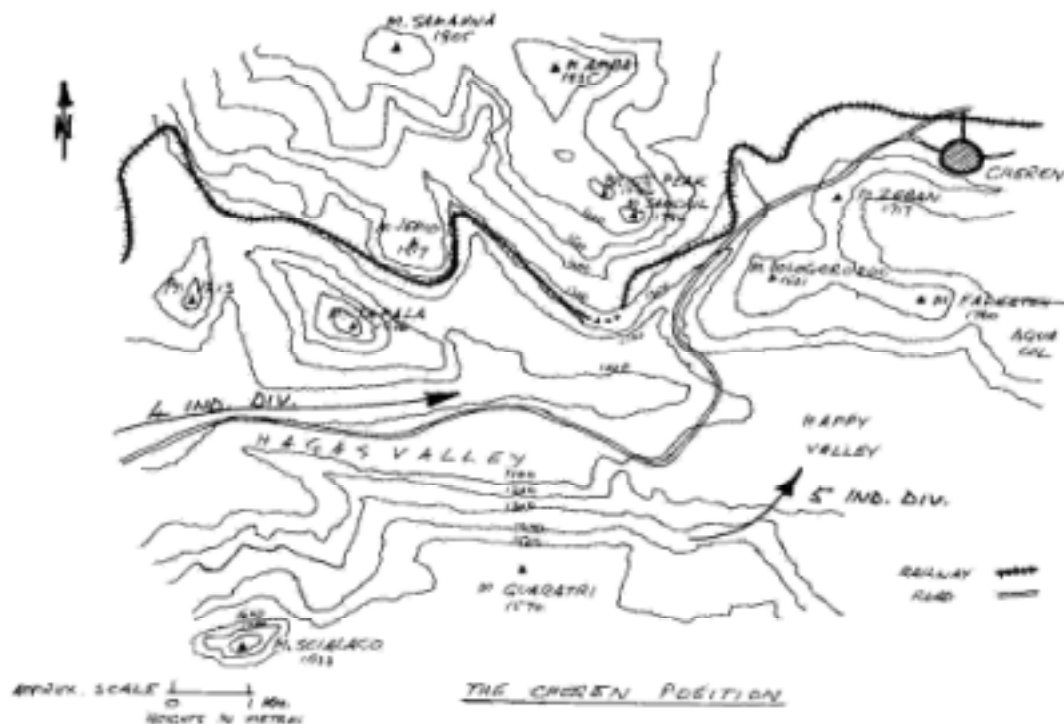
The gun regiments with which the Troop worked in this campaign were the 1 Field Regiment R.A., 25 Field Regiment R.A. and 31 Field Regiment R.A. of the 4 Indian Division, together with the 68 Medium Regiment under Col. Dimoline, and a screw gun battery from the Sudan Defence Force under an officer called Bimbashi Gregson. Later, there were the 4 and 28 Field Regiments of the 5 Indian Division. The R.A. H.Q. of the 4 Indian Division, in addition to the C.R.A., consisted of Major George Baker, Brigade Major, and Captain Wilde, Staff Captain, with Colonel Myburgh as C.B.O. The two Troops, as well as the Regiment as a whole, were to work with these officers many times in the remainder of the Middle East campaign.

It was at this time, at the suggestion of the Survey Troop Commander to the C.R.A., that experiments were made with air burst ranging - a method of registering the fall of shot by locating the burst of a shell in the air. These experiments were not a success: the 31 Field Regiment, with whom the exercise was conducted, were equipped only with "shrapnel" and not the air burst ammunition required.

Excitement! It was learned there was a large crate of "com forts for the troops" awaiting collection at Divisional H.Q. The crate was opened: it was found to contain woollen balaclavas! Something must have gone wrong with the loading of these "comforths" to send them where the temperature was well over 100 °F most of the time, and it seemed an awful shame that the people at home were working hard to produce these things but they were not going to the right destination. However, many of the troops sewed up the openings for the faces and used the balaclavas as holdalls!

On 2nd March an operation was undertaken to fix the position of an O.P. of 31 Field Regiment on the ridge overlooking Cheren. This was done by resection from triangulation points in the valley. It was interesting to see the town of Cheren itself from the O.P. and to hear the peculiar "chuff chuff" noise of shells from the 3.7 howitzers of the 68 Medium Regiment just about managing to breast the ridge. These guns clearly needed a rebore!

On the 15th March an attack was launched by the 4 Indian Division to capture more of the heights overlooking the whole valley, which would also provide good O.P.s for observations towards Cheren. The mountains were known as Samanna, Sanchil and one, given a local name, Brig's Peak. The R.A.F. assisted in the attack in the form of four Wellesleys, three Gloucester Gauntlets and one ancient Vickers Vincent. Four other planes dropped bombs close to the 'Y' Troop position. These were at first thought to be enemy planes but they were identified as a Bristol Bulldog and three Blenheims, who must have found map reading a little difficult in this area. The result of the Divisional attack on the heights was the capture of Sig's Peak and part of Samana, but not the remainder of the ridge.



As mentioned previously, it was not until the night of 17th March that the first night firing by the enemy was experienced, and enabled the flash spotting base of 'Y' Troop to produce some results. 18 enemy batteries were located from this flash spotting base, whilst about 40 were located by sound ranging. On the 25th March a new attack was launched on the Italian positions surrounding Cheren by the 5 Indian Division going in on the right of the 4 Indian Division, who were holding the heights already captured. 'Y' Troop provided the necessary survey data for the artillery of that Division. After a most successful operation, Cheren fell to this attack on 27th March.

The Survey Troop now came under command of the 5 Indian Division for the intended move towards Asmara. This proved unnecessary since there appeared to be little or no further enemy resistance and both Troops came under command of the 68 Medium Regiment for the move back to Egypt. 'Y' Troop Commander and his two officers had a spin into Asmara to see the town: the scarcity of Allied personnel and considerable number of Italian officers equipped with revolvers, with their lady friends, was momentarily worrying. All was well, however, when the Union flag was seen to be flying from the Town Hall! With the fall of Cheren, Italian resistance completely collapsed and the Eritrean campaign was over. 5 Indian Division occupied the Red Sea port of Massawa on April 8th. This successful campaign together with the advance of a brigade group from Port Sudan and General Cunningham's achievements in Italian Somaliland resulted in the elimination of the Italian empire in East Africa.

After the Troops had returned to Kassala by road the first real sandstorm was experienced. The first indication was the appearance of what seemed to be a new ridge of mountains in the distance but which was really an immense dust cloud. This moved slowly towards the camp - the air being absolutely still and very hot. As soon as the apparent mountains reached the camp all were enveloped in a howling gale and a dense cloud of flying sand. Everyone went to ground.

The storm lasted about an hour, after which peace reigned once more.

From Kassala the return trip was first by rail to Port Sudan, where both Troops and the artillery units of the 4 Indian Division embarked on an old B.I.S.N.C. ship, called the S.S. "Ethiopia", for Port Tewfik. On disembarkation at Port Tewfik, 'R' Troop went to Almaza with 31 Field Regiment and 'Y' Troop travelled to the Western desert with the 68 Medium Regiment.

This terminated the Eritrean episode, which was a most successful campaign. It was a most useful blooding of both Troops in a comparatively small and compact campaign, which provided all the action needed and yet remained fully comprehensible at all times to the members of the two Troops.

The significant points of this campaign were the successful flash spotting in mountainous country by locating gun flash sky reflections when the enemy fired at night, and the considerable success by sound ranging in difficult country. Another was realisation that the meteorological conditions were very variable, so much so that the gun fire was, in the early stages of the battle, extremely inaccurate because of the inconsistent meteorological data. Later in the campaign this difficulty was largely overcome when it was realised that the meteorological information was suspect and more frequent readings were taken. Details of this campaign are well described in a book published by the Government of India, entitled "The Tiger Strikes".

There was an amusing incident during this campaign, when the Troops heard that the Kaid was coming up to the Divisional area to see how the battle was progressing. The title "Kaid" seemed to indicate to the Troops that this was a local Sudanese dignitary and the men were most surprised to see that the Kaid was none other than Lieutenant General W. Platt, the C. in C. Apparently, the senior British officer in the Sudan area is granted the honorary title of "the Kaid".

Now to the parallel operation of the remainder of the Regiment.

CHAPTER SEVEN

THE GREEK CAMPAIGN

In late March, 1941, an advance party with the Light Aid Detachment (L.A.D.), heavy vehicles and stores, left Beni Yusef for Greece. Although heavily bombed by German planes during the voyage across the Mediterranean, the convoy arrived safely in Piraeus without loss.

The remainder of the Regiment, plus No.1 Survey Troop (but less 'Y' and 'R' Troops serving in the Eritrean theatre of war) left by road for the Amariya transit camp, a few miles west of Alexandria, prior to embarking for Greece on 1st April, 1941. The Regiment moved by train from Amariya to the harbour at Alexandria and, by coincidence, a squadron of the Northumberland Hussars travelled on the same train.

The significance that this was the day the Regiment was really moving to an active theatre of war was fully appreciated by all. The ship was the "Cameronian" and the voyage, through a beautiful blue sea to Piraeus (Port of Athens) was smooth, comfortable and more like a bright and sunny Mediterranean cruise than a wartime crossing into Europe. Sunshine all the way! The Navy and Air Force were doing a wonderful job in keeping the enemy at bay both on the sea and in the air. Memories of Amariya had not been so happy and it needed this voyage to expunge them.

With the bulk of the Regiment in Greece and 'R' and 'Y' Troops in Eritrea and the extensive deployment of the Regiment over the Middle East Command, it became clear to the C.O. that reorganisation of the Regiment was necessary so as to increase its flexibility and enable it better to meet the wide ranging demands to be imposed upon it. A survey regiment was intended to support one army corps of two divisions: the availability of only one survey regiment with one extra survey troop for the whole Middle East Command meant that the survey support for the fighting forces was very thin on the ground. This reorganisation will be mentioned later.

At the time of the Greek Campaign the three batteries were under the command of the officers who commanded them in U.K. before embarkation to the Middle East. These were Major R.W.C. Cawthorne, commanding Survey Battery, Major L. Kellett, commanding the Flash Spotting Battery, and Major Fewkes, commanding the Sound Ranging Battery.

The main body disembarked at Piraeus on the 5th April and moved to a large transit camp called "Glifardia", about five miles from Athens. This was three days before Germany declared war on Greece and bombed Piraeus Harbour. Incidentally, this was the same date that Eritrea was officially declared clear of the enemy.

Shortly after the arrival of the Regiment in Piraeus the Germans bombed the harbour and they succeeded in hitting a large ammunition ship, the blast from which did a great deal of damage to the harbour and to surrounding property. The blast was felt even in the transit camp. It was a timely warning of the strength of the enemy. During the few days required to prepare and load the transport at this camp, the water supply was found to be contaminated, and one Battery had several cases of minor stomach troubles, but the Regimental hygiene training overcame this quickly. The Regiment was able to move forward toward the confrontation and the defensive line in the Mount Olympus area on 9th April, 1941. This defensive line, which extended from west of the estuary of the River Varda on the Aegean Sea, in a north westerly direction to the Yugoslav border, was the position the Greek troops had to fall back to as soon as the Germans declared war on Greece on the 6th April and advanced across the border from Yugoslavia and Bulgaria. The position was known as the Aliakhrnon line. This defensive line was in a mountainous area intersected by several river valleys. One of the first formations to arrive in Greece was the 1 Armoured Brigade, which, in fact, arrived at the defensive position on 27th March. The Allied Army in Greece was under the command of Lieutenant General 'Jumbo' Wilson.



GREECE - 1941

The journey to the front, in the region of Elassen, near Mount Olympus, was via Thebes, Thermophylae, Lamia, Volos, Larissa and Elassen. During the first night of the move north it actually snowed -which surprised many.

An earthquake had occurred at Larissa towards the end of February, and the town was almost wrecked. This was followed by another on 28th February. The civilian casualties were heavy. But for the evacuation of many of the people due to previous bombing by the Italians, these would have been much worse. The people who remained to clear up the streets and rescue what belongings they could from their houses, were very angry with the Italians for the continuous bombing during the second earthquake. Col. de Guingand, G.H.Q. Middle East, was in the town during these calamities, after his reconnaissance by plane and car of the Aliakhmon Line, and was fortunate not to be killed. That would have been a great tragedy for the British Army, as eventually he became Lieutenant General and Chief of Staff of the 8 Army and 21 Army Group under Field Marshal Montgomery. De Guingand has been regarded by many as the finest Chief of Staff since Von Molke, the German strategist.

In the Aliakhmon position, the Royal Engineers Survey Unit had done a fine job under the Director of Survey, Brigadier Martin Hotine, and they provided the Regiment with a good set of maps and lists of co-ordinates. Communications from the south to the front line were meagre - only one small single line railway and one rather narrow main road. Col. de Guingand said later that, in his opinion, of the many problems he had studied during this war, he never came across one which appeared so unattractive to the Allies and he considered the military advantages to be nil. He felt that the intervention in Greece never had any chance of success.

After leaving Larissa, the C.O. went ahead of the convoy to report to the C.C.R.A. of the Anzac Corps and to ascertain the location of the R.A. Regiments and the Counter Battery Headquarters. In the meantime, the Regimental convoy had their first real experience of machine gunning from enemy planes whilst passing through a narrow defile. There was slight damage to vehicles but, fortunately, no casualties.

Regimental Headquarters, with the H.Q. Survey Section from the Survey Battery, were sited within easy reach of Corps Headquarters. The Survey Battery, with the attached No.1 Survey Troop, were deployed in the forward area to provide bearing pickets for the British, Australian and New Zealand Gun Regiments, a number of which had served in the earlier Desert campaign.

Dispatch Riders (Don R's) used to take survey data back to the survey troop computer centre and to deliver survey information to the gun regiments, climbed with the survey parties to considerable heights and travelled over long distances. It was rough going all the way, but the training experience in Durham and Northumberland was paying dividends for all.

From the magnificent viewpoints the flash spotters of the Flash Spotting Battery, which had deployed in the mountains, had an easy task in picking up flashes from the muzzles of enemy guns. Our gunners, however, were dive bombed, machine gunned and bombarded throughout this period in the first line of defence. Unfortunately, the R.A.F. were also thin on the ground - or should it be thin in the air? - at this time. Counter Battery Headquarters was also dive bombed and machine gunned and had their lines of communication cut quicker than they could be repaired. The pressure of the enemy was enormous, both in the air and on the ground, and was such that a withdrawal had to be made from the Mount Olympus area to Bralos Pass. This withdrawal from the Aliakhmon Line commenced on the 11th April. The Bralos Pass ascended from the plain to a height of some 4,000 feet in a very short distance and the road was straight for several miles, which made it difficult to take evasive action from the attacking planes. The Regiment deployed in the difficult mountainous area over-looking the plain with the same Gun Regiments that had been operating in the Mount Olympus area. Regimental Headquarters moved to an area in the vicinity of Anzac Corps H.Q., the rest of the Regiment moving further south. This line, known as the Olympus-Servia Line, was occupied on 14th April.

A survey process, known as a measured base, was used to link up the survey carried out in individual gun areas with the permanent trig, points in the mountains above the Pass. Observers had again to climb mountains and bearing picket data was delivered by runners and Don Rs to the gun regiments. The observers remained in the mountains for two days at a time and this made communication with Troop Headquarters extremely difficult. They were under constant attack from the air and from shelling by the German artillery. However, they persevered in their task and fixed their trig, stations in accordance with the orders that had been issued. The surveyors measuring the base line on the long, straight road, were bombed, blasted and machine gunned by fighter planes throughout the daylight period, but they managed to complete their task by nightfall. Before this defensive line could become fully operational, however, the enemy again attacked in force with all their weight of armour and air strike and another retreat to the south was ordered, this time for evacuation. In the Larissa area the Germans maintained a 24 hour watch over the airfield and our planes were shot down almost as quickly as they got off the ground. On the 17th April, Yugoslavia capitulated to the Germans, which released more enemy forces to support their attack on Greece. By the 18th April, the Allied forces had fallen back to Elasson and on 24th April the Greek Government finally capitulated to the Germans - the evacuation of the British and Australian forces commencing on that day.

The C.O. was given verbal instructions about evacuation by a staff officer from G.H.Q. Written orders were immediately distributed to the Battery Commanders, Troop Commanders and others in remote forward areas. They were strict: vehicles in fours and convoy discipline to be maintained as much as possible. The rendezvous was half a mile on the Corinth side of a T-junction on the main road to Athens, Athens being to the east and Corinth to the south west. Battery Commanders and convoy officers were to report to Regimental Headquarters on the right

of the road leading to the Corinth Canal Bridge, vehicles to keep in convoy formation, dispersed but ready for the next move from the Regimental Area.

Having selected the camp site, the C.O. and Adjutant proceeded to Athens and contacted District Headquarters, the formation responsible for the administration of the area. The Officer in Charge knew the situation in the city and made it clear that units should not assemble near Athens. The C.O., given the addresses of Movement Control and the R.E. Survey H.Q., headed for the centre of Athens. Thousands of people were milling around, as it was known that the Greek army could no longer continue the battle against the German forces who could cut them off by a right hook. The C.O. and Adjutant located Movement Control and were informed that the evacuation port was to be Navplion. They contacted R.E. Survey Headquarters to arrange for the sound ranging recorder to be flown to G.H.Q. Headquarters, Cairo. In the end, the C.O. had to be satisfied with taking the tuning fork, the most important part of the equipment, and discarding the rest.

The Staff Officer, who gave the C.O. instructions about the evacuation, had stressed that only light apparatus, such as theodolites and flash spotting heads with tripods complete, should be allocated to personnel, recorded and carried on board. Although there was potential danger to others on the ship if too much equipment was taken on board, the C.O.'s instruction about taking what equipment could be carried by each member of the Regiment was accepted by all. One bombardier in the Regiment, Bdr/Sur D.M.H. Jackson, a Jamaican, carried a rifle, a Lewis gun and a flash spotting instrument complete with tripod as well as a small cooker! It was recognised by all that the battle would continue in Egypt and elsewhere and everybody approved the C.O.'s foresight in salvaging as much of the technical equipment as possible, appreciating that the Regiment must be fully equipped with the necessary survey gear to continue to carry out the role for which it was created. Lewis guns, revolvers and Boyes anti-tank rifles were also carried by individuals to Crete and on to Egypt.

The C.O. and the Adjutant (Captain Jock Curtis, formerly Regimental Sergeant Major, one of the best regular soldiers and greatly admired by all) returned to the T-junction north-west of Athens about 8 p.m. This was on 22nd April. Most of the Regiment had by then reported and been provided with a hot meal. The C.O. called Battery and Troop Commanders and the Quartermaster to a conference and it was decided to rest and await any stragglers until 2 am. the following morning, when the Regiment would move for the port of Navplion, thus giving about two hours to get over the bridge spanning the Corinth Canal before daylight.

Don R's were still operating at the T-junction and to the north to bring in vehicles which had been held up by the enemy machine gunning and bombing, as well as by congestion on the narrow road. A railway line, which was still operating, crossed the road to Corinth Bridge in sinuous curves. This resulted in the convoy being held up on three occasions by the same train which did not slow down at all, although ample whistle warnings were given.

An officer of a small, well disciplined Royal Marine Unit, that had been in the forward area, requested permission to join up with the Regimental convoy until beyond the Corinth Bridge, where he pulled out at dawn to rest. The Regiment continued on its journey to the edge of a lake at Navplion, a beautiful little village where there was good cover under the trees. The next time the R.M. officer was encountered was on the S.S. "Delane" in Crete Harbour, the ship that was to take the Regiment to Alexandria.

Most of the convoy managed to get to Navplion without much difficulty, passing through Argos (The Golden Fleece) and Lason, but others, arriving late at the T-junction, were bombed and machine gunned. Unfortunately the C.O.'s Don R, Gunner Thomas, who was gathering up stragglers, was caught in a low-flying enemy attack and a pile up of transport on the road. He had his motor cycle wrecked and could not catch up with the Regiment. He was taken prisoner - a most brilliant rider and a great loss.

The Regiment settled down under cover of the trees but, at that time, bombing was not intense as

the German Air Force was concentrating on attacking convoys north of the T-junction. Chaos seemed to reign in the embarkation area about how the embarkation was to be organised. A Lt. Colonel, supposed to have come from one or other of the Corps or General Headquarters, told the C.O. that the Regiment had to move four or five miles from the area where it was to bivouac on the edge of the Gulf of Argolis and close by the harbour. As he did not produce any credentials, however, his instructions were ignored and the destruction of the transport was commenced in accordance with orders received. To the surveyors the loss of their Austin 8 cars was possibly the most poignant. These vehicles, although most unsuitable for battle conditions, had done sterling work and the survey pairs had become quite attached to them. Their eventual replacement by the ubiquitous jeep was, in the outcome, welcomed by all.

Soon afterwards an able Staff Officer from Movement Control, a Guards Major, came on the scene and quickly got to work and arranged a conference with C.O.s of the various Regiments regarding the embarkation, covering matters of timing, formation and the breakdown into small parties, instructions about no lights, quietness and confirmation about position on the ship and discipline on board. He did a fine job in a quiet, competent manner.

Generally, however, there was the usual confusion which largely stemmed from the fact that a ship in the Navplion harbour, which had some 500 tons of ammunition on board, was set on fire on the 23rd April during a German air raid, whilst another ship, the "Ulster Prince", which was to have carried evacuees, ran aground in taking avoiding action. The ammunition ship actually blew up as the C.O. and Major Cawthorne were making their way to a conference to arrange final details for the evacuation.

The embarkation was on a ship called the "Glennearn". Although this ship was built specially for invasion purposes, the Regiment was loaded on to it by landing craft. This embarkation was on 24th April, 1941. It was thought that the destination was to be Alexandria, but no: in the event the Regiment disembarked on the night of the 25th April at Suda Bay, Crete. As far as can be remembered, the voyage was fairly quiet; again the Navy and Air Force did a wonderful job.

The evacuation from Greece was code named "Demon". On the same day, 24th April, all Greek resistance to the enemy finally collapsed.

On disembarking at Suda Bay, the Regiment was met by a junior Staff Officer who instructed that Units should leave the harbour and go down a particular road where tea would be available, and then proceed to a nearby camp. There was no tea available and the camp was four to five miles away! This was, however, much safer from the enemy bombing and machine gunning of the harbour which frequently occurred.

The next day an Infantry Brigadier appeared at the Camp and gave orders for the Regiment to line up on a flank of the infantry defenders and anti-aircraft gunners to assist in the defence of the island. In this position it remained for four days. At this juncture, 28th April, 1941, the C.O. went on to the Area Headquarters where an Artillery Staff Officer informed him that G.H.Q. Cairo had signalled that the 4 Survey Regiment should be returned to Egypt immediately. The C.O. was informed that the Regiment would be embarking on the S.S. "Delane", which was sailing at 3 a.m. next morning. It was not possible, however, for the Regiment to be withdrawn from the defence line for this time and it was 6 a.m. before embarkation was completed. Shortly afterwards the ship was moved to the centre of the harbour and it was 11 a.m. before it set sail, along with other ships.

The C.O. was appointed O.C. troops on the ship. It was crowded, with about 5,000 persons on board and there was some chaos, with every gangway packed. Rations on the ship were taken over and an armed guard was put in charge under Lt. Burini, Quartermaster of the 4th. The C.O. broadcast a message over the ship's loud speaker for the senior officer of each unit on board to report to him at the office of the Ship's Captain. One of these was the Marine Officer who had joined up with the Regiment previously. He and his Unit were given police duties to maintain

discipline, clear the gangways and help units to their locations on the ship, which locations had been given to their senior officers. These officers were told that rations would be issued to units in accordance with their numbers and on a properly drawn up list showing names and regimental numbers, which would also be used for disembarkation of the units on reaching Alexandria. An anti-aircraft defence force for the voyage was formed consisting of some 50 Lewis guns from the Regiment and commanded by Captain Bill Wilson who had a fine time putting up a good barrage against the odd enemy aircraft during the voyage to Alexandria where the Regiment disembarked on 1st May, 1941. A short time before reaching Alexandria a belated signal was received stating that the Officer Commanding Troops must prepare a nominal roll of units in quadruplicate to be handed in on arrival.

All C.O.'s, on disembarkation of their units, were instructed to report to the Military Secretary at G.H.Q., Cairo, and rejoin their units later. Colonel Whetton reported direct to the M.G.R.A., who was delighted that the Regiment had returned with all its technical equipment and other necessary apparatus, with its manpower almost complete and ready to go into action as soon as transport could be made available.

The Regiment was directed from Alexandria to Tahag and the next day they were joined by the C.O. who was happy to see that they had settled into camp. A Major Barber and Lt. Bill Bowes, the Yorkshire and England cricketer, had made all the arrangements for reception, comfort and rest, which all so richly deserved after an exciting month in Europe during which their morale and keenness had been outstanding. Individuals could not be singled out since all had withstood the weight of the German onslaught and shown the highest courage. Thus the foray into Greece came to an end.

After the Regiment's arrival in Egypt from Crete there was an amusing consequence. The Troops, after settling down again in Tahag Camp, were given what was called Survivors' Leave (which amounted to seven days each), and, of course, they were paid. The amount of payment, however, was somewhat small, since all the Regimental records had been lost in evacuating Greece, and data about the financial state of payments to the troops were unknown. One Gunner S. Hilldrup, who in civilian life had been an important figure in the textile industry in Manchester, felt that the sums paid were not very generous, especially for leave in an expensive place like Cairo, so he decided to obtain some cash from his bank in the city and hold his own private pay parade for the troops of 'S' S.R. Troop, of which he was a member.

Later, he decided to hire a large American saloon car for his own use during his leave - which did not go down very well because at that time the transport issued to the Regiment was very sparse. The C.O. himself, for example, had only the privilege of using a 15 cwt. truck by the generosity of Middle East H.Q. The final straw came when Gunner Hilldrup was invited to spend an evening with some of his peace time business associates in Cairo, and they suggested that they should all go to Shepherds Hotel for dinner. Gunner Hilldrup said that he could not go as the hotel was for officers only. He was, however, persuaded by his friends to doff his O.R. khaki drill and to change into one of his friend's civilian suits. Unfortunately, a somewhat efficient young subaltern spotted him in the hotel and he was put under arrest. The outcome was his banishment to 'Y' Survey Troop in the Western Desert. Hilldrup was an excellent soldier, who later obtained a commission. On his first job with a gun regiment in action he was badly shot up by an enemy Messerschmitt, but he recovered from this in due course and after the War returned to continue his work in the textile industry in Manchester.

To conclude this Chapter on the Greek Campaign: although the British intervention has been considered as an ill-judged gesture to Greece, both at the time and subsequently, it did have one positive and advantageous consequence. It provoked Hitler to plunge into the Balkans, and fatally to delay operation Barbarossa, the invasion of Russia, and this involvement remained a serious handicap to him for the remainder of the War.

CHAPTER EIGHT

THE WESTERN DESERT, 1941

On the 18th April, 1941, 'Y' Troop arrived at Sidi Haneish in the Western Desert. This was just a spot in the Desert, probably originally an Arab village. There were no signs of life, other than army personnel, nor of any local habitation. At this point in the Western Desert, which was some 140 miles west of Alexandria, there was a steep escarpment which rose from the coastal plain up to the general level of the desert, some 450 feet higher. This was the general form of the topography of the desert to the western frontier of Egypt near a town called Sollum, the coastal plain varying from some 20 miles wide to only half a mile or so. At Sidi Haneish, the coastal plain was about a half mile wide. There was no visible sign of vegetation on the escarpment or over most of the coastal plain. The whole impression was most uninteresting and arid. Although there appeared to be no vegetation at all over the bulk of the area, it was surprising to find that, in the spring, the desert would come alive with minute flowers. These would only be seen if one looked carefully for them, because they were so small, only an inch or so tall. They appeared to be miniature daffodils, irises, poppies and similar flowers which seemed identical to the normal sized varieties found in England.

Where the plain met the sea there were salt flats and lagoons and some signs of vegetation and the odd palm tree. The sand along the sea coast was nearly white, which with the varying depths of the clear sea water presented most attractive colours in the lagoons which were strung along the coast. Between the escarpment and the sea was one single road - a bitumen surface carriageway some two lanes or about 25' to 30' wide - and a single track railway line.

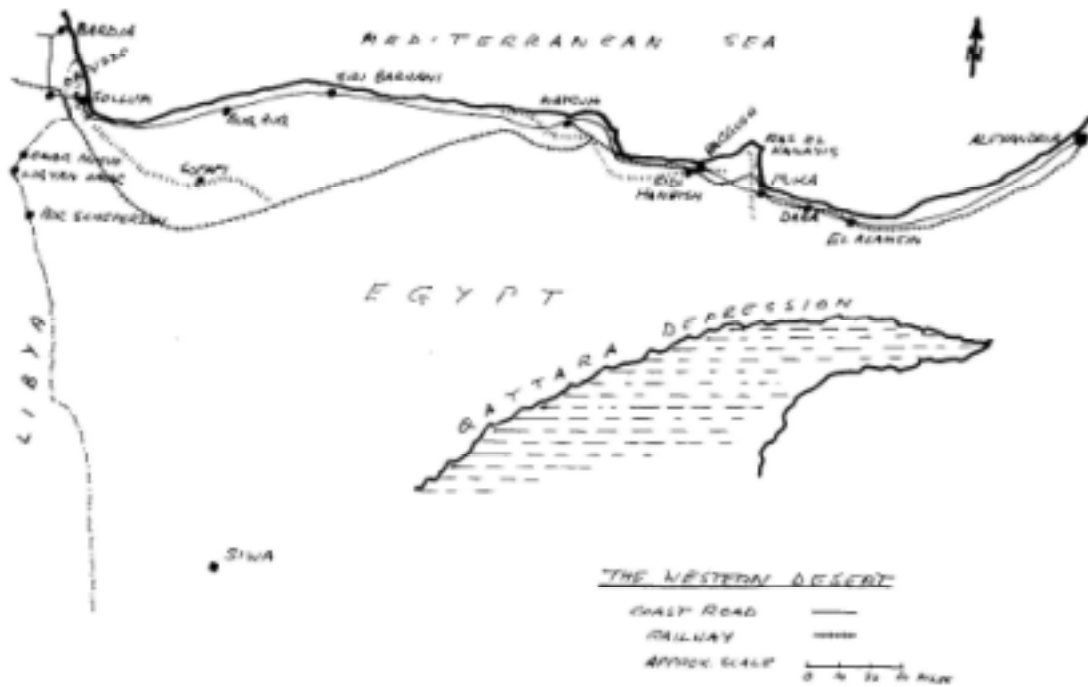
On arrival in the Desert, 'Y' Troop came under the command of the 6 Division of the Western Desert Force. The C.R.A. of the Division was Brigadier Myburgh who had been C.B.O. in Eritrea and had earlier commanded the 25 Field Regiment R.A. After General Wavell's spectacular push westwards and occupation of Cyrenaica by the Western Desert Force, now christened XIII Corps, the Allies thinly held a defensive line at El Agheila. The situation was most unstable, the advance having extended the supply lines to the limit. Moreover the comparative meagre forces had been further depleted to meet commitments in Greece. In consequence, a policy was adopted involving setting up defensive boxes along the north coast of Libya and Egypt.

As expected, it was not long before the more deadly half of the enemy combination - the Germans - appeared in the Desert, under command of General Rommel - a name all who served in the Middle East will remember and who will go down in history as a dashing and resourceful General. His forces - the elite Afrika Korps, comprising the 5 and 15 Panzer Divisions - having arrived in Tripolitania, attacked the thinly held British positions at El Agheila on 31st March, 1941. The Italian 5 Light Division was with the 15 Panzer. The following day, Agedabia fell.

Very quickly the German attack developed into a rapid advance, Benghazi falling on the 6th April and Bardia on 12th April, until Rommel arrived at the Egyptian/Libyan frontier on the 30th April, leaving Tobruk, one of the defensive boxes, encircled but still defended. This became well known as the famous Tobruk Garrison. Rommel's advance halted at the frontier and such was the situation when 'Y' Troop arrived in the Western Desert.

Soon after their arrival in the Desert, 'Y' Troop embarked on survey work which commenced with the Baggush Box, one of the defended localities, at Sidi Haneish. This was followed, on the 2nd May, by the surveying of the defensive area of Matruh, manned by the 7 Australian Division. This work was undertaken from the Troops' camp at Sidi Haneish. Survey work was also undertaken in the El Alamein area. General topographical surveys followed in the area until 14th June, when the Troop left Sidi Haneish for Matruh. Matruh was different from the other places in the Desert. Here was ample evidence of a thriving holiday resort; many fine houses, clearly rich Egyptians'

holiday homes, and an hotel - where, it was believed, King Edward VIII stayed when he visited Egypt as Prince of Wales. In addition, there was a commodious Egyptian Army Barracks. All the buildings had, of course, been abandoned, even the barracks, and many were badly damaged by the fighting that had occurred. At Matruh there was a useful harbour and quay from which supplies were shipped to the Tobruk fortress.



On arrival in the Matruh defensive area, more detailed surveying was undertaken by 'Y' Troop for the 4 Indian Division, which had returned to the Western Desert after the capture of Massawa in Eritrea.

One day an advance party of Queen Alexandra's Imperial Military Nursing Service (QAIMNS) came to the Desert - in advance of a group of sisters who were to man XIII Corps' casualty clearing station. One young staff officer from W.D.F. H.Q. was instructed to take them on a short trip around places of interest and he took them to the beach at Mersa Matruh. Here the bathing beach was enclosed in a large lagoon where the colours of the sea from the reflected sunlight on the white sand below were delightful, in the shades of the deep blue and purple ranging to pale turquoise and green. He was showing the sisters the scene when he suddenly realised that the bathers were all stark naked. He was covered with confusion but he need not have been, the sisters took it all in their stride and thoroughly enjoyed the situation.

The position on the frontier had not changed significantly since Rommel's arrival there at the end of April but, on the 15th May, the 7 Armoured Division with 22 Guards Armoured Brigade, attacked the enemy, capturing Sollum, Capuzzo and Sidi Azeiz, all just on the Libyan side of the frontier. The Germans, however, re-took all these positions on the following day, the Allies retiring to Halfaya Pass (more commonly known as Hell Fire Pass). This operation was under the command of General Gott and, somewhat prophetically, had been given the code name "Brevity".

On the 27th May Rommel attacked Halfaya and the Allied troops retreated on to the plain between the escarpment and the sea.

The position here was stabilised until 15th June, when the British attacked once again. On this date, "Operation Battleaxe" was launched. The Allied forces involved were commanded by Lt. General Beresford Pierson, who had commanded the 4 Indian Division in Eritrea, and included the 7 Armoured Division under Major General Creagh, the 4 Indian Division under Major General Messervy, and the 22 Armoured Brigade. This operation was designed to recapture Halfaya Pass, but after some ding-dong action - when the German 88mm ack-ack guns converted for ground were first encountered - the Allied forces withdrew to their original positions on the 18th June. The armour in the Allied forces for "Battleaxe" comprised some 200 tanks, mostly the obsolete Valentines, which were still armed only with a two-pounder gun. These were useless against Rommel's 88mm guns and, on the first day, some 100 of the tanks were destroyed, long before they could get the enemy within the range of their own two-pounders. General Wavell flew up on the second day of the offensive and, having assessed the situation, ordered that the Operation should be discontinued. No component of the Regiment was represented in either of these two operations.

It was shortly after this, on the 5th July, 1941, that General Wavell left the Middle East to go to India, and he was replaced by General Auchinleck, who came from India. On the 17th July, 'Y' Troop moved back to Sidi Haneish to continue their surveys for the 4 Indian Division. Survey data was also supplied to the South African Division, the 9 Australian Division and the Polish Artillery, which formations were all now operating in the Western Desert. An interesting set piece survey was done for the Australian Division which consisted of setting up gun positions and targets on an artillery range which had been laid out for the Division at Matruh. The whole job was completed in four hours, much to the amazement of the Australian Divisional Artillery H.Q.

The next move of 'Y' Troop was to Sidi Barrani - another famous Desert name - to undertake survey work for Colonel Helby, commanding the Ack-Ack Regiments in this area, and for other field regiments. After completing these surveys, the Troop moved back on 6th September to Baggush. The survey undertaken for the Ack-Ack Regiment was only to locate the individual troops so that the anti-aircraft cover would be properly organised. It was not for the purposes of using the 3.7 A.A. guns in a ground role as the Germans had used their 88mm guns. Although it was believed that the British 3.7 gun was superior to the 88mm, it was rarely used for anti-tank purposes, and then only in the later stages of the desert campaign.

On the 14th September Rommel launched a limited offensive on the frontier. This, however, did not make much progress and Rommel withdrew within 24 hours. The code name given to this attack by Rommel was "Mid Summer Nights Dream"!

On the 16th September 'Y' Troop came under command of the 4 Indian Division and was ordered up to the Buq Buq area, to report to the 31 Field Regiment R.A. The task which was allocated to the Troop here was to undertake survey work along a defensive line to be established by the 4 Indian Division from the escarpment to the sea, some 30,000 metres in length. This position was to be held by the 11 Brigade (Rajputana Rifles, Camerons and Marhattas) with the 31 Field Regiment and two troops of the 7 Medium Regiment in support. At this time a New Zealand Survey Troop under a Captain Davies was attached to 'Y' Troop, which assisted in this work until, on the 2nd October, they returned to the Delta.

At about this time Colonel Claud Goulder, C.O. of the 31 Field Regiment, asked 'Y' Troop commander if it would be possible to use a star as a reference point for a night shoot. He wanted to take one of his gun troops forward of the mine field (which formed the main defence of the position being held) under the noses of the Germans at Capuzzo and carry out a sniping shoot during the hours of darkness. The usual practice for firing at night was to fix a lamp on the aiming point to lay the guns on the required bearing and, of course, in the position now proposed this was not practicable. Captain Ogden, with his computing centre, examined this idea and, after

successful trials, arranged for the star Alpha Auriga to be used for this purpose. The bearings to this star, at five minute intervals over the one hour period from 20.30 to 21.30 hours, were calculated. In case the star became obscured by cloud a similar set of bearings were calculated for the planet Mars. This was tried out with 'D' Troop of the 31 Field Regiment on the 30th September, and it seemed to work splendidly. The actual shoot took place at 21.15 hours on the 4th October. Colonel Goulder considered it a success - no doubt the enemy were very much surprised and, it is hoped, hurt!

The next job of interest was one given to 'Y' Troop on the 7th October by Brigadier Latham, now C.R.A. 4 Indian Division. This was to erect and fix cairns in the no-man's land which lay between the allied forward defended localities and those of the enemy. At this time, the general situation was fairly static and the Allied Forces maintained patrol activities in this no-man's land area which extended from the Allied position in the vicinity of a valley called Sofafi to the enemy defended positions in the Sidi Omar area, a distance of some 50 miles. The patrolling was undertaken by two groups of mixed forces - one called Little Sister on the seaward, or northern side, and the second, called Little Brother, on the landward side. The two groups remained in the no-man's land continuously, the content of the two nomadic forces continually changing. The patrols, during the hours of daylight, ranged widely over the area, looking for suitable targets and doing their work of reconnaissance and intelligence, each component of the group being given a rendezvous point at which to assemble at dusk. On assembling, the group would move off under the officer commanding, on a fixed bearing and for a defined distance. When this position was reached, the whole group would leaguer for the night, the soft vehicles inside a circle of tanks and guns. Guards were posted and the group bedded down after a meal. At dawn the leaguer would break up and everyone would set about his daily job over the face of the desert, with, of course, information about the next evening's rendezvous. The daylight patrol work was given the name "Swanning". At this time it was learned through intelligence sources that the officer with the Afrika Corps responsible for their survey was Dr. Dickfus.

On the 8th October, 'Y' Troop left its camp in the Buq Buq area and made camp at Sofafi, where boards were prepared for erection on the cairns. These boards would give information as to the co-ordinates of the cairns, the object of which was to assist patrols -and later the advance guards of the forthcoming attack - to locate themselves in the Desert. After lunch on the same day, the Troop Commander, with 'D' Survey Section under Lt. F. Hamer, left for the Little Sister patrol, and 'C' Section, under Lt. D.A. Burnett, departed for the Little Brother patrol. The rendezvous with both patrols were made the same evening and work started the following day.

'D' Section was attached to 'A' Squadron of the armoured cars of the 4 South African Regiment. This Squadron was under a Major Whitley. A similar arrangement was made for 'C' Section in the Little Brother area. The erection of cairns and the survey field work in both areas was completed by 12th October and the Sections returned to Sofafi, where work began on computing the field observations. The boards for each cairn were then marked with the co-ordinates, the height above sea level and with a pet name. On the 15th October the Sections returned to the Little Sister and Little Brother areas and the boards erected on the cairns. The Troop Commander reported to the H.Q.R.A. 4 Indian Division on the 16th October, that the job had been completed. Lists of the cairns with the survey information were issued by Divisional H.Q. to all units operating in the area.

There was an interesting moment in the Little Sister leaguer one night. A troop of Australian gunners had not made the evening rendezvous and, when the leaguer was set up, radio contact was made with the troop. After some discussion it was decided that the troop should fire a gun and, by taking a bearing on the flash, the leaguer commander would then be able to give the troop commander a back bearing on which to travel to reach the leaguer. The troop was then given the order to fire a round - and there was a tremendous explosion! The lost troop was within about 50 yards of the leaguer!

The vastness of the desert was forcibly impressed upon those working with the Little Sister and

Little Brother patrols. One felt like a solitary billiard ball on an immense billiard table, and it was surprising that enemy aircraft passing overhead did not usually take any hostile action. This was either because they were on more important tasks or because the trucks were more difficult to see than one imagined. However, on one or two occasions, the enemy planes did take some interest, these being generally fighter planes, and a rather dangerous game of cat and mouse had to be played out. If one kept one's eye on the plane, it was possible to see it head into a dive and, when it was so committed, to turn the truck, travelling at speed, at right angles to the dive. It was possible thereby to keep out of the line of fire, the plane going so fast that it could not change its direction. The plane would then rise at the end of its dive and circle, taking another bead on the truck, and avoiding action could be taken again. Provided one kept this up the pilot would eventually become worried about running out of fuel and would fly off. On none of these occasions did the enemy hit one of the Troop's vehicles.

After this cairn building operation, further survey work was carried out for the 68 Medium Regiment R.A. and star data provided for sniping activity carried out by the 31 Field Regiment and by the 4.5 guns of the 68 Medium Regiment.

About this time, 'B' Flash Spotting Troop came into the Desert and a flash spotting base was established on the coast, facing Sollum, the survey work to establish this post being undertaken by 'Y' Survey Troop. The arrival of the flash spotting troop enabled a more sophisticated exercise to be undertaken with the sniping guns, which involved surveying gun positions in the Little Sister area. This was done on this occasion with the 1 Field Regiment, which was commanded by Lt. Col. Dobree. In this operation, the troop commander of 'B' Troop, Captain L.W. Bailey, had his first taste of the Little Sister patrol operation. Lt. Wilson, also of 'B' Flash Spotting Troop, acted as liaison officer between the flash spotting troop, H.Q.R.A. 4 Indian Division and the gun regiments involved in this work.

Located in various parts of the Desert were cavems, or cisterns, locally called Birs, which really were reservoirs for water originally built by the Romans. 'B' Flash Spotting Troop occupied one of these cisterns for its headquarters of the Sollum base. Unfortunately there was a rainstorm and water quickly filled the cistern, flooding out the H.Q. Worse, the petrol in the pressure lamps floated on the surface of the rising flood and the whole place burst into flames. Although there was some singed hair, the H.Q. staff were most fortunate not to suffer any serious casualties.

During this period, Middle East H.Q. had been preparing for the next assault. This had the code name "Crusader". It was to be a much larger affair than any previous battle in the Desert, and the Allied attacking forces were to comprise two Army Corps, XIII Corps, made up of the 4 Indian Division, the New Zealand Division and 1 Army Tank Brigade, and XXX Corps, made up of 7 Armoured Division, 4 Armoured Brigade, 1 South African Division and 20/22 Guards Armoured Brigade Group. XIII Corps was under Lt. Gen. Godwin-Austen and XXX Corps under Lt. Gen. Norrie. The name of the allied forces in the Western Desert was now changed from Western Desert Force to 8 Army, which came under command of General Sir Alan Cunningham, fresh from his victories in East Africa. The R.A.F. was under command of Air Vice Marshal Coningham. Surprisingly, the naval forces in the Mediterranean, with headquarters in Alexandria, were commanded by Admiral Sir Andrew Cunningham!

On 17th November, 'Y' Survey Troop, broken down into two parts, reported to 25 and 31 Field Regiments to take part in this operation. The static period in the Western Desert was now to come to an end.

An amusing incident occurred shortly after 'Y' Troop established themselves near El Alamein in May, in a camp close to the beach. This was during the evacuation of Crete. On the morning of the 29th May, a small naval vessel appeared some three miles off shore, apparently grounded on a sand bank. Two sailors came ashore in a rubber dinghy and asked directions for Alexandria. The sailors said that the ship had been badly damaged during the evacuation and that there were a number of wounded on board. The sailors were put on a truck going to Alexandria. It was

learned that the vessel was a submarine chaser No.KOS21 which had sailed from Suda Bay. In view of the wounded on the ship, 'Y' Troop decided that they should try to give some assistance. A search was instigated to find a vessel of some sort and, eventually, an old ship's lifeboat was found further down the coast. This was loaded on to the 3-ton lorry and brought to the camp. Food and medical supplies were assembled and volunteers asked for to man the expedition. These consisted of Sergeant J.S. Thomas and Gunner N. Hope - to be the two oarsmen - with the Medical Orderly. Lt. Burnett and Captain Ogden were also included in the crew. Lt. Burnett was to be in the bows with a torch to signal that assistance had arrived (it was getting dark before the expedition got under way), with the Medical Orderly in the stern with Captain Ogden, who armed himself with a ladle (cook's large) to do any necessary baling. Sergeant Thomas, a product of a public school, offered Gunner Hope his choice of being either bow or stroke - to which Gunner Hope retorted in suitable Geordie!

The boat was loaded and the rest of the Troop assisted in the launch. The sea was fairly rough at this time and the first breaker encountered drenched everyone and partly filled the boat. The crew, however, pressed on and after two or three breakers there was so much water in the boat that Captain Ogden was losing ground with his baling. When it was clear that the water within the boat was at the same level as that outside, the expedition was abandoned. The order was "About Ship" and return to land, amid much floating debris, including a number of loaves of bread. The following day the Royal Navy had arrived to assist the stranded ship and it was apparent that the sea was extremely rough off shore, the large R.N. motor launches being tossed all over the place. If the 'Y' Troop expedition had gone much further, no doubt the boat would have foundered with all hands!

The trouble with the rescue boat was that it had lain on the beach for such a long time that the timbers were completely dried out and, when it was launched, it just began to sink. After its wetting, however, it provided a first class addition to the Troop's daily swim in the Mediterranean!

Reference had already been made to the interesting flora of the Desert. With regard to fauna, there appeared to be only two species - the jerboa, a desert rat which became the insignia of the 7 Armoured Division and the 4 Lt. Armoured Brigade, and the gazelle - adopted as the insignia of XIII Corps. When circumstances permitted the gazelle would be hunted to add some fresh meat to the monotonous army diet. This was done from an 8 cwt. truck, crammed with men armed with revolvers and .303 rifles. The truck would be driven into the depths of the desert to the south of the escarpment in the hope of spotting a gazelle. If one was seen, the pursuit was on. A really exciting ride resulted, especially since the gazelle could really shift and the vagaries of the desert surface provided serious obstacles to the chase. If, as was frequent in the desert, one ran into an area covered with solid tussocks of tough, reedy grass, or into soft sand, the gazelle escaped, but occasionally one was downed by a shot from the truck. The shooting was itself somewhat hazardous, being rather wild and at speed in a truck from a number of excited hunters. In addition to the wild animals there was, of course, occasionally to be seen the odd camel or donkey in a small caravan of Arabs. These were most infrequent in the desert and later in the campaign disappeared altogether.

On the subject of food, the fare was monotonous. The staple diet was bully beef (corned beef) and biscuits, with which the cooks worked wonders. The changes were rung between cold bully beef and biscuits, bully beef and biscuit stew and bully beef fritters (with the bit of flour occasionally received). Breakfast was graced with a melange called biscuit porridge! If one was camped sufficiently near to the Delta, a weekly truck was sent to Alexandria to stock up with fresh fruit and vegetables. On one occasion, 'Y' Troop Commander requested the extra ration party to purchase a couple of ducks for the officers' mess. When the truck returned to the camp the ducks were found walking about the back of the truck. Food "on the hoof" as it were! There was an amusing sequel to this. The Troop cook, Gunner Norman Hope, took charge of the ducks and kept them well fed. The day came when Captain Ogden requested Gunner Hope to prepare one of the ducks for dinner. Gunner Hope, by this time, had become so attached to the two that he could not bring himself to wring the neck of one of them. Sergeant Forest obliged - and a rare

good meal was prepared. The trauma of the event, however, was such that Captain Ogden could not ask Gunner Hope to execute the second duck which, in consequence, remained a Troop pet until it eventually expired!

Variety in the official rations was provided by the occasional tin of bacon (very tasty when received but, for some unknown reason, it was interlaced with greaseproof paper - the lot being eaten!) or a tin of plum jam. Tea, sugar and tinned milk were standard issue and the proverbial brew-up or cuppa kept one and all going! Occasionally Italian rations were captured, which added a touch of Cordon Bleu to the meals. Later the compo ration appeared. This was originally an American ration and contained such delicacies as tinned beans, tinned fruit, chocolate and tinned steak and kidney. This was a great improvement.

Water was, of course, scarce in the desert and, frequently, the ration was one pint per man per day. When it dropped to this level, everyone began to look a bit scruffy, sporting week old beards! So far as bathing was concerned the proximity of the sea was fortunate, a facility of which full use was made.

The troops quickly adopted the 4 Indian Division technique of keeping water in porous bags or earthenware containers, called chargules and chatties. The evaporation through the coarse cloth or porous earthenware kept the water beautifully cool, even in the hottest weather.

During this static period in the Desert, the other components of the Regiment, since returning to Egypt from the Greek Campaign, had been re-equipping with transport and other requirements. 'X' Survey Troop, under Captain Tommy Day, had been carrying out survey work in the Delta area, which included checking range finders for anti-aircraft gunners in Alexandria, as well as in other positions. This was effected by aircraft flying round in a large circle dropping flares, which were sighted and intersected from fixed positions on the ground. The work was done over a number of nights and the results averaged to provide a correction formula for the range finders.

Another important task carried out during that summer was an extensive survey of the area between Alamein and the Qattara Depression, carried out by 'X' Troop and Survey Battery H.Q. Survey Section, together with a South African R.E. Survey Company which was also operating in this area undertaking detailed topographical surveys for map making. There was close liaison between the units of the 4 Survey Regiment throughout these operations, which were under the overall command of Major Jock Curtis, who had now taken over command of the Survey Battery. These surveys were of considerable value at Alam Haifa later in September, 1942, and in the subsequent battle of El Alamein.

In June, 'A' Flash Spotting Troop and 'R' Sound Ranging Troop sailed from Mersa Matruh to support the garrison holding Tobruk. This group was under the command of Major Kellett, the Flash Spotting Battery Commander and their exploits are described in the next Chapter. At this time Major Cawthorne had become Second in Command, Major Flowerdew being on sick leave.

During this period, arrangements were made for the majority of the troops to take a short leave back to the Delta. This was enjoyed by all - they arrived fighting fit in Cairo or Alexandria and, after a week, staggered back to the Desert to recuperate! Many places will be recalled by those who visited the Delta - such places as Shepherd's Hotel, the Continental Hotel, the Bardia, the Mena House Hotel, Groppis, the Turf Club, the Gezira and Heliopolis Sporting Clubs in Cairo and the Cecil Hotel in Alexandria. Apart from fun, of course, there were also many items of interest to see - the dead city, the mosques and the pyramids of Giza at Mena.

Health of the Troops in the desert was exceptionally good. There were, however, one or two complaints peculiar to desert life, the most common being skin eruptions known as desert sores. These most frequently came from over exposure to the sun - newcomers from U.K. being the most susceptible. But the basic reason for their development into a serious complaint was the limited diet provided by the standard ration issue. As soon as one returned to the Delta for a spot

of leave and began to enjoy fresh food again, the sores quickly disappeared. Other complaints were jaundice and short attacks of a kind of dysentery - locally called "Gippy Tummy" - which attacked nearly everyone, particularly after a sand or dust storm, no doubt due to the germ laden desert dust everyone swallowed during the storm. Jaundice could become serious, sufficient on occasions to justify repatriation to U.K., but usually disappearing once the patient obtained a better diet.

Mention should be made of the rather morbid facility provided for officers at the Field Maintenance Centre at El Daba. This was officially signposted as the "Dead Officers Shop" where the effects of deceased officers were for sale.

CHAPTER NINE

THE TOBRUK FORTRESS

This chapter deals with the garrison in Tobruk, which commenced in April 1941, when Rommel surrounded the port, and continued until November, 1941, when contact was made with the 8 Army during the "Crusader" Operation to be described in the following chapter. In the Tobruk garrison the 4 Survey Regiment played an important role.

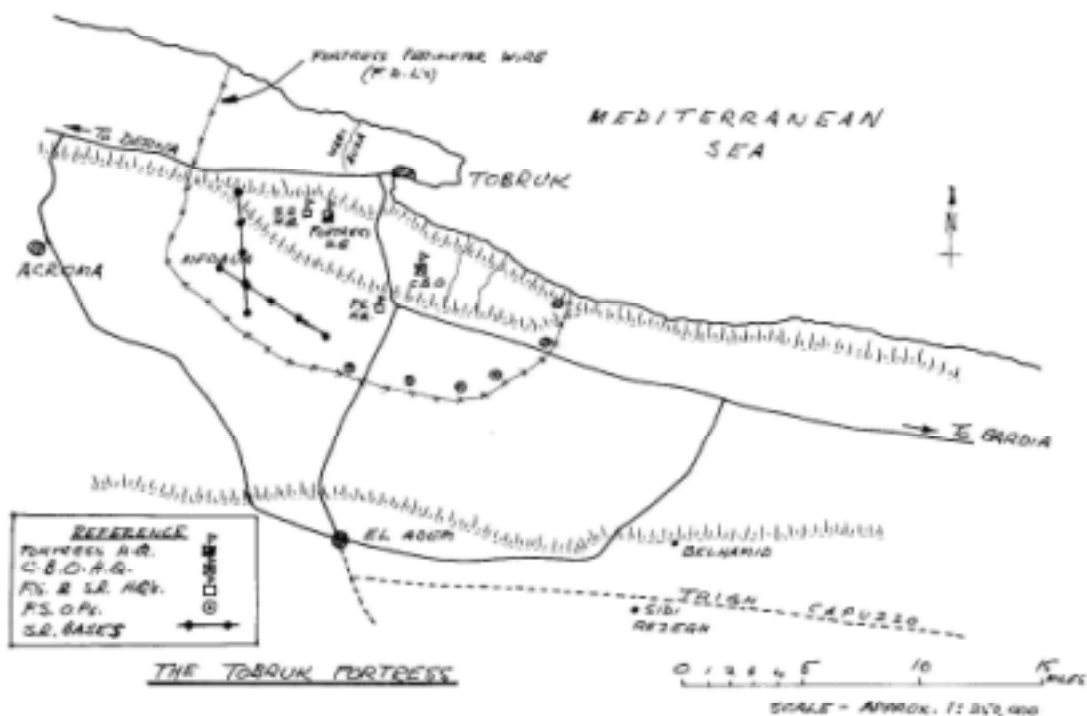
The fortress was garrisoned by the 9 Australian Division with 18 Brigade of the 7 Australian Division and other supporting troops under command of Major General L. Morshead. Brigadier L.F. Thompson was the Division's C.R.A. and Major Fryett the Counter Battery Officer. In addition to the Australian Field Regiments the Division was supported by the 1, the 104 and 107 Regiments of the Royal Horse Artillery.

From the moment the Tobruk garrison was encircled by Rommel, on the 11th April, 1941, one of the enemy's main objectives was to harass and cut off the supply of ammunition and other vital stores to the beleaguered garrison by constantly shelling the harbour. The only means whereby supplies could be delivered was by sea by the Royal Navy, and enemy shelling was beginning to have a serious impact on the ability of the garrison to continue. It was, therefore, decided that, in order to improve the effectiveness of our artillery fire in neutralising this enemy activity, and in general harassing the enemy, the garrison should be reinforced with a survey group. In consequence, 'A' Flash Spotting Troop and 'R' Sound Ranging Troop, under command of Major L. Kellett, the Flash Spotting Battery Commander, embarked on HMS Water Hen on 2nd June, 1941, at Mersa Matruh and sailed at 12 noon for the Fortress. Flight Lieutenant Bradshaw and his R.A.F. Meteorological Station accompanied 'R' Troop. This ship was attacked by enemy aircraft at about 2000 hours and, during this attack, Bombardier/Surveyor J.A. Smith of 'R' Troop fell through an engine room grating into a ventilator fan and was killed.

Arriving at Tobruk at 2150 hours, the two Troops were disembarked and went to a staging camp at Wadi Auda, Major Kellett reporting to R.A. H.Q. of the Fortress. This was followed by a detailed reconnaissance of the perimeter by Major Kellett, Captain T.W. Slater, commanding 'A' Flash Spotting Troop and Lieutenant W.W. Wilson, with Sergeant Thompson and L/Bdr. McGregor. Major R.G. Loder Symonds of the 1 R.H.A. accompanied this recon party to describe the situation. During the recon, on returning from one of the 1 R.H.A. O.P.s, the party was shelled and Major Loder Symonds and Major Kellett were both slightly wounded.

At the same time another party under Captain J.C. Balfour, commanding 'R' Troop, also reconnoitred the perimeter. The outcome of the reconnaissance work was that the sound rangers deployed a sound ranging base facing west and 'A' Troop deployed a flash spotting base looking south and south-eastwards. It was from these two sectors that the main enemy artillery fire was coming. The ground topography determined the deployment of the two Troops. The enemy guns in the south-western sector were concealed in a deep hollow which made flash spotting virtually impossible and, therefore, this area was allocated to the sound rangers. Elsewhere to the south-east and east, the country was more favourable to flash spotting.

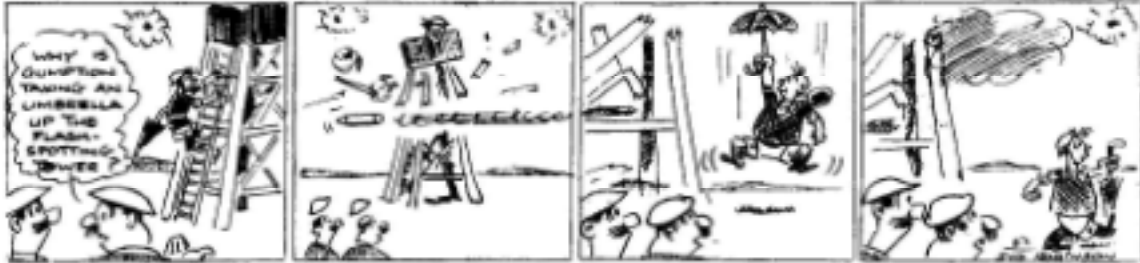
Captain Balfour had difficulty in finding a dust-proof H.Q. - a necessary requirement for the somewhat delicate sound ranging equipment. Initially he established his H.Q. north of the junction of the Bardia and El Adem roads on the edge of the second escarpment. Soon, however, he moved into a cave near the Derna Road and close to Fortress H.Q. This enabled his H.Q. to enjoy electric lighting from the Fortress H.Q. generator. Signal wire was in short supply in the garrison and the C.R.A., Brigadier Thompson, gave 'R' Troop priority in the allocation of this scarce commodity because he considered sound ranging to be of prime importance.



During the early part of both Troops' Activities, each was in direct contact with gun regiments. 'R' Troop was with 1 R.H.A. and 'A' Troop was with a troop of 60 pounders of the 2/12 Australian Field Regiment with Captain Oliver as liaison officer. This arrangement enabled very close co-ordination to be achieved in neutralising the guns shelling the harbour. Within seconds of the flash of an enemy gun it was possible to retaliate and quieten it - thus enabling the discharge of vital supplies to continue uninterrupted.

During June and July a number of flash spotting bases were established, some using gunner O.P.s and all in close liaison with the gun regiments. In particular, this liaison related to the 104 R.H.A. and, as already mentioned, to the troop of the 2/12 Australian Field Regiment which was equipped with 60 pounder guns - somewhat ancient but effective counter battery artillery. When the gunner O.P.s were used, it was only possible to operate during hours of darkness because the rather large flash spoiling binocular theodolites would have been easily observed by the enemy during daylight.

It was in Tobruk that Major Kellett conceived the idea of using towers for flash spotting operations- the flat ground not providing very good vantage points with a wide field of view. The towers were constructed by the Royal Engineers in tubular scaffolding and were some 50ft - 100 ft high. On top of the scaffolding, heavy balks of timber formed the floor of the O.P., which was surrounded by sandbags. Access was usually achieved by means of a rope ladder up the side of the tower. These towers, jokingly referred to as "Topo's Tottering Towers of Tobruk" ("Topo" being Major Kellett's nickname at the time), were located well forward. Even in this vulnerable position there was never any instance of men in a F.S.O.P. up one of: these towers being hit by enemy shellfire. The steel towers were first used on a three post F.S. base established on the first escarpment, shortly after arrival at the Fortress.



An extract from the issue of 8 Army weekly, "The Crusader", of April 5th, 1943.

From the end of July, the flash spotting base became more permanently established using towers at each O.P. This was possible by the arrival in the Fortress of the steelwork to construct further towers which had been requested. These O.P. positions were retained in action until the Fortress was relieved in November. The location of the F.S. O.P.s and S.R. bases and various H.Q.s are indicated on the map on the previous page.

On the 10th August, Brigadier (later Major General) Maxwell, B.R.A. Middle East, visited the Fortress. Before leaving, some days later, he made arrangements for the C.O. to inspect the flash spotting and sound ranging activities in the Fortress and report back to him and Lt. Col. Whetton and Major Fewkes, who commanded the Sound Ranging Battery, arrived in Tobruk on the 21st August.

The C.O. was pleased to find that both Troops were doing very well in locating enemy guns, the flash spotters' success being largely due to the effectiveness of the steel towers erected for the O.P.s. These were now being manned day and night. The general effect was that the enemy guns shelling the harbour, as well as other areas, were now being quickly located and silenced by the Fortress gunners. The flash spotters manning the towers became wonderful climbers and their morale was high.

Because of the success of the flash spotters' work the enemy began to use a so-called flashless propellant for shelling the harbour. This caused difficulty at first, but it was not perfect and the ever-vigilant instrument men continued to locate them. Towards the end of the siege 'R' Troop co-operated with the Royal Navy in neutralising hostile batteries on the western sector by ranging the naval guns onto the enemy targets. This appeared to be successful.

The sound rangers also encountered a problem which arose through the enemy adopting a technique of firing with split second delays between detonations. This, together with the very adverse meteorological conditions, made the interpretation of the sound rangers' film extremely difficult. The C.O., with Major Fewkes - a very able physicist - arranged for a log of every gun discharge to be recorded. This information was examined by a small team of experts in the sound ranging troop to overcome the difficulty. This involved close liaison with the flash spotters and the combination was successful in enabling the sound rangers to overcome the German tactics.

Shortly after Captain Balfour established his H.Q. in the cave near Fortress H.Q. he worked part of his time in the Counter Battery Office. In this work he drew the attention of the Counter Battery Officer, Major Fryett, to the build-up of enemy guns in what had earlier been empty gun pits and to the build-up

of ammunition dumps which he detected from air photographs. He had to persuade the C.B.O. and the C.R..A. to take this seriously and was finally proved correct. This enabled the necessary action to be taken to neutralise the threat.

During the siege, complications arose when the Australian Government insisted that the troops of the 7 and 9 Australian Divisions be relieved. The Prime Minister, Mr. Churchill, argued with the Australian Government not to disturb the effective defence of the Fortress - and this was important because the continued threat the Fortress presented to the enemy prevented Rommel from advancing further into Egypt. These representations, however, were of no avail, the Australians maintaining their insistence on the relief of their troops. The first move involved the Brigade of 7 Australian Division, which was replaced early in September by the Polish Carpathian Brigade. On the 25th October, the withdrawal of the 9 Australian Division commenced and this was replaced by 70 Division (earlier called 6 British Division). This Division comprised five brigade groups and one armoured brigade. When 70 Division arrived, its Commander, Major General R. Scobie, assumed command of the garrison. Brigadier Philip S. Myburgh was his C.R.A.

During the fortnight of the break-out battle, which commenced on 26th November, 1941, in concert with Operation "Crusader", Captain Balfour operated wholly with the Counter Battery Office, 'R' Troop being under command of Lt. John Kemsley. The C.B. Office at this time was located adjoining Major Kellett's H.Q.

When this was over, both Troops came under command of the 2 South African Division and were present at the fall of Bardia and of the enemy position at Halfaya Pass. They returned to Almaza, in the Delta, in January, 1942.

It should be mentioned that whilst the two Troops were in Tobruk, Lt. W.W. Wilson of 'A' Troop had to be evacuated to Alexandria suffering from appendicitis and that B.S.M. H.C. Turner, the Battery Sergeant Major, was also evacuated, his place being taken by B.S.M. M.J. Boss.

During the whole of the siege, as there was no survey troop in the garrison, the normal artillery survey work was undertaken by a small group of surveyors made up of gunners from both 'A' and 'R' Troops. This small survey party was under command of Sgt. C. Corner, who writes:

"From my own point of view, the work of great value was the complete survey of the fortress carried out by my (reduced) survey party. I feel that the sorting out of the survey and the bringing of all guns on to one grid was of the greatest importance. There was a scale error of about 1 in 600 in that part of the purple grid. A later task was the survey of A.A. positions, which I believe resulted in the correction of gaps and weaknesses in the A.A. defences. The survey was carried on intermittently throughout the siege as the occasion required and we established at least 9 permanent B.P.s, mainly in reserve and alternate positions. The survey was also done for a F.S. base manned by the S.R. Survey Section and F.S. personnel, used for the calibration of much worn 25-pounders, resulting, I believe, in a definite improvement in the accuracy of the shooting. This base was located parallel to the coast, east of the harbour. The Sound Ranging survey section also provided frequent reinforcements for the hard-pressed F.S. posts. During the final breakout, survey parties from both F.S. and S.R. did quite a lot of useful work in the corridor, fixing B.P.s for forward gun positions - often before the guns were dug in.

Of the microphone bases I can give only approximate data. Our first base was on the El Adem front, facing south and straddling the El Adem road - 5 miles, 1500m. sub base, if my memory is correct. After about three weeks of very limited success we moved the base to cover the Medawa sector. It ran roughly NW-SE and an early result of this base was the moving back by about 2000m of enemy guns which had been situated within 2000m to 3000m of the F.D.L.s.

Later the base was replaced by one covering the more westerly sector, the base running more

or less due N-S. This remained, I think, with slight adjustments and alterations, for the rest of our stay. We tried out various sub-bases, deciding finally that 2000m was too long for satisfactory work, while 1500m gave best results. One of the temporary alterations to the base was the installation of a microphone north of the Derna road, to cover a group of H.B.s proving troublesome in the Derna road area, near the sea. With the mike in position we had a ranging shoot with the Navy on some of the H.B.s.

Later came the second base to cover the Medavra sector, crossing the Derna base at Mike 4 and necessitating an ingenious arrangement for switching over the bases according to requirements. We had 10 microphones out and such was the strain on the equipment that 40 gallon oil drums were used for bins and cylindrical 5 gallon petrol tins for resonators. Line maintenance was a great problem. Tanks did much damage, but that could be expected. Something like 8 miles of wire were required to the most distant mike. To overcome this, an advance lines maintenance post was established near Dahar el Chuer Trig. This could have been done much earlier. Our main interest with this base was the notorious and troublesome harbour gun which did so much damage in the harbour area with its long range sporadic activity. Several ranging shoots were carried out by our artillery in an attempt to curb its activities.

Towards the end of the siege, F.S. suspected the use of a flashless propellant and we surveyed a new base for use in the case of need: as it happened, this was never used.

Ranging played a large part in our activities and I believe our reputation was quite high among the gunners. Certainly, our shoots never failed to keep an active H.B. quiet. In addition, a great deal of work was of the more routine type and results were often saved up for treatment on the occasion of heavy patrol works or attacks - the Polish attack on Medawa being one of these occasions. It was, by the way, a popular belief in 'R' Troop that the November attack of 1941 was, to a large extent brought forward owing to information provided by the C.B. office from aerial photographs, with which Captain Balfour did a lot of work.

Sound ranging was far from simple and straightforward. Meteorological conditions were often adverse, such as high winds, ground waves, an echo effect, sand in the mikes, to mention only a few. This kept all at H.Q. mentally alert. Not the least of our troubles was the uncertainty of the supply situation. At one time, we were practically out of grids for the mikes, and shortage of film occurred. Results, therefore, varied greatly. I think our best day was about 15 new locations.

On the more personal side - water storage, NAAFI supplies, sandstorms, fleas, desert sores, etc. were every day matters with which we had to contend, as so many others did in the fortress".

The Tobruk Fortress had been held for a total of 238 days, 'A' Troop and 'R' Troop supporting the defence for 177 of them.

CHAPTER TEN

OPERATION CRUSADER

As mentioned in Chapter 8, for "Operation Crusader" 'Y' Troop, under command of 4 India Division, was broken down into two sections, each reporting to the field regiments in this 7 Brigade group which spearheaded the Divisional attack. 'C' Section, under Lt. D.A. Burnett, reported to the 31 Field Regiment and 'D' Section, under Lt. F. Hamer, joined the 25 Field Regiment, the Troop Commander, Captain Ogden, being with 'D' Section. The balance of the Troop moved with the rear echelon of the 25 Field Regiment. The point of rendezvous with the gun regiments was some 2 to 3 miles south west of Sofafi.

The operation involved an attack on a two corps front, XIII Corps in the north and XXX Corps to the south, both Corps taking a left hook around the enemy defences in the Omars, in Sollum and in Bardia. The major objective of XXX Corps, following a much deeper route into the desert, was Tobruk, the garrison of which was to break out at the appropriate moment and join up with XXX Corps. The whole attack covered a wide front, from Sofafi in the north to a point some 60 miles south.

The formations involved, from north to south, were:

XIII Corps (Lt. Gen. W.H.E. Godwin-Austen)

4 Indian Division (Maj. Gen. F.W. Masservy) with 1 Army Tank Brigade (Brig. H.R.B. Watkins)

New Zealand Division (Maj. Gen. B.C. Freyberg, V.C.)

XXX Corps (Lt. Gen. C. Willoughby-Norrie)

7 Armoured Division (Maj. Gen. W.H.E. Gott)

South African Division (Maj. Gen. G.L. Brink)

22 Guards Armoured Brigade

In addition there was the 4 Armoured Brigade under Brigadier A.H. Gatehouse. As stated earlier, the whole force was now known as 8 Army, this title superseding the previous Western Desert Force. The Army Commander was Lt. Gen. Sir Alan Cunningham.

The 11 Brigade of the 4 Indian Division remained on the coast, having a watching brief over the enemy positions at Halfaya. The third brigade, 5 Brigade, was on the lines of communication at Matruh.

The forces to advance above the escarpment south of Sofafi took the form of a number of mobile columns, the one in which 23 Field Regiment and 'D' Section moved being led by a sapper officer. At H-hour, 21.00 hours on the 17th November, the columns moved off, 'D' Section being somewhat towards the tail of their column, behind a Bofors anti-aircraft gun. The column moved off at a good pace across the hard surface found in this part of the Desert, stopping at intervals, no doubt for the sapper officer to check his position and navigation.

Navigation in the Desert is very similar to that at sea, there being virtually no recognisable features by which to check one's progress. During daylight, the sun nearly always shone - in fact the weather and general conditions were ideal for both warfare and for living out in the open - and trucks were equipped with a piece of apparatus known as a sun compass. This was really a small, sundial, by which the driver of a truck could keep to a correct bearing, measuring his distance with his speedometer. In this way, it was possible to make a fairly precise journey across the face of the Desert, by the process known as "dead reckoning". At night, of course, this was not possible, so the prismatic compass had to be used. This was not very accurate, especially if

used within a vehicle, and one had to stop and walk some distance away to get anything like a true reading because of the magnetic attraction of the ferrous metal in the vehicle. The Survey Troop had, of course, been trained in taking star, as well as sun, observations, to obtain true bearings and to fix one's position, but this operation took a lot of time and involved a fairly complex computation.



At about 0300 hours on 18th November, the column came to a halt, which initially seemed to be the usual halt to enable the sapper officer leading the column to take a bearing check. This stop, however, proved to be of much longer duration and, after about an hour or so, 'Y' Troop commander walked to the front end of the column to find out what was afoot. On reaching the head of the column he found a gaggle of senior officers, one of whom was the Brigadier in command of the group. The Brigadier immediately asked, "Who are you?". Captain Ogden replied, "I command 'Y' Survey Troop." To this the Brigadier replied, "By jove, survey - where are we?" The outcome was an attempt to do a star observation to compute the latitude and longitude, but the delay had been too long and a quick dawn blotted out the stars. However, one of the marker cairns which had been established in the Little Sister and Little Brother operation was quickly located and the position of the column determined. This proved how useful that work had been and this, in itself, fully justified the operation.

The column deployed in this position, which was to the east of the cairn identified. This was on a low-lying feature called Alam el Fakhri, some 30 miles from the start point. Here survey was provided for the 25 and 31 Field Regiments and for 68 Medium Regiment.

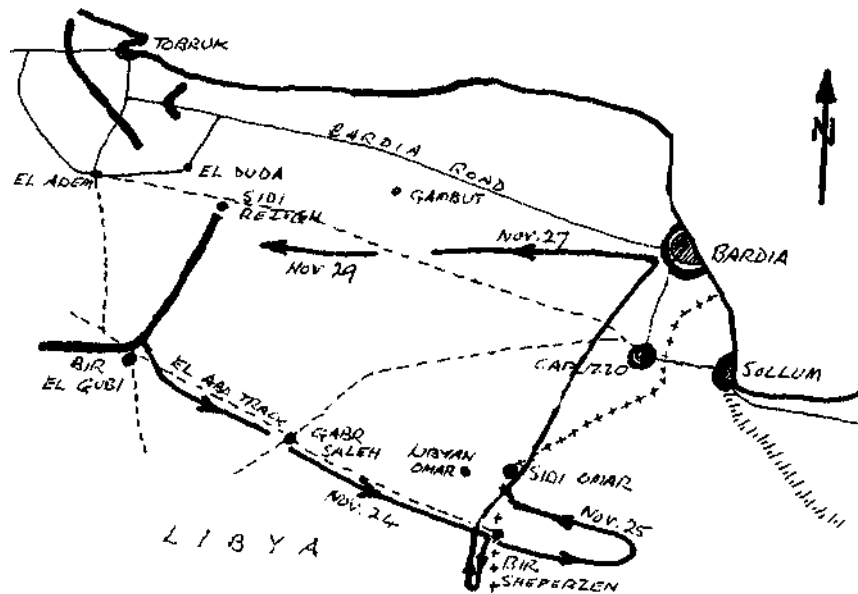
It was then learned that forward elements had reached Bir du Deheua, over the frontier wire. "The wire" was the usual term for the frontier, because of a fence the Italians had constructed from north of Solloum along the frontier many miles south.

The column advanced to Bir Sheferzen on the frontier where, on the 18th November, data was again provided for the guns. The gun regiments included the 1 Field Regiment which, in this position, was later to be involved with a serious face to face fight with Rommel's armour. A three O.P. flash spotting base was also set up in this area for 'B' Troop which had moved up with the Brigade Group.

At this time, 7 Armoured Division of XXX Corps was some 40 miles to the west, engaging German and Italian defending forces.

From Bir Sheferzen the Brigade Group moved in a northerly direction towards the Omars - positions heavily defended by the enemy, whose units included the 55 (Italian) Savona Division, the 33 (German) Recce Unit and 21 Panzer Division. The Sidi Omar Nuovo position was attacked by the Brigade, 'Y' Troop again providing survey data, and taken on the night of 22nd November. Libyan Omar, a mile or so to the west, proved a more difficult task and it took about a week of hard fighting before this was also overcome. In this battle the guns were again surveyed in, the survey being based on a single trig point with a sun bearing, as it was impossible to bring forward the permanent grid by triangulation due to German mobile columns swanning around in the desert to the rear of the Omar position. F.S. O.P.s were also fixed, as was a sound- ranging base for 'S' Troop, which by this time had arrived in Sidi Omar Nuovo.

An unusual bit of assistance was; given to the artillery O.P.s which involved fixing features in the Libyan Omar box, such as knocked out by enemy guns, by intersection from survey stations in Sidi Omar Nuovo. This helped the O.P. officers in ranging on to the enemy defences. The Libyan Omar position was finally taken and, on the 4th December, 7 Brigade again moved westwards.



Rommel's raid, 24-29 November 1941

Whilst the battle for Libyan Omar was going on, 7 Armoured Division became embroiled in a battle with Rommel which resulted in serious losses to that Division. Rommel was surrounded, but his Panzers fought like - and with - tigers. This was the battle of Sidi Rezegh. This battle, one of the major tank battles fought in the Desert, was most confused - confused to both sides. This is exemplified by the experience of a mobile hospital which had been established by XXX Corps

somewhere in the Desert between the Omars and Tobruk, which was captured by the Germans. Whilst in German hands Rommel himself visited the hospital and talked to the wounded patients. It is believed he promised them a more comfortable environment when he got them back to Germany, but the promise was not realised - the hospital was almost immediately re-captured by the British forces.

During the battle, on the 23rd November, Rommel detached a strong force of tanks and sent them due east as a counter stroke to the allied attack. This group crossed the frontier into Egypt but decided to turn back, largely due to the resistance put up by 1 Field Regiment, and moved in a north easterly direction passing along the south side of the Omar Nuovo position on the afternoon of 25th November. The German procession of armour past the Omar Nuovo position presented a most remarkable sight - German tanks growling along the 7 Brigade defences, firing their guns, the Indian Division artillery replying, with everyone in the Onnar Nuovo position, including 'B', 'S' and 'Y' Troops, climbing on to the top of their vehicles to see the excitement, cheering the salvoes of the 25 and 31 Field Regiments and the 7 and 68 Medium Regiments. The whole thing was like a rather noisy and dangerous race meeting. The gunners had a field day - all over open sights. By dusk, the German tank group had disappeared to the north east, leaving a number behind which had brewed up - the expression used for tank or vehicle catching fire and burning out.

During this eastward move of part of Rommel's armoured forces, which comprised elements of 15 and 21 Panzer Divisions, the 1 Field Regiment faced, on the 25th November, some 28 Mark III and Mark IV tanks in a position which had earlier been surveyed in. This was at a point called Hagfit el Qineiqina, just south of Sidi Omar Nuovo. The resistance of the 1 Field was sufficient to make the enemy tanks withdraw and saved the 4/11 Sikh Battalion and a column of New Zealand Division transport which it was protecting. The Field Regiment suffered serious casualties in this operation.

There was another exciting moment one night in the Omar Nuovo position. Everybody was awakened about midnight, to see the whole area lit up by a beautifully laid out formation of parachute flares. There were at least 12 in two rows of six. When all these were operating, planes came over and bombed the position. Not a lot of damage was done, only some three men being injured and one or two trucks being set on fire. In the light of day one of 'Y' Troop recovered the base plate of one of the bombs, which indicated it belonged to the Royal Naval Air Service!

Eventually, the 7 Armoured Division prevailed at Sidi Rezegh and contact was made with the Tobruk garrison, where 'A' and 'R' Troops were in action. The lads in Tobruk always say they came to the rescue of XXX Corps!

On 4th December, the 11 Infantry Brigade had a bitter fight with the enemy in the El Gubi area, some 35 miles south of Tobruk. The Brigade suffered considerable losses, but the enemy were repulsed. Later the same day, 7 Brigade moved some 6 miles westward, reaching the 11 Brigade position on the morning of the 5th December. By the final withdrawal of the enemy on this day, the 5th December was considered to be the day when the siege of Tobruk was finally lifted.

Rommel continued to retreat, followed by the 4 Indian Division and, on the morning of 9th December, El Adem was occupied. It was now the job of 4 Indian Division and 7 Armoured Division, under command of XIII Corps, to pursue Rommel. During this period, the Divisions were subjected to many bombing attacks, largely by JU 87s or Stukas. One was particularly impressive - instead of individual planes peeling off to dive and bomb, a complete formation of some 15 - 20 Stukas in line abreast dived together, maintaining a flat arrowhead formation throughout the attack. Luckily their bombs just overshot the column, of which 'Y' Troop was a part, and did no damage at all.

For a few days at the beginning of December the advance was hindered by the famous south wind which at this time of year blew over the Desert. This was called the Khamsin, which created

a dust storm, reducing visibility to nil and filling everyone's eyes, nose and mouth with dust and sand. It was generally most uncomfortable. (It was understood that the tradition with the Arabs was that if the Khamsin lasted more than 7 days, one who murdered would be let off!). During one of these dust storms an R.A.F. Hurricane landed in the desert near 'Y' Troop's H.Q. The pilot was eventually located and whilst he was being given some refreshment he was asked about the difficulties of navigating in such featureless country. His reply was that it was easy in the extreme - sea on your right you were going towards the enemy, sea on your left you were homeward bound!

On 13th December the enemy were encountered in strength, holding a position from Gazala on the coast to Alam Hamza, some 20 kilos; inland to the south, thence to Sidi Beghise and the T'righ el Abd, over 20 kilos further south. 7 Brigade attacked this position from the south, with 4 Battalion 11 Sikh Regiment supported by 25 Field Regiment (to which 'Y' Troop was attached) and 12 tanks of 8 Battalion R.T.R. The position of the 25 Field Regiment was attacked by 39 enemy Mark III and Mark IV tanks. On the right was the 31 Field Regiment. Both opened fire over open sights. One battery of the 25 Field Regiment, the 31/58, was over-run by enemy armour. The other battery, the 12/25, then took on the advancing tanks,, supported by the Bofors of the 57 Light A.A. Regiment R.A. and the anti-tank guns of the 65 A.T. Regiment. The intensity of fire halted the enemy tanks and they retreated. The 25 Field Regiment's losses were high. The following day, the 14th December, all the guns which had been over-run were retrieved. The C.O. of the 25 Field Regiment was Col. Claud Eastman. On the 15th December, 31 Field Regiment front was subjected to a similar attack which, after furious battle, was also repulsed.

After these battles, 4 Indian Division moved forward, 7 Brigade; with 'Y' Troop entering Derna on 19th December. The 4 Indian Division then set about clearing the Jebel Akhdar area from Tmimi to Benghazi and finally, just after Christmas, 7 Armoured Division of XXX Corps advanced to a point just short of El Agheila, the position which General Wavell had reached the previous February.

On the 22nd December, Captain Ogden was evacuated to the Delta suffering; from the common desert complaint, jaundice, and 'Y' Troop was taken over by Lt. D.A. Burnett. From 29th December 'Y' Troop moved westward from Derna, arriving in Benghazi on 31st - only to receive orders to return immediately to the Regiment at Tobruk, which they rejoined on the 3rd January, 1942.

In the initial phases of Crusader, when 'Y' Troop was attached to the 25 Field Regiment, the remainder of the 4 Survey Regiment, which had come up to the Desert just before Crusader was launched, came under command of XIII Corps, to be prepared to deploy should any big set-piece: battle develop. As already mentioned, flash spotting and sound ranging bases were set up in Sidi Omar Nuovo but apart from this deployment, the set-piece situation did not materialise during this operation, which remained throughout one of extreme fluidity. The Regiment did, however, move with the XIII Corps H.Q. as far as Tobruk, joining up with 'A' Troop and 'R' Troop.

The continually fluid situation resulted in Lt. Fisher and a number of other ranks, experienced surveyors, being captured by the enemy. This was a considerable loss to the Regiment. Fisher was a former student of the C.O. at Armstrong College and deserved a better fate. He would have had every prospect of a promising career in the Army. Also, Lt. Quarter-Master Burini and two members of his staff were captured by enemy armoured troops when returning from the Field Maintenance Unit (FMU) to the Regiment with rations, petrol and other supplies. The two soldiers, however, rejoined the Regiment after the capture of Bardia, but Lt. Burini was sent to Italy as a POW. There he suffered from a heart complaint and was eventually repatriated to the U.K.

Apart from these unfortunate experiences, there were other exciting incidents which came from the fluid situation. One night, the Regimental H.Q. was bivouacked in a basin in the Desert when, at dawn, after the mist had lifted, all hell was let loose in a battle between enemy tanks and British anti-tank guns, only some 500 yards away! On more than one occasion Regimental H.Q.

were spectators of battles between allied artillery and the German tanks, at a distance of about half a mile.

While moving with Corps H.Q, R.H.Q. sometimes had difficulty in maintaining contact due to other units cutting across the line of advance. This placed a heavy strain on the navigating officer, Major Cawthorne, the Second in Command, but he reacted to every situation and Corps H.Q. was never lost entirely. One scare for Corps H.Q was when two German lorries, driven at top speed from the coast, cut through the Corps area, shooting; their way to safety and at the same time avoiding the fire of the British defensive anti-tank unit.

During the operations, General Cunningham became ill and General Auchinleck, who had come to the 8 Army H.Q. when the Sidi Rezegh battle was raging, gave the command to Major General Ritchie, who had been Deputy Chief of General Staff at G.H.Q. Cairo.

The conclusion that must be drawn from this operation, so far as the Regiment was concerned, was that, although valuable work was done by the component parts of the Regiment, its full potential was not realised, due to the situation being continually much too fluid. Survey data had been unusually based on a map spot with a sun observation to obtain the bearing, but a process of standard triangulation was developed by 'Y' Troop to speed up the survey process to meet the requirements of the quick moving artillery which had some success.

CHAPTER ELEVEN

ROMMEL'S ADVANCE - JANUARY, 1942

On 21st January, 1942, Rommel again attacked the El Agheila position, and the British forces had to withdraw. This attack was first thought to be a reconnaissance in force, and so it probably was, but it proved so successful that Rommel must have decided to exploit the immediate victory, to the detriment of the allied forces in the area. At this time the morale of the 8 Army was of the highest order, but the demands of the World War had again starved the Middle East forces of much-needed reinforcements and the forces at the El Agheila position were once again very thin on the ground. In addition, of course, the supply problem was enormous. Soon after Rommel's attack it became apparent that a second general withdrawal from the El Agheila position was in operation.

The forward positions at this time were held by the 1 Armoured Division, which had recently arrived in the Middle East from U.K. and had relieved the 7 Armoured Division, with the 4 Indian Division still in the Benghazi area. These forces were under command of XIII Corps. Earlier 'X' Troop had been moved up to the forward positions near Agedabia, taking over from 'Y' Troop.

The C.O., on a visit to the forward area near Agedabia, arrived just in time to join 'X' Troop under Captain Day, which was being shelled by enemy mobile artillery whilst carrying out their survey task. Due to the enemy pressure, they, with other units, commenced withdrawal. The Adjutant, Captain B. Abbott, had contacted Brigadier John Harding, Army Chief of Staff, in a lone tent near Agedabia, to learn that, as the pressure of Rommel's advance was increasing, XIII Corps H.Q. were preparing to withdraw at nightfall. The Brigadier instructed the Adjutant to wait until then and, if the C.O. had not returned, to follow in the wake of Corps H.Q. However, the C.O., who had reported to Brigadier Harding on his way back from 'X' Troop, returned just as the Regiment was ready to move.

The next incident happened when the long line of vehicles came to a halt to enable the C.C.R.A. XIII Corps to satisfy himself that the Regiment was following in the convoy. At this point the Regiment found itself beside a huge petrol dump, and a message was sent to the drivers of all the vehicles to fill up with cans of petrol. This was carried out immediately and shortly afterwards the convoy moved on. In view of the very fluid situation and the considerable doubt about necessary supplies arriving, this was a most prudent action to take. By daylight, the Corps H.Q. was located at a road leading from Msus and, when the C.O. reported to the C.C.R.A., who asked the Chief of Staff what was happening, the answer was that four German tanks were attacking up the Msus road. The C.C.R.A. asked what was being done about it and got the reply: "We are engaging them!" The C.C.R.A., winking at the C.O., said "Move independently and join up with us later." He knew how well the Regiment could navigate the Desert! By this time, petrol at the huge dump was being restricted to tank and other fighting units in the midst of the battle. Thanks to the person who halted the convoy during the previous night, the H.Q. of the Regiment and other attachments under command were well supplied for a few hundred miles. Even so, at times, recourse had to be made to one vehicle towing another in an effort to conserve supplies.

This withdrawal of the 8 Army was a major reverse. The Survey Regiment, less 'A' and 'R' Troops which had been relieved from Tobruk and were now at Almaza in the Delta, withdrew to the Gazala area, part of the way in company with Corps H.Q. and part independently.

At this stage, the C.O., on reporting to the C.C.R.A., was told that the Regimental H.Q. and 'Y' Survey Troop had to return immediately to Almaza, where they would join 'A' Flash Spotting and 'R' Sound Ranging Troops, along with No. 1 Survey Troop, all coming under direct orders of G.H.Q. Middle East. No. 1 Survey Troop was the original Survey Troop involved in the Wavell advance of December 1940. This left Major Fewkes commanding a group comprising 'X' Survey Troop, 'B' Flash Spotting Troop and 'S' Sound Ranging Troop under XIII Corps at the Gazala position. It was in this way that the Composite Battery Organisation became crystallised, Major

Fewkes' group being formalised as No.2 Composite Battery and the other group, then at Almaza and made up of 'A', 'R' and 'Y' Troops, becoming No. 1 Composite Battery. The H.Q. Survey Section of the original Survey Battery was allocated to R.H.Q. and became R.H.Q. Survey Section.

In the Western Desert the British forces, in March, withdrew to the Gazala Line, a position extending from Gazala on the coast to the southernmost defensive box at Bir Hacheim where, it will be remembered, the Free French Forces put up a gallant resistance to Rommel's attack, which came later. The line consisted of a number of defensive boxes and was liberally sprinkled with minefields. From the time this defensive position was up, 8 Army began to build up its strength and plans were made for an attack on the enemy, one of the objectives of which was to recapture the Cyrenaica bulge and retake important airfields in this area. The line was held by 1 South African Division in the north, the 50(N) Division, which had just been released from Cyprus to assist in the Desert, and, at the most southerly point, Bir Hacheim, the Free French Brigade. These formations were supported by the 32 and 1 Army Tank Brigades, with Valentine and Matilda tanks. Behind were the 1 and 7 Armoured Divisions, the 7 Armoured being to the south with 2 South African Division and 9 Brigade of the 5 Indian Division in Tobruk. 5 Indian Division had relieved the 4 Indian Division which returned to the Delta, one Brigade proceeding to Cyprus.

No.2 Composite Battery deployed along this line and the guns of the several divisions were surveyed in and a flash spotting base and a sound ranging base deployed. On the 27th May Rommel attacked - before the British attack could be launched - outflanking the Gazala Line south of Bir Hacheim and attacking the British forces to the east. A fierce tank and gun battle ensued in an area south west of Acroma, which became known as the Cauldron. This was fought near an important crossing of two main desert tracks, which cross-tracks had been given the name of Knightsbridge.

The battle was fierce but the axis troops were overwhelming and Tobruk was again invested - but, this time, it was captured on the 20th June.

In the capture of Tobruk, No.2 Composite Battery was taken prisoner, except for a small group of men under Sergeant Thomas, who joined up with a company of Coldstream Guards. This company, under a Major Sainhill, broke through the enemy lines and escaped.

Just before the fall of Tobruk, Major Fewkes had left No.2 Battery, handing over command to Major B.A. Curtis. Major Curtis, however, was wounded shortly after assuming command of the Battery and command was taken over by Major G.D.H. Flowerdew, who had returned from sick leave in South Africa, only to be taken prisoner almost as soon as he had assumed command of the Battery.

Further misfortune befell those who were captured, many being lost crossing the Mediterranean to Italy. The C.O. received a personal telegram from the M.G.R.A. informing him of the loss of the Battery.

Rommel continued to advance before being brought to a halt in the El Alamein position at the end of June, 1942.

As mentioned earlier, when the Regiment developed into the Composite Battery formation, the Survey Battery H.Q. Section was put under command of Regimental H.Q. and became directly responsible to the Commanding Officer. This provided a very good reserve, available to assist one or other of the Batteries, or to meet the particular needs of the Corps artillery. Later, this section was enlarged to full Troop strength and was referred to as the R.H.Q. Survey Troop.

CHAPTER TWELVE

THE SYRIAN INTERLUDE

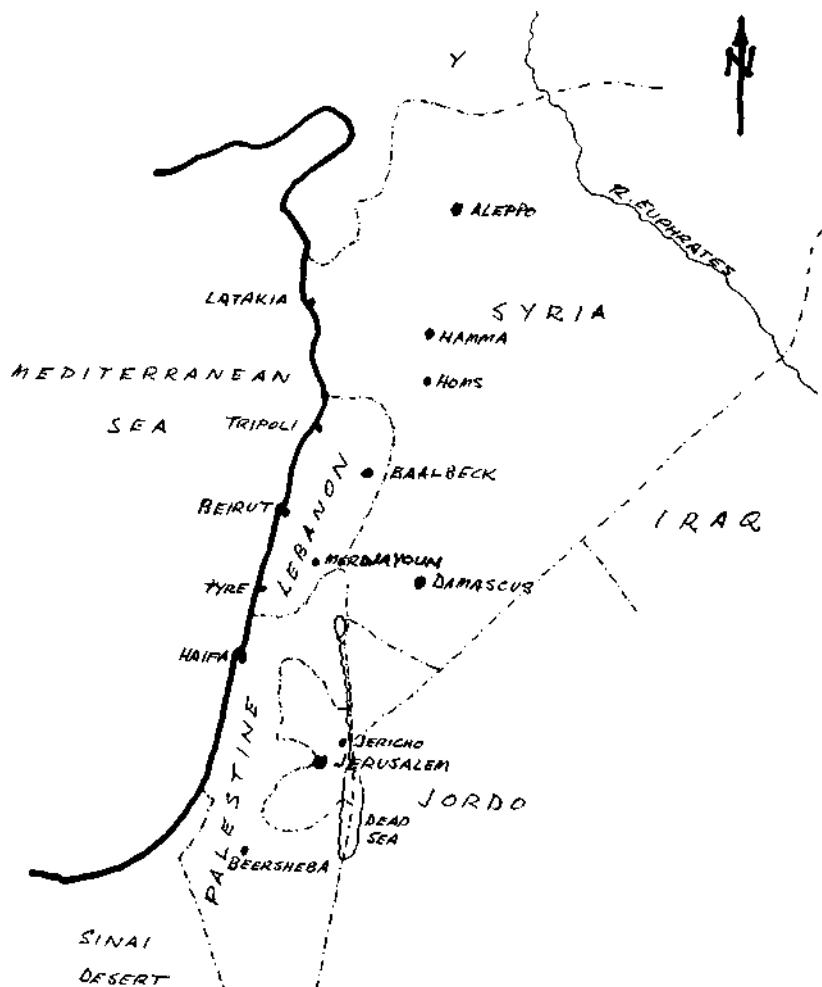
In February, 1942, Regimental H.Q., with No. 1 Composite Battery, made up of 'A', 'R' and 'Y' Troops, together with No. 1 Survey Troop, which had been ordered to leave the Desert shortly before the Gazala battle and go to Almaza, were posted to 9 Army to survey defended localities which were being prepared in the Damascus, Tripoli and Baalbek areas, and to operate generally from the Turkish border in the north to the southern part of Palestine. This area had been occupied by the Allied forces in a short but fierce operation to secure the right flank of the Middle East Command. The area had been controlled by the Vichy French and the occupation began with an attack launched by the 7 Australian Division, 1 Cavalry Division, 5 Indian Brigade and a group of Free French Forces, on 8th June, 1941. The Vichy French capitulating on 14th July, 1941.

The Regimental group left Almaza on the 17th February, 1942, travelling via Beersheba, Lydda, Haifa and Beirut to Damascus. The journey was without incident until the convoy started to go over the Lebanon Mountains between Beirut and Damascus, on 20th February. The road here reaches a height of some 2,000 feet above sea level and there was a blizzard blowing at the time. The convoy was scattered in this arctic weather, the majority of the trucks sliding off the carriageway into the ditches at the side of the road. A number of vehicles returned to Beirut as they could not make the gradients in the slippery, wintry conditions. Captain Ogden of 'Y' Troop, with his sergeant and driver, spent the night in a taxi, which was also snowbound, with half a dozen local Lebanese. The taxi was distinctly warmer than the Troop Commander's 8 cwt. truck! The remainder of the Troop stayed in a police post some 35 miles from Damascus.

Early in the morning of 21st February the taxi was extricated from the snow and managed to crawl into Damascus. The picture that was presented was far from what one expected of an eastern city - it looked like Manchester on a wintry day, with snow and muddy slush all over the place. The C.O., who eventually got through the snow, reported to the C.C.R.A. of X Corps, part of the 9 Army, whose H.Q. was in the Orient Palace Hotel in Damascus. Billets for R.H.Q. and 'Y' Troop were located in an old French barracks at Mezze, on the outskirts of Damascus. 'A' Troop and 'R' Troop were located in an area to the north west of Damascus, near Baalbeck, whilst R.H.Q. Survey Section were near Merdjayoun with 64 Medium Regiment.

R.H.Q., being established in Mezze barracks, was nicely placed to supervise the survey operations and to assist in the reconnaissance work for G.H.Q. Middle East, 9 Army and 10 Army. Some of this work was undertaken to provide survey data for training operations by the 9 Army. The C.O., along with Lt. Col. Yates, Counter Battery Officer from Almaza, made an extensive reconnaissance of the area and also undertook a lecture tour of R.A. units in the 10 Army area.

The portion of the Regiment in Syria came under command of the C.C.R.A. X Corps, Brigadier Frowen. The Brigadier was an old friend who had commanded 7 Medium Regiment R.A. in the first offensive in the Western Desert, when No. 1 Survey Troop was operating with the Western Desert Force and, later, with the 4 Survey Regiment in the Greek Campaign.



Syria, 1942

Early in May, the C.O., the C.C.R.A. and the commander of 'Y' Troop undertook a reconnaissance along the Turkish frontier, from the coast, north of Latakia to the River Euphrates in the east. During this time the reconnaissance party stayed at a very English hotel in Aleppo, called the Baron Hotel, which was most pleasant. On the trip from Damascus to Aleppo the party passed a memorial at the side of the main Damascus/Aleppo road, erected to commemorate the last battle of the 1914-1918 War which had been fought in this area. It was entirely covered and defaced with signatures and other graffiti, no doubt by tourists who had come to see it. This caused Brigadier Frowen to recite an apt couplet which, suitably censored, went as follows:

Education is a wonderful thing
 It lifts man up from the gutter
 It teaches the boys to write *** on the walls
 And girls to write *** on the shutter.

This reconnaissance resulted in survey work being undertaken along the frontier by both 'Y' Troop and the R.H.Q. Survey Section, under command of Lt. T. G. Boaz. The R.H.Q. Survey Section now took on a more independent role, while R.H.Q. operated from Damascus. It moved

with 'Y' Troop into the north Syrian area and was strengthened by the addition of another subaltern, Lt. B. Bowlt. The survey work undertaken involved major and minor triangulations, the object of which was to establish bearing pickets for the use of artillery, should the latter be deployed to hold any advance of the enemy southwards through Turkey. In addition, a lot of work was carried out along the frontier and in the southern part of Syria, as well as in Palestine, setting up control points for aerial photography.

There was a moment worthy of record when a survey section of 'B' Troop halted an express train - possibly the Orient Express! - until the necessary observations were completed at a survey point on the railway track!

Generally, the country was most interesting. Survey work had to be carried out within two or three hours after dawn or before dark – such was the heat haze. The only real hazards which had to be faced were the possibility of theft of firearms and equipment by the local Arabs, and the consequences of accepting hospitality and dubious food delicacies from the local sheikhs.

Quite a large river, the River Barada, flowed through Damascus from the Lebanon Mountains - but it did not last long as it penetrated the Syrian desert to the east. Within two or three miles it had disappeared altogether. The town of Damascus was an intriguing place - the wide variety of goods in the local market, called the Sukh, was surprising. It was also interesting to note that in the swampy area where the river became dissipated on the outskirts of the town and where cultivation was intense, when the crops were reaching the time for harvest, observation posts were erected by the owners, manned with men with firearms to protect the crops from theft! Aleppo, Horns and other towns were also intriguing - especially the great wooden water wheel in Horns. The area between Aleppo and the coast contained many interesting Roman remains, most of which appeared to have been large country houses.

During this period, No. 1 Independent Survey Troop, which had been with the Regiment since the Green Campaign, was exchanged with another independent troop which had been operating with the 9 and 10 Armies in Syria and the Persian Gulf area. As has been recounted earlier, No. 1 Independent Troop was transferred to the 9 Army and the new troop, under Captain Stuart Taylor, replaced Captain Day's 'X' Troop which had been captured when Tobruk fell.

The R.H.Q. Section later moved into the wilderness of Judaea, undertaking survey work in the hills between Jerusalem and Jericho. For this period, the Section was billeted with a Jewish Pioneer Troop, whose rations were scarcely appreciated!

On 22nd June, R.H.Q. and 'Y' Troop left Damascus and 'A' and 'R' Troops left the Baalbeck area, on orders, which had been received at 9 Army, for No. 1 Composite Battery and attachments to return to Almaza in the Delta and come under command of G.H.Q. Middle East. The Regiment was to be re-established after the debacle of the loss of Tobruk which readers will remember occurred on 20th June - the order coming, of course, in consequence of Rommel's new advance towards the Delta after the battles around the Gazala Line.

Thus ended a very pleasant four months in Syria.

CHAPTER THIRTEEN

EL ALAMEIN

By the end of June, 1942, Rommel's advance into Egypt had been halted at the El Alamein position, where the space for manoeuvre, which had up to this time characterised desert warfare, was restricted between the coast and the Qattara Depression. This Depression, some 35 miles south from the coast, consisted of salt flats which were largely impassable for motorised units, and certainly for armoured formations. The northern edge of the Depression was defined by a steep escarpment, the level of the Depression being over 100 feet below sea level. At this lower level were the salt flats known as Sabakha, and the area was indicated on the local maps as being "impassable by cars and unsafe for loaded camels".

As is well known, General Auchinleck had now taken over direct command of the field forces from General Ritchie and, with the decimated but still aggressive 8 Army, had stemmed the enemy advance at this defensive position.

As described in Chapter 12, the Regiment had withdrawn from its duties in Syria and Palestine and concentrated in the Cairo area. The bulk of the Regiment was at Mena, near the Pyramids, but 'Y' Troop was deployed on the Cairo/Alexandria road, approximately half way between the two cities, while R.H.Q. Survey Section was in the Alexandria area. The job of these two survey units was to survey in prepared positions to which the Army would fall back, should the Alamein position become untenable.

In July, 'A' Flash Spotting and 'R' Sound Ranging Troops of No. 1 Composite Battery was ordered up to the Alamein position and they deployed on the XXX Corps front. XXX Corps at this time was holding the right flank adjacent to the sea, with XIII Corps to the south as far as the Qattara Depression.

As soon as the defensive position at Alamein had stabilised in June, the 8 Army immediately took up an aggressive attitude and continually eroded Rommel's strength. The northern half of the defensive line was strongly held by XXX Corps, whilst towards the south the strength of the static troops thinned out, the responsibility for dealing with the enemy here being in the capable hands of the 7 Armoured Division.

Apart from 'A' and 'R' Troops at El Alamein, the remainder of the Regiment at this time came under command of "Lees Force", which formation was responsible for the defence of the Delta area. The main memories of the return to the Delta from Syria were meeting the continuous convoys, largely made up of RAF base formations, including heavy ack-ack units, which were evacuating from the Delta and going north to Palestine and, on passing through Cairo, the showers of burning paper that were falling, no doubt coming from the destruction of secret documents being carried out in the M.E. and B.T.E. Headquarters! It seemed as though the 'flap' was really on!

On 12th August, 1942, Lieut. General B. L. Montgomery arrived in Cairo, having been appointed to take command of the 8 Army. Major General Gott, an old 8 Army veteran, who had commanded 7 Armoured Division, had been selected for this command, but the day before he was actually to be appointed, he was killed in an air crash. The arrival of Monty, as the new commander became known, had a dramatic impact on the situation. All work on the defensive positions around Cairo and Alexandria, upon which 'Y' Troop and R.H.Q. Survey Section had been engaged, ceased within 24 hours of his arrival in the Middle East.

General Alexander, who almost simultaneously with the arrival of Monty, took over command of the Middle East from General Auchinleck, states in his memoirs that his first step was to restore morale by laying down the firm principle that no further withdrawal was contemplated. This may well have been so but it would seem that, as he arrived in the Middle East on 15th August, the

orders from Monty on this policy anticipated those of General Alexander. However, whatever the reality, the impact of the new overall command was immediately felt!

At this point, mention should be made of reports which, since the War, have been commonplace, that Monty found a demoralised 8 Army at El Alamein when he arrived in the Middle East. This is entirely incorrect. Although the Army was both concerned and bewildered that it had been pushed back to El Alamein, there was no feeling at all of demoralisation or panic. All - and this means ALL - had no doubt whatsoever that, in due course, the Allied cause would prevail and it only needed the supply of suitable weapons of war to effect this. A simple example of the frustrations in this respect concerns major transport. The sort of small vehicle with which the Regiment had largely been equipped up to this time was an 8 cwt. van, made by Standard. This was, in fact, a civilian vehicle in military guise - virtually useless off the macadam of the coast road. It was not until the Regiment was equipped with American Jeeps that the light transport could be really relied upon. Generally speaking, it is of interest to note that the American vehicles, much tougher propositions than their British counterparts, were always welcomed by the Regiment when issued. These included Fords and Chevrolets as well as White and International scout cars and half-tracked vehicles. The only British vehicles which really stood up to the severe conditions of desert travel were the Morris Commercial 8 cwt. pick-ups (fitted with wireless sets, hence the name "pick-up") and the A.E.G. "Matador" Command Vehicle and medium gun tractors.

Some light has recently been shed on the reasons why the 8 Army appeared to be so out manoeuvred by Rommel in his advance from Agedabia which commenced on the 21st January, 1942 and finally ended at El Alamein. This appears in a book by William Stevenson, entitled "A man called Intrepid" which describes what is called "The Secret War 1939 - 1945". This book was published in 1976 and includes much information of considerable interest that had previously been on the secret list. In this book Stevenson records that the defeat of the British forces in the Gazala position and the loss of Tobruk most probably occurred because of unwitting help given to Rommel by the U.S. Military Attache in Cairo, Col. Bourne Fellows. Coded messages about the battles from the U.S. Embassy in Cairo to Military Intelligence in Washington were sent via the Egyptian Telegraph Company in Cairo and these were intercepted by the Germans because they had broken the code. Apparently every morning Rommel was given a concise appreciation of the British tactics, dispositions and strength. This had been going on since January, 1942. Stevenson records that at the time of these battles it had been stated that Rommel's confidence in his deployments to isolate Tobruk "seemed born of foreknowledge". British monitoring of German radio traffic during these battles led to the conclusion that Rommel was receiving advance information from inside the British H.Q. in Cairo. The leaks were eventually traced back to the U.S. Embassy and, in due course, stemmed.

This confirms the comments already made about the morale of the 8 Army and the fact that bewilderment was the main feeling of the troops. The defeat clearly had not been accompanied by disgrace. Mr. Churchill, Stevenson reveals, used the American involvement in this leak to press for tanks and other arms from the U.S. which, of course, arrived in time of the El Alamein battle.

To return to Monty, it must be said that he did have an enormous impact in encouraging the troops and increasing their confidence to face the forthcoming battles. His Australian hat and, later, the black beret, were symbols of this. His tours amongst the troops, both in and out of action, gave a tremendous boost to morale. He normally drove, particularly in action, in a Sherman tank with MONTY in letters about 2 feet deep on both sides, which became well-known to all the troops in the Desert. In fact, many of them were somewhat concerned about this tank - one wondered if the signs on the side - the name MONTY - would result in the enemy writing him off! But this did not happen!

The "awe" in which the troops held Rommel has been over-stressed. Everyone respected Rommel as an able General which, of course, he was. As far as personalities were concerned, however, the Allies had many who were held in greater respect - Jock Campbell being an

example. There is no doubt, however, that Monty's arrival had a tremendously beneficial effect - one of the major reasons for the respect which he earned from his men was the fact that one knew, if Monty said an attack was on, everyone had the best chance of staying alive anyone could possibly guarantee.

On 1st September, 'Y' Troop, having been ordered up to Alamein, left Tahag, where they had been camped, and travelled to Alamein via a route known as "C" Track. This route ran parallel to the coast road, some 10 miles south. As the Troop approached Alamein it was clear that there was a party in progress, and this was the battle of Alam Haifa, Rommel's last attempt to break the Alamein position, which he had launched on 31st August. 'Y' Troop reported to Major Kellett, commanding No. 2 Battery, who jokingly said that the Troop had arrived just in time to be put in the bag! As has been described in many histories of the Alamein period, Rommel's plan had been forecast by Monty and Monty's deployments to deal with the situation worked exactly as he had forecast, the outcome being that Rommel retreated to his start position with a decidedly "bloody nose". By 3rd September the situation had been restored, leaving only Himeimat, a small but commanding feature some 600 feet high, in Rommel's hands.

During this battle, XIII Corps, which took the brunt of Rommel's attack, was commanded by Lieut. General Brian G. Horrocks, who had arrived in the Middle East from the UK at the same time as Monty. He had been one of Monty's Brigade Commanders in 3 British Division when Monty commanded this Division during the Dunkirk period. The Alam Haifa ridge itself had been manned by 44 Division, also newly arrived from the UK, while the northern flank of the German breakthrough had been defended by 2 New Zealand Division, together with 22 and 23 Armoured Brigades. The mobile forces comprised the 7 Armoured Division. In total, some 700 tanks were available to the Allied forces, many of which were in a hull down or dug in position on the Ruweisat Ridge. The whole operation was ably supported by the Desert Air Force. The enemy attack forces comprised the 15 and 21 Panzer Divisions of the Afrika Corps and the 90 Light Division - all these units were well known enemy formations in the Western Desert. The 4 Survey Regiment was not deployed in this battle.

The period following the Alam Haifa battle was one during which the Allied forces were built up and there was considerable activity in gathering information about the enemy positions. The Allied grouping prior to the historic battle of El Alamein was as follows:

XXX Corps - under Lieut. General Sir Oliver Leese

consisting of:

- 9 Australian Division
- 51 (Highland) Division
- 2 New Zealand Division
- 1 South African Division
- 4 Indian Division

XIII Corps - under Lieut. General Brian Horrocks

consisting of:

- 7 Armoured Division
- 44 Division
- 50 (Northumbrian) Division

X Corps - under Lieut. General Lumsden

consisting of:

- 1 Armoured Division
- 8 Armoured Division
- 10 Armoured Division

plus the following additional formations:

- 9 Armoured Brigade
- 23 Armoured Brigade

One Greek Brigade
The Free French Brigade
One Free French Flying Column

The South African contingent included a South African Royal Engineers Survey Unit, whose main assignment was to produce maps of the area. The liaison which was established between this Unit and the 4 Survey Regiment was a happy one, as well as being most useful, and this continued throughout the remainder of the North African Campaign.

The deployment of the Regiment was No. 1 Composite Battery in support of XXX Corps in the northern sector, with No. 2 Battery under XIII Corps in the south.

Major Kellett, commanding No. 1 Composite Battery, established himself in a fine H.Q. in an old concrete dug-out close to the coast road, together with the H.Q.'s of 'A' Flash Spotting Troop and 'R' Sound Ranging Troop. 'Y' Survey Troop H.Q. and computing centre, after occupying a number of different positions in the area, were also established adjoining the Flash Spotting H.Q. on 16th October, just before the main battle.

In one of its camp sites 'Y' Troop was amongst the troops of the 9 Australian Division. At 0700 hours every morning it had been the custom with the Troop to have a morning parade with due ceremony. When this occurred in this camp the Australians cat-called, "Where do you think you are? Buck House or something?" Fortunately the Troop moved immediately and the exigencies of the situation prevented a continuation of the morning parades - so a further confrontation with the Aussies was avoided!

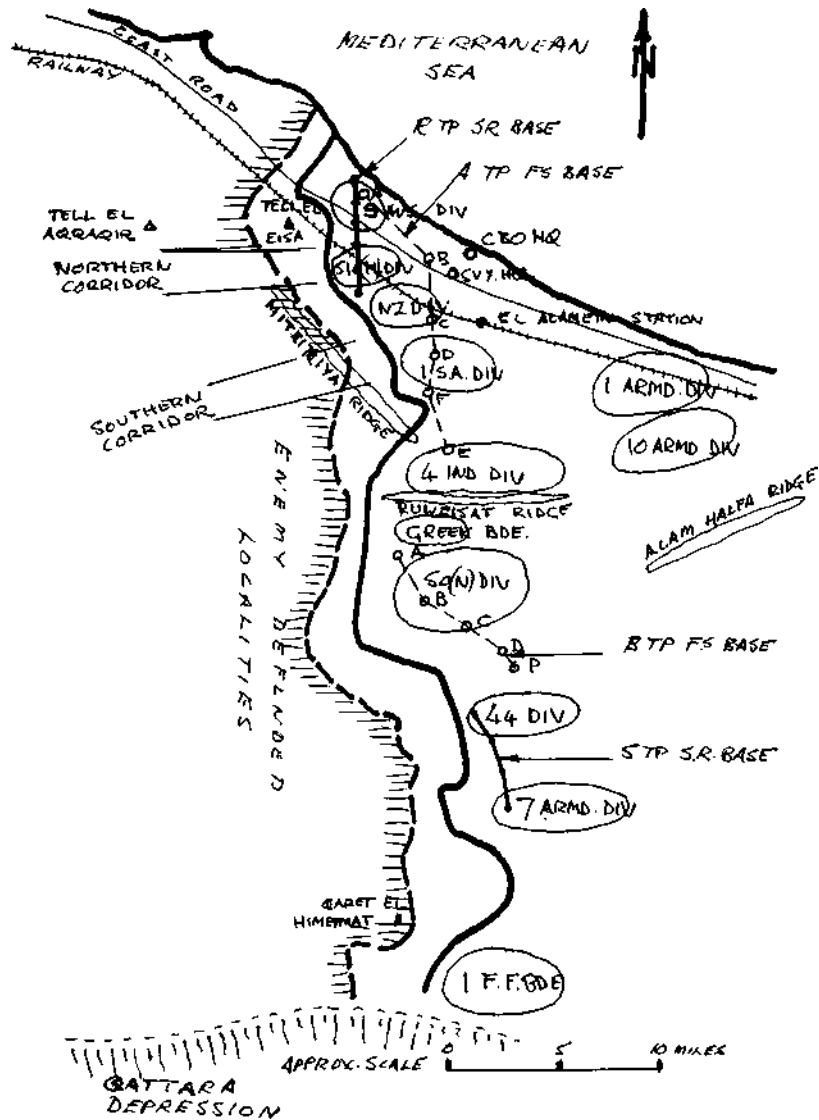
No. 2 Battery in the south had, of course, been newly formed from reinforcements from the UK - the original Flash Spotting, Sound Ranging and Survey Troops having been lost at Tobruk. As these new reinforcements consisted of surveyors, who had been trained in the UK in basic survey work as well as in flash spotting and sound ranging, they were immediately ready for active service in the Western Desert. This Battery was also supported by the R.H.Q. Survey Section.

The gun regiments served by the Survey Troops consisted of many new ones, as well as those that were already old friends, such as the 1 Field Regiment, 25 Field Regiment and 31 Field Regiment of the 4 Indian Division, 7, 64 and 68 Medium Regiments, the 74, 75 and 76 Field Regiments of 50 (N) Division, and the regiments of 9 Australian Division, 1 South African Division and 1 and 7 Armoured Divisions. The new artillery regiments were those of 44 division, 51 (Highland) Division, 2 New Zealand Division and the newly arrived 8 and 10 Armoured Divisions.

It was in this build-up that the potential of the Survey Regiment was first properly realised. The position was static which enabled all gun regiments to be surveyed on the permanent grid and flash spotting and sound ranging bases to be fully deployed as an important arm of the Corps Counter Battery Organisation. Two flash spotting and two sound ranging bases were deployed over the whole front. Some 300 miles of Don 8 wire were in use for sound ranging, flash spotting and general communications of the Regiment.

During this period, it was possible to concentrate as many as 10 or more different gun regiments on one enemy target, the total number depending on the range of the target. Different artillery programmes were prepared and introduced, which were given the names such as "Stonks", "Balls of fire" and "Murders". The artillery concentrations were so carefully arranged that the differences in the time of the flight of shells of each of the regiments involved on to a single target were calculated, thus enabling a target to be annihilated by rounds from all the Allied regiments involved arriving simultaneously. To this was added the tremendous discipline of the gun regiments, which resulted in a round of gun fire from each of 24 guns of a regiment sounding as though just one round was being fired. In this way, the enemy had no warning of the attack before the full weight of the bombardment was felt and the effect was tremendous, as can be imagined.

Although some artillery bombardments were carried out in this way before the battle started, most of the information about Hostile Batteries (H.B.s) was logged by the Counter Battery H.Q. and no action was taken to neutralise them. This was, of course, to build up a full picture of enemy locations so that a heavy counter battery programme could be carried out immediately before the major attack, to knock out the enemy artillery.



The El Alamein position

During this build up period the policy was one of stealth, or, in current language, a "low profile" was maintained. The increase in war material on the ground was the subject of elaborate camouflage arrangements. This, it was understood, was the subject of advice given by a gentleman called Jasper Maskelyne - a descendant of the famous illusionists, Maskelyne and Cooke. Tanks carried temporary super-structures to make them look like lorries, make-believe trucks were dotted about the area, so designed that, under cover of darkness at a later date, tanks could run underneath the mock vehicles, so preventing the enemy air reconnaissance from being able to detect the quick build-up in the number of tanks in the area. It was hoped thereby to maintain the vital element of surprise on the day of the attack.

Mention must be made at this juncture of the efforts of the Army to provide entertainment for the troops. The most appreciated was an E.N.S.A. (Entertainments National Service Association) party which came out to the Alamein position and, within range of the enemy guns, gave a number of shows. The party consisted of about half a dozen or so artists, both lads and lasses. This was really a "good show" in more ways than one. Everyone hoped that their brave effort was suitably recognised. The more famous artists, however, remained in Cairo where first class shows were staged for those on leave. These included George Formby, Sir and Lady Seymour Hicks, Alice Delysia and many others.

In the early part of the build-up period, before Monty started his well-known conferences to inform all of his intentions, new gun positions for the forthcoming battle were surveyed in, and it was interesting to note that, no doubt in the interests of security, only one officer in each gun regiment knew of these new positions. In one regiment it was the Commanding Officer, in the next the 2 i/c and the next, the Adjutant. Finding the appropriate officer was something of a difficulty experienced by survey troop commanders. On one occasion, Captain Ogden of 'Y' Troop, searching for the artillery of the Greek Brigade, found a Greek Unit in the vicinity of the location given to him, and he asked the officer in charge if he could tell him where their artillery unit was. The Greek officer took out his prismatic compass, looked through it and said, "Bearing 360°, 1,000 metres." After thanking the officer, Captain Ogden set off in a due northerly direction and, at about the right distance, he encountered another Greek Unit, but not an artillery unit. He asked again and another Greek officer took out his prismatic compass, looked through it and said, "Bearing 180°, 1,000 metres." On that reply, Captain Ogden gave up this line of investigation!

During this period of surveying in new gun positions, Captain Ogden came across a most interesting unit. This was occupying a large marquee containing complex looking radio equipment operated by some 20 signallers. The code name of the unit was 'Panther' and it was continually monitoring enemy radio messages.

In the weeks before D-Day of the battle, the flash spotting and sound ranging bases made a vital contribution to the information about H.B.s which was steadily being compiled by the Counter Battery Organisation. This Counter Battery set up was under command of Captain Edwards, who had a small group of officers and other specialists in his Unit. In addition to data from flash spotting and sound ranging, information about H.B.s came from aerial photographs, gunner O.P. registrations and other sources. In this theatre of war, of course, little came from espionage activity, which emphasises the ideal setting of the Western Desert area for a battle - apart from possibly a few Arab nomads there was no civilian population to worry about or to be hurt by the fighting.

The F.S. O.P.s on the two bases which were deployed were largely established on towers constructed of tubular steel scaffolding, as had been adopted in the Tobruk fortress.

When Monty developed his plan of attack, he held a number of conferences at different levels of command, to inform all of his intentions. In a Sunday Times paperback, entitled "Alamein and the Desert War", Monty states that, contrary to previous policy, "Orders were no longer to form the basis for discussion, but for action." This gives some credence to a story which went the rounds just before the battle, and this was as follows. At a conference of officers down to Brigadier level, at which Monty explained his tactics for the forthcoming battle, he finished his talk by asking, "Any questions?" It was said that one Brigadier, possibly with the intention of drawing himself to the notice of the new commander, got up and suggested some alternative approach. Monty asked, "What is your substantive rank?", to which the Brigadier replied, "Major, Sir." Monty then said, "You will assume your substantive rank as from tomorrow. Any more questions?" It is understandable that there were no more questions!

Broadly Monty's plan was to start the whole operation with a heavy concentration of artillery fire on the enemy H.B.s and on enemy ammunition dumps. This was to last 20 minutes, to be followed by a creeping barrage behind which the infantry would leave their slit trenches and

advance and crush the enemy forward defence positions. When this was achieved, the armoured divisions of X Corps were to pass through on defined routes and then hold the enemy armour off whilst the infantry methodically destroyed the enemy infantry divisions in their defensive positions. Monty called this the "crumbling" process. When this was achieved, the armour was then to break out and smash the enemy armour.

D-Day was fixed for 23rd October - when the moon would be full. This situation later became known as "Monty's moon". Moonlight, of course, assisted movement at night and this was essential especially in the first stage which was for the forward troops to occupy their assault positions in forward slit trenches on the night before - i.e. D-1 - and to lie doggo throughout D-Day until Zero Hour, which was to be 9.40 p.m. or 21.40 hours. The main attack was to be undertaken on the XXX Corps front, the brunt of the attack falling on 9 Australian Division, 51 (Highland) Division, 2 New Zealand Division and 1 South African Division. When the initial objectives were reached, the armoured divisions were to pass through these divisions in two corridors, 1 Armoured Division in the northern corridor and 10 Armoured Division in the southern corridor.

It was decided that 'Y' Survey Troop should be broken down and the survey sections attached to the Tac H.Q.s of two of the Divisional C.R.A.s. 'C' Section under Lt. L. 3. H. Berry, was attached, first, to the New Zealand Division and later to the 1 Armoured Division, and 'D' Section, under Lt. F. Hamer, was attached to the 51 (Highland) Division and later to the 10 Armoured Division. In this way, it was expected that the direct liaison between these sections and the Divisional Artillery would ensure survey data being provided quickly to the guns, as required. At a number of the main trig points within the Allied lines, survey beacons were erected, so that the mobile sections attached to the Divisional Artillery could fix themselves by a survey process known as resection.

There is a tradition, in the British Army at least, for Generals to issue a stirring message to the troops on the eve of an important battle. Monty excelled in these. The message issued by Monty on 23rd October, 1942, is reproduced below.

EIGHTH ARMY Personal Message from the ARMY COMMANDER

1. When I assumed command of the Eighth Army I said that the mandate was to destroy ROMMEL and his Army, and that it would be done as soon as we were ready.
2. We are ready NOW.
The battle which is now about to begin will be one of the decisive battles of history. It will be the turning point of the war. The eyes of the whole world will be on us, watching anxiously which way the battle will swing.
We can give them their answer at once, "It will swing our way."
3. We have first-class equipment; good tanks; good anti-tank guns; plenty of artillery and plenty of ammunition; and we are backed up by the finest air striking force in the world.
All that is necessary is that each one of us, every officer and man, should enter this battle with the determination to see it through — to fight and to kill — and finally, to win.
If we all do this there can be only one result — together we will hit the enemy for "six," right out of North Africa.
4. The sooner we win this battle, which will be the turning point of this war, the sooner we shall all get back home to our families.
5. Therefore, let every officer and man enter the battle with a stout heart, and with the determination to do his duty so long as he has breath in his body.
AND LET NO MAN SURRENDER SO LONG AS HE IS UNWOUNDED AND CAN FIGHT.

Let us all pray that "the Lord mighty in battle" will give us the victory.

B. L. MONTGOMERY,
Lieutenant-General, G.O.C.-in-C., Eighth Army.

The Alamein battle was code named "Lightfoot". As H-Hour approached, in the crystal clear night with a full desert moon shining, tension increased until small voices were heard shouting "Fire!" Then commenced the most impressive display of artillery fire yet seen in this War. The sky was filled with brilliant and sparkling flashes from the guns and the noise was awe inspiring. No doubt it was frightening in the extreme to those at the receiving end!

As the battle developed it became clear that the devolution of the survey sections to individual Divisions, although superficially attractive, did not enable the survey demands to be met and, on 25th October, two days after the start of the battle, the sections were regrouped as a Survey Troop. This centralisation was much more effective in providing gun regiments with the vital survey data and from this moment throughout the battle, all the gun regiments were surveyed in on the permanent grid. This increased tremendously the effectiveness of the artillery arm and made an important contribution to the success of the whole operation.

On this re-organisation the resection process was abandoned and the survey information was carried forward by means of triangulation from the permanent trig stations behind the Allied lines. As such triangulation proceeds, however, errors are accumulated and the survey data becomes progressively less accurate. In this instance, however, as the triangulation was being taken forward immediately behind the infantry, one of the trig points established by 'Y' Troop in the Alamein area nearly 18 months earlier was found inside the German defensive positions, which enabled the whole triangulation to be corrected. This proved to be of enormous assistance in maintaining the accuracy of the Allied artillery offensive. This trig point was one of the earliest that had been concreted in and referenced in the Troop records. This particular trig point was "Y 21", and consisted of an angle-iron set in concrete. It is surprising that the enemy had not taken any steps to destroy it!

Attacks made by the Divisions of XXX Corps had not created the corridors for the armoured Divisions to pass through by the evening of 24th October, so the armoured Divisions were called up to assist. By 25th October 1 Armoured Division in the northern corridor had broken through the enemy defences into the open and were being attacked by the enemy armour. In the southern corridor, however, 10 Armoured Division tanks were stuck on the Miteiriya Ridge and were being heavily counter-attacked. This was a critical moment and, although the Divisional Commander wanted to withdraw, Monty stuck to his plan and the Division was, later that day, through the enemy defences and out into the open. On the northern part of the front, the 9 Australian Division did tremendous work in the crumbling process against a position particularly strongly held by the enemy.

On 27th/28th October, there was some re-grouping of Divisions, to enable the break-through to be maintained, and this operation, called "Operation Supercharge", was launched on 2nd November. At first light on 4th November, Captain Ogden rendezvoused with Major Kellett at a tower occupied by "Nuts" F.S. O.P., which had been quickly erected in the Tel el Aqqaqir area, and, from the silence, it was clear the battle had moved on and the chase was afoot. The Tel el Aqqaqir area had been the location of the great tank battle on 2nd and 3rd November. When, on the 4th November, Captain Ogden reported to the C.C.R.A. XXX Corps, Brigadier Meade Dennis, the C.C.R.A. said that, "The Survey Troop did an excellent job of work. Without the survey that was available, it would not have been possible to put down the large Divisional concentrations on the enemy positions, which resulted in the show being as successful as it was." A reasonable testimonial!

Throughout the battle, flash spotting and sound ranging bases were deployed by the two Composite Batteries forward of their original positions as the advance proceeded. In total, some 250 H.B.s were located, 140 of these being included in the counter battery fire plan which opened the battle at 9.40 p.m. on 23rd October.

CHAPTER FOURTEEN

THE FINAL LAP OF THE BENGHAZI HANDICAP

When the break-out from the El Alamein position commenced, the C.O. decided that, in view of its greater experience, No. 1 Composite Battery should be the Battery to accompany X Corps. R.H.Q. was to move under command of XXX Corps.

The C.R.A. of the New Zealand Division, Brigadier Steve Weir, who had a New Zealand Survey Troop under his command, felt that it would be of considerable advantage if his Troop could be trained in flash spotting and sound ranging, particularly as his Division had on occasion to act in an independent role. In consequence, the M.G.R.A. at M.E.H.Q. Cairo requested the 4 Survey Regiment to provide a cadre of instructors for this purpose. This was done and a training programme embarked upon at Almaza, under the supervision of the C.O., Col. Whetton, leaving the 2 i/c, Major Cawthorne, in command of the Regiment. Major Cawthorne commanded the Regiment from 16th November, 1942 until 8th January, 1943, when the C.O. returned to the Regiment.

No. 1 Composite Battery, moving with the Tac H.Q. of X Corps, quickly passed through many of the well-known places in the Western Desert, such as El Daba, Sidi Haneish, Mersa Matruh, Sidi Barrani, Bardia, El Adem and so on, until, for the third time, Agedabia was reached - nearly the limit of previous advances. When the Battery was near Sidi Haneish on 8th November, it was learned that the Allies had landed in North Africa. This news gave the first real hope that the end of the North African campaign was in sight, and that the Benghazi Handicap was most likely on its last lap!

During this rapid advance, Monty paid frequent visits to the forward troops and an amusing outcome arose from one occasion when he called on 7 Medium Regiment. As was customary with desert troops, they were past masters at improvising for their comfort in the unyielding environment in which they found themselves. So far as 7 Medium Regiment were concerned, this included setting up a fairly elaborate chicken run when the opportunity presented itself - which, of course, yielded welcome eggs and even the odd bird to add to the somewhat monotonous bully beef and biscuit diet. The rather permanent appearance which this presented to Monty apparently gave him the impression that the Regiment's mobility was not what it ought to be and he ordered that the Regiment move every two days, whether the battle required this or not! How long this order operated for is not known but it certainly was not necessary - 7 Medium, chickens and all, could move at a moment's notice at any time - and the same applied to all the seasoned troops of 8 Army.

On 2nd December, No. 1 Battery arrived at Mersa Brega and came under command of 51 (H) Division. Survey work was embarked upon to provide necessary data for this position to be held. Shortly afterwards No. 2 Battery arrived in this area and both Batteries provided survey information to the gun regiments deployed, including 127 Field, 5 R.H.A., 64 Medium Regiment and 57 Field Regiment. 'A F.S. Troop also deployed a base. Whilst at Mersa Brega the Regiment was visited by a small group of senior R.A. survey officers from the School of Artillery, Larkhill, which included Lt. Col. H. H. Hemming, M.C., who was one of the survey enthusiasts in the Great War mentioned in Chapter 1 of this story. It was felt that he was duly impressed by the work the Regiment was doing in contributing to the success of the campaign, much of which was based on his original endeavours during the 1914-18 War.



The situation in this forward position was, at this time, rather weird and somewhat unsettling. It was understood that the Germans were in force immediately to the west, but there was virtually no visible evidence of this, nor any apparent enemy activity. Moreover, there was little information available as to the Allied plans. Had the full extent of the advance been reached yet again? Was another reconnaissance in force by the enemy once more to turn into a rout and escalate into a retreat towards the Delta? No, not this time! On 13th December the news came that Jerry had gone. No. 1 battery came under command of 7 Armoured Division and, on 15th December, the Battery moved westwards, passing the well known monument erected by Mussolini, where the Desert road crossed the Tripolitania/Cyrenaica border, which was christened by the Western Desert Force as "Marble Arch".

During the stay at Mersa Brega the accuracy of the survey carried out by 'X' Troop was brought into question. The R.E. Survey Section alleged that the survey was 3,000 metres out! Before this could be verified, however, the advance was on again. It is doubtful that 'X' Troop's survey was in error. Experience both before this incident and subsequently, when the R.A. Survey Troop work had been questioned, checks by the Survey Troop and by those challenging the survey showed that the original survey work carried out by 'X' and 'Y' Troops was correct.

On 23rd December, 'Y' Troop were in the Noflia area, some 50 miles west of Marble Arch, and came under command of 4 Light Armoured Brigade, which now formed the vanguard of the offensive, and their subsequent move was with 3 R.H.A., commanded by Lt. Col. Daniels.

As the advance proceeded, survey data was provided for the 3 R.H.A. and a battery from the 64 Medium Regiment, in a number of positions. These two units formed the artillery arm of the 4 Light Armoured Brigade. The survey data provided was largely based on astro fixes. One area where this was done was near Sirte (where Christmas Day was celebrated with a little pork and beans, kindly provided by 3 R.H.A.) at a position along a wadi called Wadi Tamet. 7 Medium Regiment and 57 Field Regiment, following with 7 Armoured Division, were also provided with survey data at this position. No action, however, materialised. The enemy were still retreating.

The enemy air force, however was very much in evidence. The Allied forces were continually subjected to dive bombing attacks although the R.A.F. fighters were continually present and, on a number of occasions, got amongst the dive bombers and Messerschmidts and shot down a number.

Survey information was also provided in the Sonda, Buerat and Wadi Chebir areas. In this latter area occurred another instance of questioning the accuracy of the R.A. survey: the South African R.E.s queried 'Y' Troop's survey, stating that it was in error by some 1,000 metres in northing and 800 metres in easting. Again, the R.A. survey was correct. On further checking, the South Africans agreed that they had forgotten to allow for a grid correction factor!

From the position of Wadi Chebir, which was held for some six days, 'Y' Troop moved forward with No. 1 Battery, which had caught up with the forward units. The general arrangements for the moves were, at nightfall, to form a leaguer - as had been done in the earlier advances, thereby protecting the soft vehicles during the hours of darkness. At first light the leaguer would be broken up so as not to form a target for the Luftwaffe. On one occasion, 'Y' Troop lost the Battery column, but proceeded forward and found a leaguer as night fell which appeared to consist of 146 Field Regiment and a few tanks. The Troop Commander of the gun regiment got on the radio link to Battery H.Q. and informed Major Kellett of where 'Y' Troop was. The radio link was marvellous. The radio operator commented upon this as, usually, radio links in the Desert were very poor and subjected to much interference, especially at night. Major Kellett informed the Troop Commander that, at first light, he should retrace his steps back down the route of the advance and re-join the Battery who were with 7 Medium Regiment. Dutifully, at first light, 'Y' Troop moved back from the leaguer and decided to have breakfast about 1 mile away. During this period they were appalled to witness the leaguer being heavily bombed by a number of J.U. 87s. After taking some time to investigate where the main leaguer was, it was discovered that during the night both leaguers had combined - no wonder the radio link was so good! It was fortunate for 'Y' Troop that the mistake had enabled them to avoid being bombed. There were, unfortunately, a number of casualties suffered by the Battery in that air attack.

The forward group then moved on the Beni Ulid and, on 20th January, took Tarhuna. During this operation, the enemy put up a fairly stiff fight and the columns were subjected to prolong shelling. By 23rd January, the column had reached Tripoli. Between 25th January and 4th February, the survey troop camped near Zuara, to the west of Tripoli, and contributed to the parade of 8 Army Troops inspected by Mr. Winston Churchill on 3rd February. The Troop's contingent consisted of Lt. L. J. H. Berry, Sergeant Potter and Gunner Lorrimer.

On 4th February 'Y' Troop was ordered to undertake survey work to fix 5 R.H.A. and F.S. O.P.s at Zelton, where again the enemy were putting up stiff resistance. Survey data was also provided near El Assa, where 'A' Troop established a flash spotting base and 'R' Troop a sound ranging base. The enemy finally withdrew and, by 15th February, the spearhead was at Ben Gardane, where bearing pickets were again fixed for the gun regiments and a flash spotting base deployed. The push continued to a place called Netafia, where the usual survey information was provided and, to the relief of No. 1 Battery, No. 2 Battery came up to take over for a spell.

No. 1 Battery returned to Tripoli on 19th February to enjoy a few days of rest. "A few" turned out to be correct, for on 23rd February orders were received to move forward again to Ben Gardane. At this time, Major Kellett left No. 1 Composite Battery to take up an appointment in India. This caused some re-organisation of commanders within the Regiment, which included Major G. Lewzey, a recent arrival in the Middle East, taking over command of No. 1 Battery, and Captain John Kemsley to command 'S' Troop of No. 2 Battery. Major Lewzey, however, was wounded whilst carrying out a reconnaissance at the Mareth line position and Captain Ogden, promoted major, took over command of No. 1 Battery. Lt. Hamer, promoted captain, took over command of 'Y' Troop.

The whole Regiment came together again at the Medenine position, which was forward of the

Mareth line, where it was expected the enemy would make a strong stand. Survey information was again provided in this position and a flash spotting base deployed. Here again, tubular steel towers were erected for a number of O.P.s. In the centre of the front, between the Matmata Hills and the coast, was a single hill which dominated the area. On this hill was located one of the flash spotting O.P.s. One day, Monty came up to the O.P. with his Corps and Divisional Commanders, to explain to them his tactics. When this site conference was completed, Monty came over to the O.P. and asked what the men were doing. The O.P. Commander explained to Monty that they were flash spotting. During this encounter one of the lads in the O.P. plucked up courage to ask Monty for his autograph. This Monty complied with, saying, "You want to hang on to this - it will be worth a bit in a few years' time!" A typical comment of Monty's which went down well with the men.

The forward position at this time was held by XXX Corps, which comprised the 7 Armoured Division, 51 Highland Division, 2 New Zealand Division and 201 Guards Brigade. 7 Armoured Division comprised 22 and 23 Armoured Brigades, with 4 Light Armoured Brigade and 131 Brigade. Monty expected Rommel to make an attack of some sort on to the Allied position and so he did. On 6th March Rommel attacked with his 10, 15 and 21 Panzer Divisions and the 90 Light Division. The Allies were well prepared - this was the first time that the new 17-pounder anti-tank gun was used, and the units using this weapon, together with the other gun regiments, had a field day. At the end of this day, 52 German tanks had been knocked out and Rommel retreated. The Desert Air Force also did sterling work in this battle.

Just before this battle, a new organisation, known as 5 Army Group R.A. (A.G.R.A.) came into action. The role of this group has been explained in an earlier chapter but, in essence, it replaced the old Corps Command Medium Artillery (C.C.M.A.). At Medenine, 5 A.G.R.A., which was under command of Brigadier Toe Elton, earlier C.O. of 7 Medium Regiment, consisted of 57, 58 and 121 Field Regiments and the 7, 51, 64 and 68 Medium Regiments, in addition to the H.Q. and the counter battery organisation.

Some re-organisation of the command set up within the Regiment now took place. Captain B. Abbott, the Adjutant, went on a staff course in Palestine and Lt. T. G. Boaz, who commanded R.H.Q. Survey Section, became Acting Adjutant and was promoted to Captain. Lt. J. D. Blackburn took over the R.H.Q. Survey Section. On his return, Captain Abbott became officer commanding No. 2 Composite Battery. Major B. A. Curtis was promoted to second in command when Major R. W. C. Cawthorne, the existing 2 i/c, left the Regiment on 10th April, 1943, to take over command of the 1st Survey Regiment in P.A.I. Force (Persian and Iraq Force).

Shortly after his reverse at Medenine, Rommel returned to Germany, a sick man, and General Messe took over on this front, the enemy forces here being re-constituted as the 1st Italian Army. Although there were some Italian Infantry in the force, it largely comprised the old German formations of 15 and 21 Panzer Divisions and the 90 Light Division. From Medenine they fell back to the prepared defences of the Mareth line. The Allied forces at this position were strengthened by the arrival of the 50 (N) Division and the 4 Indian Division. On 16th March, the Guards Brigade made an attack on the upper course of the Wadi Zig Zaou, but this was only partly successful. This river valley, widened and deepened by the Germans as a tank obstacle and protected by a complex system of wire, minefields and pill boxes, was a formidable position to attack. This was to be the objective of XXX Corps in an attack to be launched 20th March.

The opening barrage of the attack commenced at 2230 hours on the 20th March. It lasted for half an hour, after which the infantry attack by 50 (N) Division began, the Division quickly securing all its objectives. However, the positions gained proved to be difficult to hold and after the initial success little progress was made. On the 22nd March 15 Panzer Division attacked in heavy rain and 50 (N) Division had to withdraw.

On the 23rd March, Monty changed his plan and decided to break the position by a left hook to the south and west of the Matmata Hills. This left hook was to be undertaken by X Corps under

the command of Lieut. General Horrocks and comprising 1 Armoured Division, 8 Armoured Brigade and General Freyburg's New Zealand Division. X Corps' main objective was to dislodge the enemy forces which surrounded the town of El Hamma, which consisted of 21 Panzer Division and 164 Division, thereby outflanking the enemy troops holding the Mareth position. The attack on the 21 Panzer Division was launched during the hours of darkness - which was a unique and entirely new situation for a tank battle. By 28th March X Corps captured El Hamma and the Mareth line was outflanked. H.Q. Survey Section provided the survey support to this left hook operation, and did some excellent work for gun regiments. Its commander Lt. J. D. Blackburn was awarded the M.C.

The enemy defensive line at Mareth out-flanked, 50 (N) Division was in the town itself on 28th March, 51 Highland Division over the Mareth - Zarat Road and 4 Indian Division and 7 Armoured Division in Toujane, a town on the left flank. On 29th March, Gabes fell. Unfortunately X Corps was held up near El Hamma by some vicious German counter attacks which gave the main body of the enemy sufficient time to withdraw and, once again, avoid being encircled.

Reference to the effectiveness of the artillery support is made in the history of the East Yorkshire Regiment. To quote, "As a preliminary - in order to 'soften it up' - so that the infantry company could go forward - five Regiments of Artillery and one Company of the Divisional machine gun Battalion were ordered to turn their fire upon the enemy's position... Although the artillery support accorded for the softening up of the Mareth line post was more than usually lavish, it is interesting to note that 120 guns, each capable of firing 10 rounds a minute ... could without difficulty be devoted to a one-company advance."

The enemy fell back to a position along the Wadi Akarit, where the high ground came close to the coastline. Here, Monty adopted a new tactic: to attack silently and at night, without a moon. This was launched on 5th April by the 2 Gurkha Rifles of the 4 Indian Division, and took the enemy completely by surprise. Some gory tales were told of the effectiveness of the Gurkha's favourite weapon, the Kukri! It secured one of the peaks on the high ground, known as Jebel Beida. At 4 a.m. on the morning of 6th April, after a 15 minute barrage, a three Divisional attack, comprising 51, 50 and 4 Indian divisions, was launched. Although the enemy attempted to counter attack, complete victory ensued and by nightfall the enemy were in full retreat once more. Here again, No. 1 Battery took a major role in providing gun survey services.

On the evening before the attack, a group of 53 U. 88s flew from south to the north over the Allied lines, bombing and strafing. Before they managed to reach the safety of their own lines every one fell to the Allied Bofors A-A defences - a splendid example of the accuracy and effectiveness of the L.A.A. Regiments in the Allied defences.

On 10th April, Sfax was entered and Sousse was reached on the 12th. The enemy then fell back to a defensive position near Enfidaville, where again the necessary survey data was provided, and sound ranging and flash spotting bases deployed.

From this point the main action took place on the 1 Army front, the initial contact between 8 and 1 Armies having been made just after the Wadi Akarit battle. 1 Army was reinforced by 7 Armoured Division, 1 Armoured Division and 4 Indian Division from the 8 Army. The 8 Army force comprised 50 Division, 51 Division and 2 New Zealand Division, plus 8 Armoured Brigade, together with some Free French Forces. The attack on the 1 Army front was launched on 19th April. This eventually culminated in the complete destruction of the enemy forces in North Africa, Marshal Messe surrendering unconditionally on 13th May.

In October, 1942, the Prime Minister, Winston Churchill, in his role as Minister of Defence, circulated a note to his commanders on the importance of the artillery arm. The note commenced in this way:

"Renown awaits the commander who first in this War restores Artillery to its prime

importance upon the battle field, from which it has been ousted by heavily armoured tanks."

The note concentrated on close fighting between enemy tanks and field artillery, but the Prime Minister stated in his History of the Second World War that at Alamein, renown had certainly attended Montgomery's restoration of artillery to its position on the battlefield.

In the official history of the 4 Indian Division, the effectiveness of the artillery was particularly referred to in the battle for the Garci feature during the attack at Enfidaville in April, 1942. The reference was to the assistance that could be given to infantry attacks through the very efficient fire control system which had been evolved since Alamein. To quote the passage:

"For this action, the three Divisional Regiments were reinforced by four other Field Regiments, three Medium Regiments and one troop of the newly arrived 17-pounder antitank guns. In all, this gave Brigadier Dimoline no less than ten regiments (222 guns) of Field and Medium Artillery, and by calling upon flanking divisions to assist under the very efficient fire control system which had been evolved since Alamein, thirteen regiments (294 guns) were available for emergencies. Scattered back among grain fields, in the valleys between rolling ridges, this powerful force awaited for the hour when they could intervene with devastating power upon behalf of the sorely tried infantry. The latest theories of artillery support maintained that a thin barrage was useless, and that shell fire dribbled over an area was a waste of time and money. To be effective, a barrage must be so tight that a shell would fall in every ten yards of target. But no barrage could match the deadliness of concentration shoots in which a staggering weight of shell was cast upon a comparatively small area. Such targets, if pinpointed and given code names, could be brought under an inferno of fire which must destroy all resistance. The Divisional and supporting artillery could pitch high explosive at the rate of more than eight tons in every sixty seconds, and could switch from one target to another in five minutes or less. Such uncannily complete support for the infantry had involved months of patient planning and training, and it likewise required artillery officers to go forward to the most exposed positions, and with the greatest daring select targets and report upon them. So then the great test came at Garci, the artillery took over the battle in such manner that not only did the infantry never lose an inch of ground, but the enemy were so dazed and shocked by their ordeal that in the end they had no fight left in them."

This co-ordination of individual gun regiments, which was achieved by the survey work of the 4 Survey Regiment, indicates the magnitude of the contribution made by the efforts of the Regiment towards the success of the battles in which it was involved.

Before closing this chapter, one of the efforts of the welfare side of 8 Army is worth recording. Shortly after hostilities ceased on the 8 Army front, XXX Corps arranged for a cinema in Sousse to be opened up and regiments were invited to send parties to the show - the objective being to provide some relaxation after the months of battle which had been endured by everyone. When the first audience had settled themselves down to the anticipation of a pleasant cinema show - surprise, surprise - the film was "Desert Victory"! Although everyone agreed it was a first class film (and, of course, it had some additional attraction in that the boys could see themselves on the silver screen) and that the administrative effort in producing such a fine film in so short a time was admirable - it was felt that a film of the Ziegfeld Follies might, under the circumstances, have been more appropriate. In fact, it was suggested that American troops who watched the film in its entirety would be eligible for the Purple Heart!

CHAPTER FIFTEEN

SICILY - JUNE TO OCTOBER, 1943

After the victory had been achieved in North Africa, the Regiment moved to the Sfax area. A rest camp was set up on the coast and, over a period of some six weeks, all members of the Regiment spent at least a week in the camp. The situation was ideal -the best that could be provided in the circumstances, with a beautiful Mediterranean beach on the spot. Some local French colonialists also assisted and made a civilian contribution to the whole scene.

During this period the opportunity was taken to contact the 5 Survey Regiment serving with the 1 Army. There were two survey regiments with 1 Army, the 5th and the 8th. The 5th was under command of Lt. Col. Wedgwood who, of course, had been one of the original 4 Survey Officers. On this visit, Major Ogden's driver swapped two bags of Alamein sand (these sand bags were laid on the floor of trucks to afford some protection in the event of running over an enemy Teller mine!) for 300 or 400 Players cigarettes. This was considered to be a good bargain! One wonders if those bags of sand are still fondly preserved as a souvenir!

Intensive training now commenced, together with calibration shoots, using the F.S. Troops, for the gun regiments in the area. One of the most interesting and, at times, annoying items of training was the process of loading transport in reverse into L.S.T.s (Landing Ship Tanks). Drivers would try to look backwards and not trust the signals being given to them in front - with dire consequences. However, the trick was finally mastered. This item of training, of course, gave some indication as to what sort of an operation the Regiment was likely to be next involved.

On the 4th June, a Regimental conference was held and information was given about future operations. This was to be the invasion of Sicily. An invasion by sea was a new concept for Desert troops, which involved the problem of waterproofing vehicles, instruments, arms and other stores. The Regiment was again to support XXX Corps in this invasion, the Corps consisting of 1 Canadian Division on the left, with 51 (H) Division on the right. XXX Corps was again to be part of 8 Army which also included XIII Corps, to land on the right of XXX Corps. 8 Army was to be accompanied by 7 United States Army on the left of XXX Corps. The landings of the two armies extended from Syracuse on the right to beyond the town of Gela on the left. Immediately to the right of 51 (H) Division was 50 (N) Division, both Divisions landing on D-Day. 50 (N) Division's initial objective was to secure Syracuse whilst 51 (H) Division was to advance inland to Caltagirone. D-Day was to be 10th July and the operation was supported by an air-borne invasion, 1 British Airborne Division, using towed gliders which, it will be remembered, was something of a disaster as many gliders were unhooked too far out over the sea and never made land-fall.

At this time, the designation of the two Batteries in the Regiment was changed; No. 1 Composite Battery became A4 Battery and No. 2 Composite Battery B4 Battery. Immediately after the conference on 4th June, B4 Battery left the Regiment, which was concentrated in the Sousse area, for 51 (H) Division near Bougie. Here, this Battery carried out sea landing exercises with the Division in preparation for the invasion. Meanwhile the remainder of the Regiment, that is R.H.Q. and A4 Battery, was organised into light scale parties for the invasion and similarly undertook sea landing exercises.

On 20th June, movement orders were received which covered the move of the light scale parties of R.H.Q. and A4 Battery to Malta. The light scale parties of B4 Battery were to leave Bougie with 51 (H) Division invasion forces to sail directly to Sicily. The remainder of the Regiment stayed in Sousse.

consisted of 51 (H) Division, which were accompanied by survey personnel of B4 Battery, the Battery being under command of this Division. A4 Battery, with R.H.Q., disembarked on D+4, 'Y' Troop being immediately detached and put under command of 1 Canadian Division, which had arrived directly from the UK. R.H.Q., with 'A' F.S. and 'R' S.R. Troops remained under command of 5 A.G.R.A. and in close liaison with C.C.R.A. XXX Corps.

The initial landing on this sector was virtually unopposed and the advance inland was swift. The first check was at Vizzini, where F.S. and S.R. bases of B4 Battery were deployed and gun regiments put on the permanent grid. Vizzini was quickly captured and 51 (H) Division moved towards Scordia. 1 Canadian Division moved to the left towards Caltagirone. B4 Battery remained under command of 51 (H) Division whilst 'Y' Troop were joined by the remainder of A4 Battery, which then came under command of 1 Canadian Division.

B4 Battery F.S. Troop and S.R. Troop deployed for a 51 (H) Division attack on Scordia on 16th and 17th July, which was successful. Later, the Division was held up on the line of the River Dittanio, where both bases were again deployed.

The Canadian Division advanced from Caltagirone and Piazza Amerina to Leonforte and Agira. F.S. and S.R. bases were deployed to cover each action fought and the gun regiments supplied with trig data by 'Y' Survey Troop.

At this stage, 78 Division came into action, between 1 Canadian Division and 51 (H) Division. This Division had been with 1 Army in the North African Campaign. 78 Division attacked Catenanuovo and advanced towards Centuripe, from the south. Although consisting only of light scale parties, the Regiment at this time was supporting three infantry divisions as well as the artillery of 5 A.G.R.A. Centuripe was captured by 78 Division, which also took the town of Regalbuto. This was on the 6th August.

The country was completely different from the sort of topography the Regiment had experienced in North Africa. It was much more mountainous - more like Eritrea. The deployment of flash spotting and sound ranging bases in this kind of country was most difficult and, so far as flash spotting was concerned, the use of a technique known as the short base had, on a number of occasions to be adopted. This, as the name implies, is founded on a short base of, say, 300 metres, relying on 2 O.P.s alone. The fact that there were only 2 O.P.s in this system and the angles of intersection were very small, due to the limited length of the base in relation to the distance of the target, made the resultant locations very doubtful. However, in the circumstances this method was the best possible.

The Sicilian towns were most intriguing, being located in nearly every case on the tops of hills, and reached by winding roads up the steep slopes of the hills. These were very difficult to attack and deploying anything like a reasonable flash spotting or sound ranging base was a nightmare.

Contact was made on 31st July with the Regiment's opposite number in 1 U.S. Division. This was with the Flash and Sound Unit of the 1 Observation Battalion of 13 Field Artillery Organisation. This survey battalion was commanded by Colonel Ellinson. The American set-up was very similar to the British Counter Battery Organisation, except that the whole of the actual counter battery work was done by the survey battalion. The battalion was responsible for providing survey data for three field artillery battalions equipped with 105 mm guns and seven battalions equipped with 155 mm guns. In a number of ways, however, their customs were different from the British - in particular their habit of having a tin of mixed fruit with their bacon and eggs for breakfast - all on one plate - was an example!

With the Americans advancing on the left, 78 Division advancing around the western slopes of Mount Etna and 51 (H) Division and 50 (N) Division, now under XIII Corps, on the eastern side of Mount Etna and along the coast, the enemy was pressed into the Messina peninsula. The Allied advance to Messina, via a single coast road, was obstructed by considerable demolitions and, at

one time, the advance could only proceed by the forward units of the attack being ferried by L.C.T.s (Landing Craft Tanks - a vessel much smaller than an L.S.T.) along the coast, thereby circumnavigating the demolitions on sections of the road. 'X' Troop was included in one of these marine movements.

Finally, the enemy resistance collapsed and, on 19th August, the Regiment found itself in Messina. Here XXX Corps, along with U.S. forces, deployed their gun regiments with flash spotting and sound ranging bases overlooking the Straits of Messina, as a preliminary to launching an attack on the Italian mainland. Opposite Messina is the town of Reggio, which was the main target for artillery fire during this period.

R.H.Q. set up a fine H.Q. on the hills overlooking the Straits, and this H.Q. was shared with 5 A.G.R.A. D-Day for the attack on the mainland was 3rd September and prior to this, the usual hostile battery data were collected and the C.B.O. made out a counter battery fire plan. The total fire power for covering this 8 Army attack mounted to some 100 medium and heavy guns and about 500 field guns. The attack opened at 3 a.m. with the usual counter battery gun fire. Guns firing tracer along fixed lines provided a guide for the ships crossing the straits. The code name for this attack was "Baytown".

H hour was preceded by the assembly of many officers and press correspondents at the joint 5 A.G.R.A./4 Survey Mess to witness the attack from the excellent viewpoint provided by the Mess. Although the viewpoint was excellent, apart from the artillery fire, it was difficult to see really what was happening. Generally, however, it was an interesting party and a good time was had by all.

By 5th September, the invasion of the mainland had moved forward out of range of the flash spotting and sound ranging bases at Messina and the Regiment was stood down. There followed a period of rest and training until the middle of October, when an advance party of the Regiment left for the UK.

The Sicilian Campaign, from a survey standpoint, was not really a howling success, at least from the point of view of the location of hostile batteries. The terrain, except in the valley of the River Dittanio south of Catania, did not lend itself to the easy deployment of flash spotting and sound ranging bases in the traditional way. In the Dittanio Valley, however, reasonably long bases were deployed, with better results. Similarly, the time available enabled good bases to be deployed at Messina to cover the landing on the mainland.

On the left flank of the advance, that is with A4 Battery, four sound ranging bases and 14 flash spotting bases, all short bases, were deployed during the campaign. In total only 15 locations of enemy batteries were made. On the right flank, that of B4 Battery, eight sound ranging and nine flash spotting bases were deployed, obtaining a total of 62 locations, the majority of these from the bases in the Dittanio Valley.

The four flash spotting and sound ranging bases set up in Messina obtained 34 locations. Although the Counter Battery information was disappointing, the work done by the survey troops enabled co-ordinated fire of the Allied artillery to be maintained. Special mention of this was made by both the C.C.R.A. XXX Corps and Colonel Stansfield of 7 Medium Regiment.

Shortly after the invasion of the mainland had been successfully launched. Monty held an investiture in the main square in Messina. This was a very formal affair. Full contingents from 51 Field, 7 Medium and 4 Survey Regiments were paraded. In the centre was a small group of officers and men who had been awarded decorations during the Western Desert Campaign, amongst whom were Captain Hamer and Major Ogden. Unfortunately for Major Ogden, he had been involved in something of a hectic party in the R.H.Q. Mess the night before and felt pretty rough the following morning. The M.O. prescribed a brandy to assist - but this did not improve matters. At any rate, he looked somewhat the worse for wear on parade. The time for Monty's arrival was about 11 a.m. and the whole parade was formed up about half an hour before Monty's

scheduled arrival. As usual, the sun was fierce, which did not assist. Moreover, Monty, believe it or not, was about half an hour late. On his arrival, the name of each recipient of a gong was called out and he had to climb about 20 or 30 steps to where Monty stood, to receive his ribbon. Eventually Major Ogden's name was called, and he marched up the steps to Monty. Monty pinned the M.C. ribbon on his shirt front, and said, "And how long have you been in the Middle East?" Major Ogden replied, "Nearly three years, Sir." Monty said, "Feeling quite fit?" Major Ogden said, "Yes, Sir (swallow). Quite fit."

Some three months later, after the return to the UK, Major Ogden was detailed to parade with half a dozen men of the Regiment at a large assembly of troops representing Regiments about to take part in the Normandy invasion. There must have been over 2,000 men present. These were formed up in a large square and Monty came round to inspect each detachment. On reaching the 4 Survey group, he said to Major Ogden, "Well - feeling quite fit now?" This incident exemplifies Monty's amazing memory. It might be, however, that two things could have assisted his recollection. These were, first, that the whole parade was turned out in great coats with green webbing, in accordance with the orders received, whereas the 4 Survey contingent's webbing was brilliant white, indicating, of course, service in the Middle East. Also, the only officer on parade wearing a light coloured British wam, other than Monty himself, was Major Ogden.

The interlude which followed the stand down on 30th September was enjoyed by all. One of the features of the period was the activity of the Regimental concert party. Their first production was a parody on "Maria Martin - or the Murder in the Red Barn", with an entirely original script. One of the acts involved a "major" and, during rehearsals, while he was waiting for a call, the C.O. spotted him. The C.O. said, "Good morning, can I help you?" The "major" spluttered and said, "Please Sir, I'm only Gunner Smith". This incident is also reported in a book published on the history of 5 A.G.R.A., in which it was stated that the incident gave considerable credit to the props department of the concert party.

There was also a revue staged, called Siciliana. In this it was hoped to persuade Miss Eve Beck to appear as guest artiste -but she did not really fit into the riotous rehearsals that were held and dropped out. Eve Beck had been a well-known croonette before the war with, it is believed, Jack Payne and the BBC Dance Orchestra, and married an Italian Count and was now Countess Caneva. She and her husband had lived in Messina. She did, however, give some shows with the E.N.S.A. party in Messina.

Whilst on the subject of film and stage personalities, it should be mentioned that when the main body of the Regiment was left behind at Sousse in North Africa and before it left to re-join the light scale parties, they undertook various duties in the area, one of which involved transporting Vivien Leigh, Mitzy Green and Stanley Holloway in the 2 i/c's staff car from Sousse to Tunis. The 2 i/c's driver had an amusing journey - not the least on the desert crossings being the task of finding suitable terrain to enable the passengers to meet the needs of nature!

At about this time Major Curtis, the 2 i/c, left the Regiment to return to the UK on the Python scheme for demobilisation, as did the R.S.M., Mr. "Geordie" Calder. Major Ogden was appointed second in command and Captain Balfour was promoted to Major, becoming Battery Commander of B4 Battery, Major Abbot transferring to A4 Battery. B.S.M. Boss became R.S.M.

The return to the UK commenced with an advance party leaving Augusta on 19th October, 1943. This party travelled with an advance group of 51 (H) Division in S.S. Dunottar Castle, sailing in convoy through the Mediterranean past Gibraltar and finally arriving at Gourrock, on the Clyde, on 26th October. Life on the Dunottar Castle was vastly different from the outward bound voyage in the Reina de Pacifico, especially from the officers' point of view. Instead of using the civilian accommodation as it stood, as on the Reina, officers had to sleep four in a small single bunk cabin. Food was dished up without any selection and, worst, the ship was dry. This latter difficulty was, to some extent, moderated by the fact that Burns Night occurred during the voyage and the O.C. Troops asked for a special dispensation on the drinks ban because of this. The Chief Naval

Officer relented and allowed the bars to be opened for one hour. One group of four Scotsmen had 16 double gins four times, 16 double whiskeys four times and 16 pints four times during this period - the hard stuff just being poured into empty bottles, to be used for the rest of the voyage.

The advance party was followed by the rest of the Regiment, which left Syracuse on 27th November, 1943, and arrived in Liverpool on 9th December. The main regimental group stopped en route in Algiers at a camp just outside the town where conditions were atrocious. The M.O. advised everyone to take on board as much alcohol as possible to prevent infection from the various diseases rife in that area. This advice was welcomed by all!

On sighting the shores of Britain again after three years overseas, the main thing uppermost in the minds of nearly everyone, apart from looking forward to meeting loved ones, families and friends, was the prospect of sitting in a British pub and sinking a pint of British draught beer!

CHAPTER SIXTEEN

THE NORTH WEST EUROPEAN CAMPAIGN: THE INVASION OF NORMANDY

On arrival at Gourock, the advance party travelled by train to Manningtree in Suffolk. Here, accommodation and billets were organised to receive the Regiment, which arrived on 10th December, 1943. Regimental H.Q. and the H.Q. Survey Section were stationed at Dedham - one of Constable's subjects - with 47 and 48 Batteries at Manningtree. Immediately on arrival, the majority of the men went on leave, only a small holding party remaining behind. In the same area were located other regiments of 5 AGRA, with the Army Group R.A. H.Q. in Felixstowe.

On the 26th December, a message was received by the 2nd in Command for the C.O. to attend an important conference at XXX Corps H.Q. in London just before New Year. The C.O., on leave at this time, was contacted and he authorised the 2 i/c to attend on his behalf, together with the Adjutant, Captain Boaz. Commanding Officers and other regimental representatives all gathered at XXX Corps H.Q., and there they learned that the next job was to organise the Corps into Light Scale Parties. The immediate reaction was, "... So we have to do this job (the invasion) as well!" From that moment, life was extremely hectic in organising this streamlined establishment and in training and obtaining new equipment and stores.

A new piece of equipment for sound ranging now appeared - the four pen recorder - really a miniature sound ranging system which will be described in more detail later. At this time the H.Q. Survey Section was enlarged into a full Survey Troop and it was equipped with flash spotting binocular theodolites for air burst ranging: the Troops could now act as an independent unit with some flash spotting capability.

In January, 1944, the Regiment began to be brought up to full strength in personnel and equipment. Training was initially on an individual basis, followed by spells at the Survey Training Unit at Larkhill. There followed exercises carried out with different Divisional Corps formations.

Particularly during the Sicilian Campaign - largely due to the rapid movement, allied to very difficult topographical conditions - the need for a high level of radio communication became evident. Radio had been used for normal communications and for flash spotting in Eritrea but there was a vital need for radio facilities at every level of communication, including both flash spotting and sound ranging. The necessary equipment became available during the training period before the invasion of Europe, and the use of the radio became an important component of the training exercises.

Instructions in waterproofing both vehicles and equipment were issued, which ensured that every driver could fully waterproof his vehicle and all tradesmen became capable of waterproofing their equipment. This operation had been undertaken in Malta and Africa prior to the invasion of Sicily, but the extent to which this was carried out within the Regiment was now greater. The efficiency of the waterproofing technique was thoroughly tested in the river at Dedham, which proved ideal for the purpose, being reasonably easy of access by vehicles and about 4 to 5 feet deep. The extremely low percentage of "drowned" vehicles during the actual landing testified to the thoroughness of this training.

The training exercises included three very comprehensive operations with 50 (N) Division. Two of these were given the code names "Smash III" and "Smash IV". These were invasion exercises which involved a survey party, under one officer, in the first waves of the invading troops. The third exercise, called "Fabius", was a marshalling and embarkation exercise held at Tilbury, in which the Regiment as a whole participated.

Large parts of the southern counties of England were sealed off some two to three weeks before the invasion took place and the Regiment, together with other Regiments of 5 AGRA, had moved

into this area and were located near Godalming. Leave was still permitted, but from 31st May all camps in which there were troops destined for the assault were completely sealed. From that date, all those involved in the actual invasion, known as Operation "Overload", were fully briefed. The naval part of the assault, i.e. the work of the Navy in carrying the troops across the Channel to the beaches in Normandy, was code named "Neptune" which was, on most documents, preceded by the word "Bigot", which indicated the high level of security.

For the invasion, the Regiment was broken down into nine parties and the programme provided for some 75% of the Regiment to land by D+10. The parties were as follows:-

<u>DAY</u>	<u>PARTY</u>	<u>NUMBER OF MEN</u>
D	Beach survey party, 'Y' Troop, 47 Battery Tactical H.Q., 47 Battery Light Scale Party, 'A' Flash Spotting and 'R' Sound Ranging Parties, 47 Battery	1 officer, 13 ORs 1 officer, 1 OR 3 officers, 37 ORs
D+1	Second phase, 47 Battery HQ Second phase survey, flash spotting and sound ranging, 47 Battery Tactical RHQ	1 officer, 4 ORs 4 officers, 52 ORs 2 officers, 12 ORs
D+2	Third phase 'R' Sound Ranging Troop, 47 Battery Tactical HQ, 48 Battery Light Scale Survey Party, 'X' Troop, 48 Battery	No officers, 10 ORs 2 officers, 6 ORs 3 officers, 30 ORs
D+3	Third phase 47 Battery HQ Third phase 'A' Flash Spotting Troop, 47 Battery Fourth phase 'R' Sound Ranging Troop, 47 Battery Second phase 48 Battery HQ First phase 'S' Sound Ranging Troop, 48 Battery (including 4 Pen Recorder Section)	No officers, 4 ORs 1 officer, 48 ORs No officers, 7 ORs No officers, 6 ORs 3 officers, 58 ORs
D+4	Second phase HQ	3 officers, 22 ORs
D+10	Fourth and fifth phases 47 Battery HQ and 'A', 'R' and 'Y' Troops	2 officers, 53 ORs
D+12	Second and third phases 48 Battery HQ, 'B', 'S' and 'X' Troops	1 officer, 43 ORs
D+17 onwards	Balance of 47 Battery onwards Balance of 48 Battery Balance of RHQ	No officers, 13 ORs No officers, 21 ORs 2 officers, 36 ORs

The R.A. XXX Corps Operation Order No. 1 included the following orders for the Regiment:

"Para. 12. Survey. Initially regiments will obtain fixes from 1/25000 Map, checked by block plot on air photos.

Tasks of the 4th Survey Regt. R.A.

- (a) Survey - Priority of Tasks
 - (i) Bearing and fix for L.C.G.'s (Landing Craft Guns)
 - (ii) Bearing for 50 (N) Div. Arty, and 7 Armd. Div. Arty.
 - (iii) Bearing and fix for HAA troops
 - (iv) Bearing and fix Corps Arty.
 - (v) Establishment of theatre grid in conjunction with I Corps and V U.S. Corps
- (b) Sound Ranging - Priority for deployment
 - (i) Area South West of BAYEUX
 - (ii) Area South of ST. LEGER
- (c) Flash Spotting - Priority of Tasks
 - (i) Long base for flashes - priority as for Sound Ranging
 - (ii) On gaining contact - short bases for information as required by CRA 50 (N)Div."

As it is well known, the Commander-in-Chief, General Eisenhower, finally decided to delay D-Day for 24 hours and the operation was launched on 6th June, 1944, the General taking a calculated risk with the weather, which was far from encouraging. H-Hour, the moment the landing was to take place, varied over the front from 6.30 to 7.55 a.m.

There had been much discussion in high places as to when H-Hour should be. The alternatives were, of course, whether the attack should be made during the hours of darkness or during daylight. Both alternatives possessed advantages and disadvantages, the major factor in favour of darkness being the element of surprise. The disadvantages of a night attack, however, outweighed the advantages and H-Hour was selected to be shortly after dawn.

The main reasons in favour of this time were that recognition of beach landing points would be easier, there would be less chance of mix-ups amongst the considerable number of ships making up the invasion convoys and that, initially, the elimination of enemy strong points would be much more effective. The selection of this time also enabled the small survey parties landing at about H+2 hours to become effective immediately, although in the outcome smoke from grass fires impeded the work in the early stages.

The invasion was preceded by heavy bombing, some of which was aimed at bridge crossings on rivers surrounding the Normandy area, on which enemy supplies to the battle area depended. In addition to the beach landings, airborne attacks were launched by 82 and 101 U.S. Airborne Divisions on the American right flank, and by 6 British Airborne Division on the British left flank. To assist in aircraft recognition all Allied planes in the invasion operation were painted with a thick double white line around the fuselage and around one of the wings.

The invasion front extended from Ouistreham in the east to the base of the Contentin Peninsula in the west, the British forces being on the left flank and the American on the right. The whole operation was controlled by 21 Army Group under General Montgomery, the British forces comprising I Corps, with 3 (British) Divisions, and XXX Corps, whose leading elements were units from 50 (N) Division and 3 Canadian Divisions. The American Divisions, of which there were three, were 1 and 29 Divisions, under V U.S. Corps, and the 4 Division under VII U.S. Corps. The British forces were controlled by 2 Army and the American by 1 U.S. Army.

The beaches to be invaded were given code names, the most well-known perhaps being Omaha

Beach, where the invading 29 Division of V U.S. Corps suffered tremendous losses by being faced in most difficult circumstances with a German Division carrying out an anti-invasion exercise.

The initial landing points were, from west to east, as follows:-

1 U.S. Army:

Utah Beach (west of the Bale des Veys) 4 U.S. Division VII U.S. Corps

Omaha Beach (from Vierville to Port-en-Bessin)	1 U.S. Division 29 U.S. Division	V U.S. Corps
------------------------------------------------------	-----------------------------------------	--------------

2 British Army:

Gold Beach (Arromanches)	50 (N) Division	XXX Corps
Juno Beach (Corseuilles)	3 Canadian Div	XXX corps
Sword Beach (Ouistreham)	3 British Div	1 Corps

The disposition of the actual points of landing were as follows:- Utah Beach about 15 miles west of Omaha; Omaha Beach about 15 miles west of Gold; Gold Beach and Juno Beach were contiguous, whilst the landing point at Sword Beach was about 6 miles further east. The airborne landings, which accompanied the sea-borne attack, comprising 82 and 101 U.S. Airborne Divisions, landed inshore of Utah Beach and that of the 6 British Division to points north and west of Caen, inshore of Sword Beach. These airborne attacks commenced at about midnight before H-Hour.

Later, the famous Mulberry Harbours were constructed, one for the U.S. Army at St. Laurent and one for the British Army at Arromanches.

The operation was accompanied by elaborate deception activity to divert the enemy's attention from the Normandy beaches. This was aimed at suggesting that the Pas de Calais was the target. It put the enemy in something of a quandary and did have the effect of reducing the resistance in the initial stages of the landing.

An interesting security matter arose at just about the time of the invasion and this related to allusions to the area of attack in the Daily Telegraph crossword. The code name "Overlord" was the answer to one clue and the Bayeux Tapestry to another. It is understood that the subsequent investigation proved that this was entirely accidental!

blew up mines in mine-fields, thereby creating a safe passage for troops, and AVRE tanks, specially designed to bridge anti-tank ditches and overcome similar obstacles. Another piece of equipment was the rocket craft, LCT (R). These were land craft equipped with two or three banks of rockets totalling some 1,080 rockets, which, when in action, were most spectacular. The fire power of one LCT (R) was, in the space of the 26 seconds required to discharge all the rockets, equivalent to that of 80 cruisers or 240 destroyers.

The LCG's which contributed to the artillery plan to neutralise enemy strong points and gun positions and to support the attacking infantry, were also assisted by the gun fire from the cruisers and destroyers of the Royal Navy making up the force- On the XXX Corps sector these amounted to some 20 ships in total.

Mention should be made at this point of the organisation dealing with artillery support to the attack, which had been laid on for the actual landing and the immediately subsequent phases of the advance into Normandy. This had been the result of guidance from Combined Operations H.Q. (COHQ). This organisation provided for the whole operation on each Corps front to be controlled from an HQ ship. For 'G' Force on the XXX Corps sector, this was a specially designed ship called HMS Bulolo, which carried on board Commander Douglas Pennant of the Royal Navy and, until the attack had moved from the beaches, Major General Douglas Graham, Commander of 50 (N) Division. Until a secure beachhead had been gained, each of these ships provided an operations room which obtained the data from the survey troops and, later, the flash spotting and sound ranging troops, as well as collating information from other sources, and arranged for the artillery support, when called for, from the LCG's and warships available. These warships included such well-known names as Ajax and Argonaut on the XXX Corps front, and Warspite and Ramilles on the I Corps front.

To return to the operations of the Survey Regiment, at 12.20 hours the first piece of mechanical transport, a jeep, arrived on the beach for the 'Y' Troop survey party. This improved mobility and enabled the party to keep up with the demands of the artillery regiments for survey information. By the end of D-Day successful beachheads had been established on all beaches with 50 (N) Division making the greatest penetration. There were, however, gaps between each lodgement, a continuous beachhead not being achieved until the 10th June.

On the second day, D+1, the remainder of the technical party of 'Y' Troop arrived and from then on survey activity followed normal procedures.

During the advance from the beaches, initial survey data supplied to the gun regiments consisted of a 1/25,000 map spot and a grid bearing obtained from sun observations. Within 24 hours of landing, however, all these independent survey stations were linked up and put on the permanent theatre grid.

The light scale party of 'X' Troop, under Captain Stuart Taylor, arrived on D+4 and deployed assisting 'Y' Troop. Shortly afterwards, however, when other Divisions arrived, 'Y' Troop was put in support of 5 AGRA and 50 (N) Division, whilst 'X' Troop was put in support of 7 Armoured Division and 49 Division.

The first light scale party of 'A' Flash Spotting Troop, under Captain W. R. Kirk, arrived on D+1, and this was capable of deploying a short base. In accordance with the Corps order, the first short base deployed was one near the village of St. Leger on the Bayeux - Caen road, on June 8th (D+2). The base came out of action three days later when the second wave of 'A' Flash Spotting Troop arrived, which enabled a long base to be deployed, consisting of 4 OPs, covering the approaches to Tilly-sur-Seulles.

A recce party from 'R' Sounding Ranging Troop, under Captain George Finch, landed on D+1, followed by the first group from the Troop on D+3, capable of deploying a base. The first deployed was a 5 microphone base east of Bayeux. This came into action on 10th June, but no

hostile batteries (HB's) were located. The base came out of action on the following day and was deployed further south, covering the approaches to Tilly-sur-Seulles, in concert with the flash spotting base of 'A' Troop. This base, which consisted of 6 microphones operated by two advance posts (AP's), remained in action until 28th June - 13 locations of enemy batteries were obtained.

The first party of 'S' Sound Ranging Troop, under Captain C. W. Bryant, landed on D+5 and on 16th June a 3 microphone radio link base, some 5 miles south east of Bayeux, was deployed. No results were obtained from this base and it was withdrawn within 24 hours. This was followed by the deployment of a 6 microphone wired base at Loucelles. From this base 38 HB's were located before the base was withdrawn on 28th June. This base had proved very difficult to maintain, largely due to the enemy activity, the Troop suffering 3 killed and several wounded during those 12 days. Two further bases were set up by 'S' Troop overlooking Tilly-sur-Seulles, from which 162 enemy gun positions were located.

The first wave of 'B' Flash Spotting Troop, under Captain E. W. Gamble, comprising 4. F.S.O.P.s and Troop HQ, arrived on D+8. The first flash spotting base deployed by this group was west of Tilly, which initially consisted of a series of short bases which were later linked together. These bases were at first in front of the forward infantry positions by as much as 300 yards, and, during darkness, it was necessary to request special protection from the nearest infantry battalion. Later, after the individual bases had been linked together, steel towers were erected by the Royal Engineers at two of the OP's. This base remained in action until 22nd July, during which period 34 locations of enemy gun positions were obtained.

On the 19th June the beach-head installations were badly damaged by a force 6/7 gale which delayed the build up. However, by 10th July, all the remaining echelons of the Regiment had arrived in Normandy and thereafter the Regiment operated at its full strength and was capable of meeting any demands made upon it in the forthcoming thrust into Germany.

Three incidents which occurred during the movement of the main group of the Regiment from U.K. to Normandy are worthy of noting. The first related to the embarkation at London docks on one of the Kaiser utility ships under the U.S. flag. The Regimental convoy of vehicles arrived at about 08.00 hours in the morning and marshalled on the dock side. Loading of the transport commenced but proceeded very slowly - in fact, up to about 5 p.m. in the afternoon, only about half the trucks had been embarked. The OC of the Regimental group enquired what was holding things up, to be told that loading was being organised to ensure that the last truck did not get loaded until after 7 p.m. This was because, after 6 p.m., time and a half was paid to the stevedores doing the loading, and any time after 7 p.m. was double time and paid for one hour as a minimum. This approach at a time when the country was in a life and death struggle in Normandy just across the channel was hard to swallow! In the outcome, the last truck was stowed quickly at about five past seven!

The next somewhat unusual incident was the arrival of the American Captain who had clearly been enjoying himself in local hostelries during the day. He looked at the gap in the dock wall through which the ship had to be steered to reach the river and asked the OC Troops if he thought he could hit the target. The Captain did not seem to worry - and in due course the ship, with engines going hard astern, went clean through without mishap. This may have been due to the quality of the London pilot rather than the Captain!

The convoy assembled in the River Thames, moved downstream and hove to opposite Southend Pier. Here the ships' captains and OC Troops were picked up in a launch and taken to the pier head, where convoy orders were issued. The amusing part of this little manoeuvre was to see OC Troops, Major Ogden, attempting to alight on to the launch from a rope ladder down the side of the transport ship - in a pretty rough sea. The launch was leaping up and down some 20 feet or more. Finally, after a number of abortive attempts, he let go of the rope ladder at the right moment and landed in the launch - the whole episode being very much to the amusement of the chaps who were leaning over the ship's rails cheering him on!

Some time later, after disembarking in Normandy, there was an amusing incident - which had somewhat serious consequences - related by one of the 64 Medium Regiment's officers who had arrived in the beach-head with the Regiment's rear party. Shortly after arrival he had to take a spell at one of the Regiment's OPs. As he was carefully crossing a country road to reach the OP, a Jeep with two Americans in it stopped to make enquiries as to the situation in the area. They said they were off duty and going for a spin in the British section. They asked where the front line was and the 64 Medium officer, who was a bit vague as to the precise position as this was his first visit to the OP, said he thought it was about a quarter mile down the road. As he struggled through the undergrowth on the far side of the road he looked back, to see the two Americans, only about 100 yards away, being marched off, hands in the air, by a German with an automatic gun!

As the battle continued on the approaches to Tilly-sur-Seulles, the opposition from the enemy increased considerably. During this time an attack was launched by 7 Armoured Division to capture Villers Bocage, but this was unsuccessful and the Division had to be withdrawn. The failure of this attack illustrated the changed environment in which the old Desert units were now operating. Instead of the wide open spaces of the Western Desert, they were fighting in the very close country of the Normandy bocage. The change was so dramatic that a number of these units, which had fought well in the Desert, found that they could not move with their usual dash - for example, the write-off of seconds in command of gun regiments was unreasonably high. In consequence of the withdrawal of 7 Armoured Division from this operation there were a number of changes made by the Army Commander, General Montgomery, which ranged from regimental commanders right up to the Commander of XXX Corps, and, here, the new Commander was to be Lieutenant General Brian G. Horrocks. Whilst many of the Regiment felt the previous commanders had been dealt with somewhat severely, there was great satisfaction that it was to be General Horrocks, affectionately known as "Jorrocks", taking over, as everybody had known him so well in the Middle East.

The main role of XXX Corps, and 2 British Army generally, at the time was to protect the northern flank and continually erode the enemy forces facing them. This role was to be accompanied by a push by the Americans from the right, taking a right hook, thereby, it was hoped, encircling much of the enemy force in the area. The portion of the front held by XXX Corps facing Tilly-sur-Seulles was relinquished to I Corps on the left, and XXX Corps side-stepped to the right, taking over the front at a place called Caumont, which had been held by the Americans. At this time, 49 Division left XXX Corps and 43 (W) Division and 15 (Scottish) Division joined it. Later, 15 (Scottish) returned to VIII Corps, which had arrived in Normandy with the follow-up troops. From this point, XXX Corps consisted of 43 (W) Division, 7 Armoured Division and 50 (N) Division. This movement to the right, of course, reduced the front covered by the Americans and enabled them to concentrate their push.

During these side-stepping movements, Major Ogden encountered his brother, Captain J. N. Ogden, an officer in the 2nd Battalion, East Yorkshire Regiment. This Battalion was in 3 (Br.) Division which moved, under command of VIII Corps, to a concentration area near Caumont. Captain Ogden, in describing to his brother the problems being met by the infantry, was particularly concerned about the enemy mortaring activity. Major Ogden suggested that he ought to make enquiries about his Corps Survey Regiment and request the assistance of their 4 Pen Recorder Section to locate the mortars. The East Yorks officer had not heard of this mortar locating unit and he reported later that he had made strong representations for VIII Corps 4 Pen Recorder to deploy in his Battalion's sector, with the desired effect on the enemy mortar activity. There was, of course, a 4 Pen Section available, but apparently no one in Command HQ fully appreciated what its capabilities were! This state of ignorance did not apply so far as the 4th were concerned and this was largely due to the energetic enthusiasm of Col. Whetton, the CO of the 4th, since the inception of the Unit. He continually extolled to his superior officers in Divisional, Corps and even Army command headquarters the capabilities of the 4th and that it would undertake almost any task allocated to it - this, frequently, much to the concern and, at times, the

embarrassment of his officers! The consequence was that all R.A. H.Q. staffs were made well aware of the potential of a survey regiment and this was one of the reasons why the Regiment was able to play such an effective role in the battles in which it took part. This energy of the CO was comparable with the enthusiasm of those original stalwarts of the 1914-18 War. It is surprising how individuals, both officers and men, can influence the outcome of quite large operations - and this example is worth remembering not only by men in the services but also in civilian life.

On 1st August, Tilly-sur-Seulles was captured and the battle continued, XXX Corps advancing to Aunay-sur-Odon, from which point an attack was made on a feature which dominated the whole area, called Mount Pincon. This was captured by 43 Division on the 6th August.

The Americans were rapidly advancing from the west on an axis further to the south, and both forces finally met, the British Army advancing south towards Falaise and the Americans north from Argentan. This pincer movement encircled many enemy forces and much of their equipment, and the destruction that was wrought upon the enemy was considerable in what has become well known as the Battle of the Falaise Gap. By this time, of course, the CBO organisation was that which was normally used, the naval support arrangements during the invasion having been superseded. Those in the XXX Corps Counter Battery Office will always remember the radio communication from one of the artillery air OPs, which was something like, "For goodness sake fire -anywhere, it doesn't matter, just fire!" This gives some idea of the concentration of enemy targets which were available in the Gap.

From this point, the enemy fell back and they were followed up by XXX Corps on an axis which led to the town of Vernon on the River Seine.

It should be mentioned that the axes upon which the troops advanced were normally marked by some easily identifiable signs, a process which, of course, was very useful in the Desert where there were few features to enable any detailed map reading to be undertaken. This sign posting was continued in the close country of Normandy and the sign for XXX Corps axis was the card suit Clubs. This route became well-known as the "Club Route" and stretched right from Arromanches to Hamburg and beyond. Other major axes of advance had different signs, usually other suits in the pack. The Corps of Military Police did a grand job in defining these routes, the markers being erected just behind the forward troops.

From the Tilly position to Vernon, 'A' Troop and 'B' Troop set up 7 bases which produced only 11 locations of HBs. 'R' Troop and 'S' Troop on the other hand set up 8 bases which located 99 HB's. The best result over this period, however, had been obtained just before Tilly was captured, when one base of 'R' Troop over a period of some 20 days located 124 HB's, and 'S' Troop, on two consecutive bases over the same period, located 162 HB's, to which reference has already been made.

Reference has also already been made to the new piece of equipment which had become available to the Regiment, namely the 4 Pen Recorder. The first section which was organised to handle this piece of equipment, called No. 1 4 Pen Recorder Section, came into action on 25th June, and added to the sound ranging capability of the Regiment. The Section, and the later ones when they were formed, acted as independent units. These were especially useful during periods of advance, when they were attached to the forward Divisions of such advances. The Section represented a very compact sound ranging system, the whole unit being contained in two International half-track vehicles with two jeeps, each with two trailers. The system involved the deployment of 4 microphones over a short base, which varied from 900 m to 3,000 m, although the usual length of the base was about 1,200 m. The sound waves were recorded on the 4 Pen Recorder using a magnetically sensitised paper, and the recording was made dry, as opposed to the wet development process of the films in the standard sound ranging recorder. The compact set up, which included one AP only, enabled it to be located much closer to the FDLs than the normal sound ranging base. In view of this, the base was capable of locating mortars as well as

enemy gun positions; the German Nebelwerfer was a piece of equipment frequently encountered in this campaign which was successfully located and neutralised.

From the initial invasion to the time of the breakout, the Regiment identified 649 enemy gun positions, of which 486 were obtained by sound ranging. The better performance of the Sound Ranging Troops in locating HBs was in consequence of two major difficulties encountered by the Flash Spotting Troops. These were, first, the extremely good cover provided for the enemy's guns by the dense country of the Normandy bocage and, secondly, the fact that the enemy began to use flashless propellant which, of course, was more difficult to locate. These conditions did not adversely affect the sound rangers, their main problem being the difficulty in identifying the discharge from individual enemy guns from the considerable background noise of the battle being fought.

CHAPTER SEVENTEEN

THE BREAKOUT AND THE CHASE - NORMANDY TO HOLLAND

The breakout from the Normandy bridgehead was momentarily held up on the River Seine, where flash spotting and sound ranging bases were again deployed. However, a bridgehead over the river was quickly obtained and, when XXX Corps broke out from this on 29th August, there was a quick chase into Belgium and to the frontier with Holland. At Vernon, Captain Mike Berry and one of his officers, Lt. E. Bailey, were unfortunately taken prisoner during a reconnaissance on the right bank of the Seine. This was a great loss to the Regiment. Lt. Bailey had been one of the original members of the T.A. unit in Gateshead.

Mike spent the rest of the war in a prisoner of war camp and, on his return home on the cessation of hostilities, he reported that when he was captured he was interrogated by a German officer, who asked for details as to his unit. He replied in the conventional way by giving his name, rank and number. The German officer persisted, but without Mike saying anything but repeating his name, rank and number. Finally, the German said, "At any rate, you can tell me if your Regiment is considered to consist of elite troops." Mike replied, "All British troops are elite troops." At this response, the German officer abandoned any attempt at further questioning!

From the Falaise Gap, the enemy quickly retreated and, except for the momentary halt at the River Seine, it was not long before the Guards Armoured Division of XXX Corps was in Brussels, which was reached on the 3rd September, five days later and over 300 miles further on.

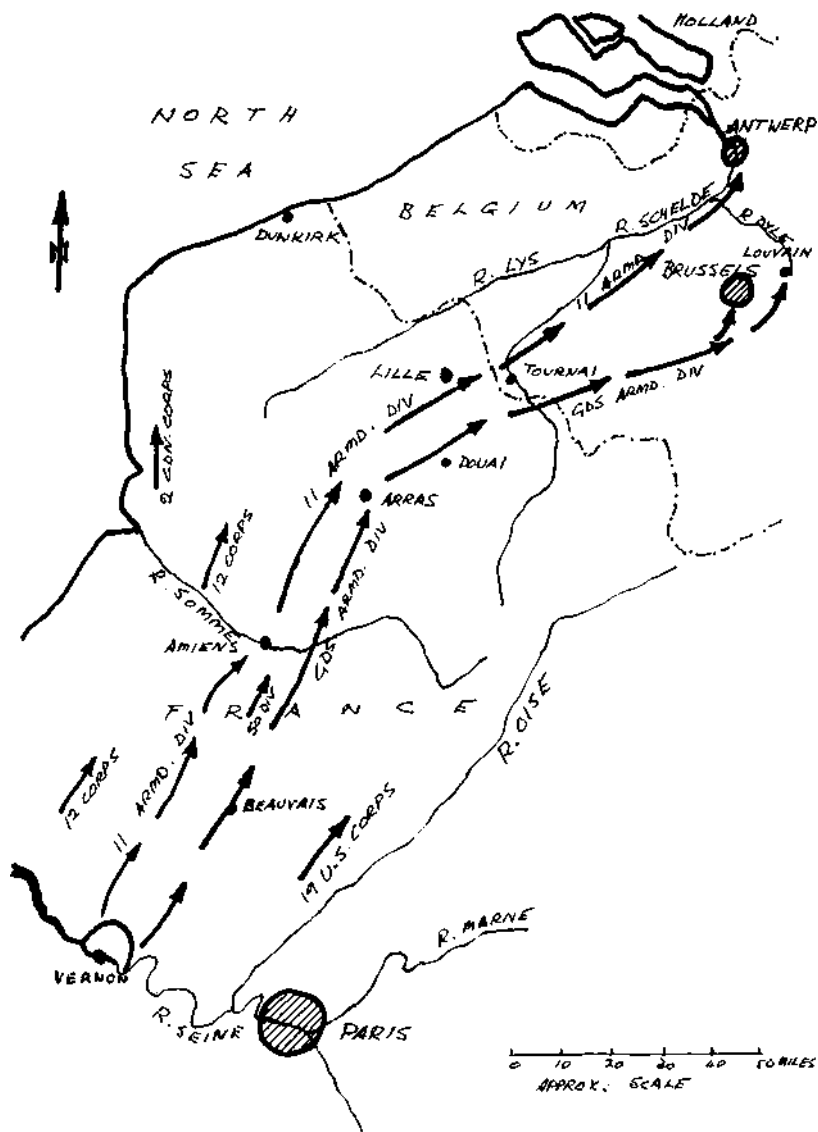
By 5th September, 11 Armoured Division, advancing on the left of Guards Armoured Division, were in Antwerp. R.H.Q. of the 4th, with the H.Q. Survey Troop and 'S' Sound Ranging Troop of 48 Battery, moved with XXX Corps H.Q. and the Guards Armoured Division and, on the evening of the 3rd September, were ensconced in part of the Laeken Palace in Brussels. During this period, 'B' Troop of 48 Battery, with the Four Pen Recorder Section, moved with 11 Armoured Division. The remainder of the Regiment remained in the Vernon area.

As the advance proceeded through the towns and villages of France and, later, Belgium, the local inhabitants gave the troops a tremendous welcome. The whole situation seemed unreal - the breadth of the advance was virtually the road upon which each spearhead travelled. That, so far as XXX Corps was concerned, was Club Route, and the British advance seemed tenuous in the extreme.

This, together with the locals turning out to welcome "les liberateurs" and, at the same time, giving hair raising information about German Tiger tanks just round the corner, added to the strange situation in which the Regiment found itself. These impressions, however, did not deter progress and the convoy kept moving, at times at a considerable speed. The leading armoured cars, of course, had to deal with the rearguards of the fleeing enemy, which frequently put up a stiff resistance. One especially difficult moment was at a small town called Pont a Marcq, where the Grenadier Guards Battalion unfortunately suffered severe casualties which marred for them the excitement of entering Brussels.

In one village, where the convoy halted for a short time, a number of French Resistance fighters were making some German prisoners run up and down the road. The Germans were elderly and obviously came from some rear German unit, such soldiers being known as the "Duodenal Brigade", which illustrated the depths to which the enemy had had to go to maintain his strength in personnel. The prisoners were obviously much distressed and the 2 i/c was requested by members of the Regiment to ask the French to stop this treatment, as it was clearly not in accordance with the Hague Convention. The 2 i/c requested the French officer to stop his men ill-treating the Germans but he reported that they were so excited he could not do anything about it. The men of the Regiment became so agitated about this that they informed the 2 i/c that unless it stopped they would shoot the Frenchmen. At this moment, the convoy moved on again and a

potential international incident was avoided!



The Advance into Belgium

Although the reception given by the local inhabitants to the advancing troops was tremendous, there is no doubt that the entry into the city of Brussels itself will be remembered as a most moving occasion by all those who experienced it. The Belgians gave the British troops an uproarious welcome. Girls were riding on the tanks, armoured cars and trucks, dispensing kisses and wine to all. Captain K. J. Burton, the H.Q. Survey Troop commander, who had gone ahead of the main convoy to reconnoitre a camp site, met the R.H.Q. Group on the outskirts of Brussels and led them to Laeken Palace. During his reconnaissance he had been approached by a member of the Household Military attachment to the Palace, - he carried the title "Chevalier", - who had suggested that the barracks of the Royal Guards at the Palace was a most suitable

place to stay - and so it was! The building was superb and the accommodation the best the Regiment had had for many, many months. In one large room was a grand piano, which provided some light relief. During the day of the 4th September, Captain Burton reported that the Chevalier, who had recommended the Palace as a billet, wished to meet the C.O. This he did and he was invited to stay for dinner in the R.H.Q. Mess, which had been set up in the officers Mess of the barracks. During the evening, the Chevalier made reference to the fact that, during the German occupation, the young people of Brussels had had a miserable time and that they were looking forward to more normal enjoyment now that the city had been liberated by the British. This comment resulted in Flight Lieutenant Bradshaw ("Met") being instructed to lay on a party for the following night, to which the Chevalier's lady friends were to be invited. "Met's" first job on the following day was to obtain some drink and other necessities for the forthcoming party. After combing the city, he returned in the afternoon with two bottles of champagne and one or two other items of refreshment. As there were 10 officers in the group in Laeken Palace, this was hardly lavish.

Later, when "Met" had departed with some of the other officers in their jeeps to pick up the Chevalier and the girls, the Padre returned from a tour of the city which he had undertaken to locate XXX Corps H.Q. and the other H.Q.'s, and reported that he had seen an amazing sight - acres and acres of bottles of champagne, brandy and other attractive items. He proved this by producing from his 15 cwt. truck a crate containing 32 bottles of champagne. Those who remained in the Mess immediately opened two bottles of champagne and had drinks to celebrate the occasion, hiding the case under the table. When "Met" returned, he was extremely annoyed to find that those remaining behind had apparently quaffed the two bottles of champagne which he had obtained with great difficulty during the day. However, his anger evaporated when he was shown the case under the table. The outcome, as one can imagine, was a most successful party. The Regiment had introduced a new life to the Brussels girls with a good curtain raiser! The case of champagne, it was discovered, had been obtained from a bulk store of what was the German equivalent of the British N.A.A.F.I.. The make will always be remembered - "Heidsich 1937, Sec Americaine" - a delightful year! The labels were overprinted "Reserve pour le Wehrmacht"!

The following day Captain Bryant, in command of 'S' Sound Ranging Troop, which was accompanying R.H.Q., was requested to unload a 3 tonner and repair to the German store and collect as much drink as the vehicle could carry. Some two or three hours later he was asked if the task had been completed but reported negative because the Troop were carrying out an M.T. inspection! He, however, immediately dispatched a lorry which returned empty, reporting that XXX Corps had clamped down on the store. The Padre, however, was not to be defeated and he made another expedition himself and returned with three or four cases of liquor of various sorts. This, however, was the limit. It is interesting to note that later, in civilian life after the war, Major Ogden met a Major Tomlinson who confirmed that his Sapper company, which was attached to XXX Corps H.Q., had put up XXX Corps signs on the liquor store, thereby reserving it for themselves. His company was supplied with drink for many weeks subsequent to this occupation of the store until, some time later, when 21 Army Group became inquisitive and he ordered his holding group to return to XXX Corps H.Q., then in Germany.

During the 3rd and 4th September, the enemy continued to lob shells into the city, mainly from a solitary 88 mm gun located on the Brussels aerodrome. This was considered to be only a nuisance, but when Lieutenant General Horrocks decided to use the aerodrome to fly back to 2 Army H.Q. something had to be done about it, and it was dealt with by one of the A.G.R.A. regiments.

The momentary respite in Brussels was quickly brought to an end by an order from R.A. XXX Corps, received the following day, 5th September, for the components of the Regiment, with XXX Corps H.Q., to move towards the Escaut Canal with Guards Armoured Division. On the 11th September, the remainder of the Regiment, which had been left at Vernon, was also ordered up to the Escaut Canal position.

At this time 'X' Survey Troop and 'B' Flash Spotting Troop of 48 Battery and the Four Pen Section, with 11 Armoured Division had set up flash spotting and four pen bases in Antwerp. One of the F.S.O.P.'s was located on a balcony on the top floor of a multi-storey luxury hotel - the Century Hotel. With first class sleeping accommodation and room service, this was the most comfortable O.P. ever occupied by a flash spotting section. Although this base did not achieve any actual H.B. locations, many single bearings were obtained, together with much general information. The Four Pen Section set up two bases in the city, the first without result but the second, in action from the 6th - 19th September, obtaining six locations of enemy guns. On the 9th September the flash spotting base was handed over to the 7 Survey Regiment and 48 Battery were ordered to concentrate with the Regiment at Deist, a town some 30 miles east of Brussels. At the same time, 11 Armoured Division switched to the right flank of XXX Corps front, east of Hechtel.

At the Escaut Canal position, the XXX Corps front was held by 11 Armoured Division on the right, Guards Armoured Division in the centre, west of Hechtel on the Escaut Canal itself, with 50 (N) Division on the left.

Here, 'A' Flash Spotting Troop of 47 Battery deployed a 3 post base at Bourg Leopold on the 13th/14th September, but no locations were obtained. A 3 post base was then set up on the south bank of the Escaut Canal which remained in action until the 21st September. The results were poor, only one enemy battery being located. 'B' Flash Spotting Troop set up some short bases in support of 50 (N) Division, but these came out of action on 15th September. Sound Ranging consisted of a 5 microphone base deployed south of the Canal by 'R' Troop, in action from the 13th-25th September and obtaining 19 locations, with a 6 microphone base deployed by 'S' Sound Ranging Troop along the Albert Canal, which was in action from the 11th -14th September and obtained 37 locations.

By the 18th September, a small bridgehead had been secured over the Escaut Canal and the stage was set for the advance into Holland.

CHAPTER EIGHTEEN

"MARKET GARDEN" - THE ADVANCE TO NIJMEGEN

The next move was to advance to Nijmegen and Arnhem, with the intention of bouncing the River Rhine at Arnhem. The attack, code-named "Market Garden", was an elaborate operation. It involved the Guards Armoured Division of XXX Corps moving up a single central axis which consisted of the main road from the Escaut bridgehead, through Valkensward, Eindhoven, Veghel and Grave to Nijmegen, and on to Arnhem. Airborne troops were to be dropped along the route between Eindhoven and Veghel, at Grave and Nijmegen, as well as at Arnhem. The major objective of these troops was to capture the bridges over the rivers, in particular those at Grave over the River Meuse, at Nijmegen over the River Waal and at Arnhem over the Neder Rhine. "Market" was the code-name for the ground operation and "Garden" for the airborne component.

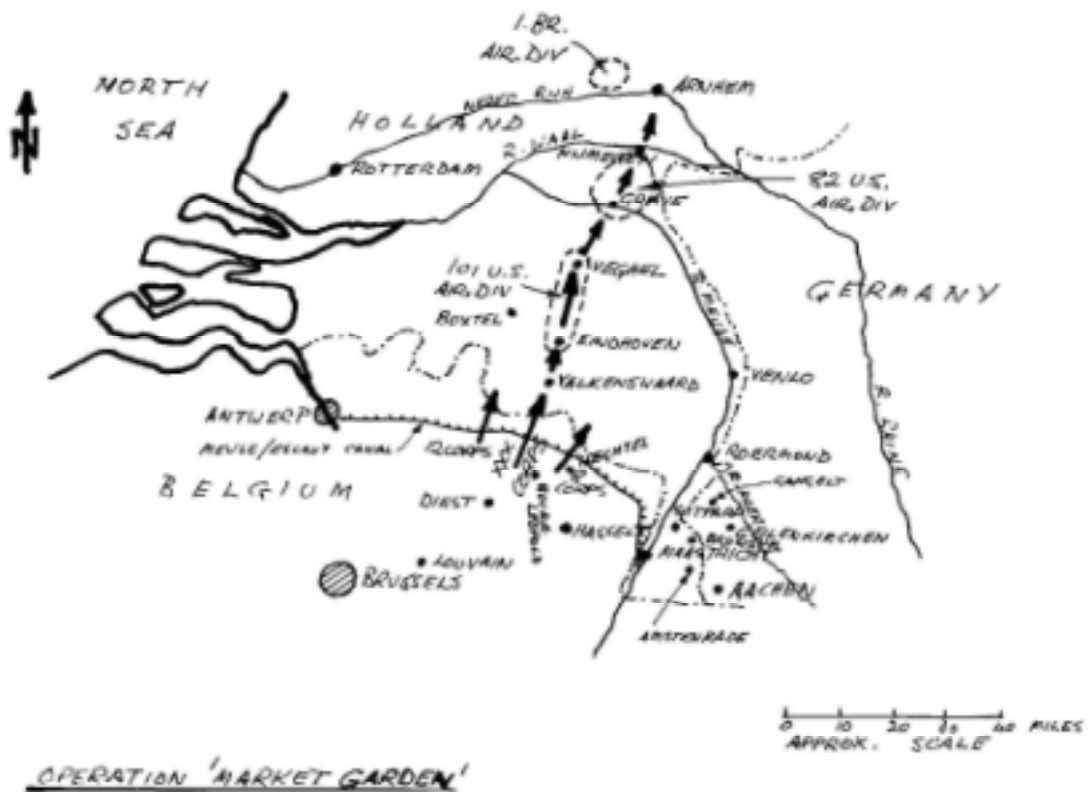
The airborne forces comprised 101 US Airborne Division, which secured the road from Eindhoven to Veghel, 82 US Airborne Division which captured the bridges at Grave and Nijmegen, and 1 British Airborne Division, with the Polish Parachute Brigade, which landed at Arnhem. XXX Corps spearhead was the Guards Armoured Division, with 50 (N) Division, 43 (W) Division, 8 Armoured Brigade and a Dutch Brigade. VIII and XIII Corps were respectively on the right and left of XXX Corps, but the main advance was in the hands of XXX Corps, whose job was to reach Arnhem and get to the north side of the Neder Rhine.

The artillery programme, involving some 350 guns, opened up at 1400 hours on the 17th September, 1944. This was accompanied by a large air armada carrying the airborne divisions, which passed overhead and which comprised 2,800 transport planes, towing 1,600 gliders and protected by fighter planes. The total number of airborne troops amounted to some 30,000 men.

'X' Survey Troop moved with the Guards Armoured Division, the Troop being broken down into sections, each section with one of the field regiments of the Division. 'Y' Survey Troop, similarly broken down, moved with the field regiments of 50 (N) Division, whilst HQ Survey Troop moved with 64 Medium Regiment R.A. and HQ R.A. 43 (W) Division. All these Troops provided survey information for the gun regiments during the advance to Nijmegen. The flash spotting and sound ranging troops with the Four Pen Section were also distributed between the Guards Armoured Division and 50 (N) Division, but they did not deploy until Nijmegen was reached.

The attack moved swiftly in the initial stages, the Guards Armoured Division breaking through the enemy forces surrounding the bridgehead on the northern side of the Escaut Canal and meeting up with 101 Airborne Division which had dropped at Eindhoven, and the 82 US Airborne Division at Graves, near Nijmegen, where the latter Division had successfully captured the bridge over the River Meuse. First contact with the 82 US Division was made on the morning of the 19th September. Again, the British advance was limited to the road leading from the Escaut Canal, through Eindhoven, to Nijmegen. The enemy put up a stubborn resistance and it was exciting to see the Typhoons of the RAF carry out low level rocket attacks on German strong points within 100 yards of the convoy on the road.

The 82 US Division met stubborn resistance from the German 10 SS Division south of the road bridge over the River Waal at Nijmegen. However, with the help of the Guards Armoured Division, this bridge was captured, surprisingly intact, by the evening of the 21st September. In addition to the road bridge - which was an impressive bow-string girder bridge similar to the Sydney Harbour bridge - a railway bridge was also captured intact. This railway bridge was adapted to take vehicular traffic as well as railway traffic. Some time later, the enemy sent a two-man midget submarine down the Waal to blow up these two bridges. The attack on the road bridge was unsuccessful, but that on the railway bridge brought down the centre span. This was unfortunate because it was one of the best routes for survey parties to cross the Waal and the more circuitous route had to be followed over the main road bridge.



The attack continued northwards over the low-lying area between the Waal and the Neder Rhine in order to meet up with 1 British Airborne Division which had dropped at Arnhem. This low-lying area was called "The Island" and, due to the ground conditions, was most unsuitable for tanks. This, combined with the enemy attacks on the tenuous lines of communication between the Escaut Canal and Nijmegen -which were broken on a number of occasions - resulted in the advance slowing down and Arnhem not being reached. The withdrawal of what remained of the airborne troops at Arnhem has been the subject of many reports - and was the result in many critics' minds of the operation being over-ambitious. It must, however, be realised that without dash and imagination, major victories cannot be gained and that, on occasions, the ultimate objective cannot be achieved due to unforeseen circumstances. On this occasion, one of these unforeseen circumstances was the location of the 9 and 10 SS Panzer Divisions at Zutphen, a town some 25 miles north east of Arnhem, where they were recuperating from their losses in France. The attacks made by these Divisions were the main reason for 1 Airborne Division being unable to hold Arnhem until it was possible to bring up the 43 (W) Division to take over from the Guards Armoured Division on The Island. This lack of information is even more surprising in the light of the subsequent revelations about the Bletchley Park Enigma-cracking Ultra!

Early on in the attack, before any contact had been made with the airborne troops in Arnhem, radio communication was established between a station in Arnhem and that of the 64 Medium Regiment's HQ. This was of vital importance since, for some reason, all radio communication between 1 Airborne Division and the outside world, including its main HQ had broken down. Wireless communication between the different groups of 1 Airborne Division landing, had also failed. The Adjutant of the 64 Medium, Captain Scrimgeour, ascertained that the Arnhem station

was genuine - that is, it was part of the Airborne Division and not an enemy station -by confirming who was the history master at Shrewsbury School before the War! This contact, which was made on the 21st September, enabled the guns of the 64 Medium to assist the airborne troops to stave off the attacks of the Panzer Divisions on to their narrow bridgehead in Oosterbeek north of the Lower Rhine, which was all that remained of the areas originally occupied by the 1 Airborne Division in and around Arnhem.

It is recorded that "In good radio contact for the first time, via the 64th's communication net, the Red Devils savagely called down artillery fire almost on top of their own position. The accuracy of the fire was heartening, its effect on the Germans unnerving. Again and again British guns broke up heavy tank attacks that threatened to swamp the bearded, tattered paratroopers". (Cornelius Ryan, *A Bridge Too Far*). The Regiment had again made a contribution to the quality of XXX Corps gunfire.

By the 26th September all those who could be withdrawn from the Arnhem position had reached the XXX Corps lines and the position stabilised. By this time, VII Corps had advanced and the lines of communication were secure. The next stage was to advance generally eastwards towards the river Rhine, but the hope of getting through to the Zuyder Zee and possibly finishing the war off in 1944 did not materialise.

By September, the whole of the 4 Survey Regiment was concentrated in Nijmegen and the front extended from the XXX Corps position on The Island, to the east of Nijmegen and, southwards, to the Groesbeek area. 43 (W) Division were holding The Island sector, with 48 Battery and HQ Survey Troop, whilst 47 Battery were deployed in the Nijmegen/Groesbeek area in support of the Guards Armoured Division, 50 (N) Division and 82 US Airborne Division. When VIII and XII Corps ultimately reached Nijmegen, the responsibilities of XXX Corps were re-arranged, XII Corps taking over The Island on the left, where 48 Battery handed over to 7 Survey Regiment, and VIII Corps occupying the Groesbeek area on the right. However, VIII Corps and XII Corps were later withdrawn and XXX Corps extended again to cover the whole front, 48 Battery returning to The Island.

On the 19th October, the first stages of an operation code-named "Noah" were put into effect. This operation was designed to reduce to a minimum the amount of transport and equipment on The Island in view of the possibility of the enemy flooding the area. During this period the survey troops provided data for many artillery regiments. These were regiments of the Guards Armoured, 43, 50, 82 US Airborne, 101 US Airborne and 52 (L) Divisions, as well as 5 AGRA and various HAA regiments. In addition, survey data was provided for the flash spotting and sound ranging troops.

Shortly after arrival in Nijmegen, 'B' Flash Spotting Troop deployed a 4 OP base on the north east side of Nijmegen with a field of view over the Reichswald Forest. On the 25th September, the base was taken over by 'A' Troop, who manned it until the 9th November, when it was taken over by the 2 Canadian Survey Regiment. During this period 45 locations of enemy gun positions were obtained. The OPs on this base, which were linked by wireless, were located on forestry look-out towers and on a windmill. One OP was originally established on a radio mast, but this became untenable as it presented an attractive target for enemy air burst shelling. In addition, a Shellrep OP was established at the southern end of the Nijmegen road bridge. "Shellrep" is a contraction of the words "shelling report" and the information contained in such a report includes the bearing of the enemy gun firing the shell, obtained from the sound of the gun discharge, details of the target and what information if possible about the calibre of the gun. As the bridge was a favourite target for the enemy, this OP provided a lot of useful information in building up intelligence about the enemy's artillery strength and dispositions. Two short flash spotting bases were also deployed overlooking the Reichswald Forest and the arrangement adopted was to man the main base during the hours of darkness and the two short bases, which were much nearer the F.D.L.s, during the hours of daylight. One interesting development was detected in this position, and that was the use by the enemy of dummy flashes to confuse the data being obtained. However, as the

enemy did not correlate his dummy flashes with actual gun fire, the lack of the shellrep relating to the flash was quickly realised and the difficulty overcome. The enemy, knowing the flash spotting capabilities of XXX Corps, also used another ruse, and this was to fire one or two rounds from a battery and then to have an interval of 2 - 3 hours before firing again from that battery. This, as can be imagined, put a considerable strain on those manning the OPs and it was a little bit more difficult to cope with, but a drill was adopted by the F.S. Troops, whereby further observation of the position was abandoned after a relatively short time, which overcame this problem.

After handing the Nijmegen base over to 'A' Flash Spotting Troop, 'B' Troop deployed a long base directed to the north and north west of Nijmegen. Two OPs were located on The Island and one on the south side of the river Waal. A fourth OP was established later, on the right. Three of these OPs were situated in church towers and spires, whilst the fourth was in a forestry look out tower. Communications were, as with 'A' Troop, by wireless. This base, which remained in action until October 2nd, was only successful in obtaining 4 locations of HBs. The base was then switched to look north east, two of the OPs being from the original base. The 7 Survey Regiment took over this base on 27th October, enabling 'B' Troop to deploy two long bases at Groesbeek. However, the base was again taken over by 'B' Troop on 17th October, and manned until 17th November, when it was handed over to 2 Canadian Survey Regiment. During its deployment, only 5 locations were obtained.

From the sound ranging standpoint, the extent of the front was such that both 'R' Troop and 'S' Troop each deployed two 6-microphone bases, 'R' Troop south of the Waal and directed north east and south east, and 'S' Troop on The Island looking north and north west. Each base had two APs. 'S' Troop's north west base, in action on 17th October, was switched on 23rd October to look north eastwards, to cover the Elst area on the 50 (N) Division front. All these bases remained in action until 8th November, when they were handed over to 2 Canadian Survey Regiment. The number of locations obtained from these bases by the two Troops were 'R' Troop 202, and 'S' Troop 187. This record again illustrates the effectiveness of sound ranging as compared with the results flash spotters obtained in the difficult conditions prevailing.

In addition to the main sound ranging bases, No. 1 4 Pen Recorder Section deployed bases co-operating with 64 Medium Regiment on the Guards Divisional front, coming into action on the 20th September overlooking the Groesbeek area. This remained in action for only one day and obtained four locations. Between 21st and 25th September, further bases were deployed close to the Neder Rhine in support of the Airborne Divisions. Later these were adjusted to face further west and remained in action until 7th October, when they were taken over by 7 Survey Regiment. On the 17th October, No. 1 4 Pen Recorder Section took over a base at Briault on The Island from 2 Canadian Regiment which was manned until 8th November, when the Regiment left the Nijmegen area. During these deployments, No. 1 Section located 161 enemy gun and mortar positions.

During October, a second 4 Pen Section was created and this went into action on the 24th of that month, to the north east of Nijmegen, just south of the Waal overlooking the part of The Island occupied by the enemy. This base remained in action until 9th November, obtaining 7 locations. In October, R.H.Q. was unfortunately the target of a Luftwaffe attack using anti-personnel bombs. There were a number of casualties and Lt. D. L. G. Thomas died in consequence of his serious wounds.

Before closing this chapter, reference must be made to the rumours that were going the rounds about the lack of security resulting in the Market Garden operation facing strong German resistance, especially at Arnhem. The rumours suggested that the operation had been compromised by double agents in the Dutch underground. There was apparently a double agent in the Dutch partisan forces and he did guess that the British might use airborne troops in Holland, but because he could not provide any substantial supporting evidence for his guess, the Germans did not believe him.

CHAPTER NINETEEN

GEILENKIRCHEN

At the beginning of November, XXX Corps was ordered to hand over the Nijmegen position to the Canadians and to move south on to the extreme right of the British front, near Maastricht. Here, the Corps took over part of the front held by the Americans and were given the task of assisting the advance of 1 and 9 US Armies towards the Rhine. Their contribution to this forthcoming attack was to capture the town of Geilenkirchen. This operation was code-named "Clipper". In support of XXX Corps in this operation, the Regiment moved with the Corps from the Nijmegen area on the 8th and 9th November, RHQ being established at a town called Amstenrade.

The attack started on 18th November, involving 43 (w) Division and the 84 US Division, which also came under command of XXX Corps. By the next day all objectives were captured, including the town of Geilenkirchen. Unfortunately, the weather deteriorated considerably and the ground became virtually impassable for tracked vehicles. 15 Panzer and 10 SS Divisions launched strong counter attacks on the positions taken. Although these were held, further development of the initial gains was not possible.

Prior to the operation being launched the flash spotters took over bases already deployed by the 12th Field Observation Battalion US Army, 'A' Troop occupying a 4 post base at Amstenrade in the Guards Armoured Division sector, and 'B' Troop occupying a base sited to the north west of Geilenkirchen, in the 43 (W) Division sector. The northern base remained in action throughout the operation, the southern base remaining in action until 21st November, when, after the capture of Geilenkirchen, the Troop deployed a new 3 OP base further east.

Sound ranging bases were deployed in the Sittard area by 'R' Troop and in the Brunsum area by 'S' Sound Ranging Troop. Both these bases were 6 microphone bases with 2 A.P.s. The southern base deployed by 'S' Troop was moved forward on 21st November during the "Clipper" operation and a new 6 microphone base established between Gangelt and Geilenkirchen. No. 1 4 Pen Recorder Section established bases near Gangelt from 10th to 21st November and east of Geilenkirchen from 21st November to 7 December. No. 2 Section deployed a base just north of Sittard, which was in action from 15th to 19th November and, later, two bases near Geilenkirchen in support of Operation "Clipper".

The locations obtained during the action in the Geilenkirchen area were as follows:-

Flash Spotting 75
Sound Ranging 177
4 Pen Recorder 161

Survey support was given in the orthodox manner by 'X' and 'Y' Survey Troops. In this area, however, an additional job was to fix searchlights in appropriate positions for these to define the axes of advance during the hours of darkness of Operation "Clipper". This technique was first used at El Alamein, but then the positions were fixed by the R.E. Survey Company.

On 23rd November, 84 US Division reverted to the command of the US Army and the front became static. On the 13th December, XXX Corps HQ was pulled out of the line, in great secrecy, to prepare for the next operation, which was to be the attack on the Reichswald Forest and the advance of 2 British Army up to the Rhine.

During these battles on the approaches to the Rhine, a technique of using searchlights at night, to provide what was called "artificial moonlight" to assist movement, was adopted and this was particularly effective. The technique had, of course, been used in earlier battles in the campaign but not to such an extent.

Another survey job was to superimpose the theatre grid lines on oblique photographs taken from air OP aircraft, as a preliminary to an operation code-named "Shears". This operation was to clear the enemy from the area west of the River Roer. XXX Corps was to undertake this operation but, on 12th December, XII Corps took over and XXX Corps HQ withdrew to Boxtel to plan for the forthcoming Reichswald operation, as mentioned earlier. The Divisions and Units remained in action under XII Corps, but Operation "Shears" did not materialise, largely because of the adverse weather conditions.

What immediately followed was one of the greatest surprises ever, namely Runstedt's advance into the Ardennes. As will be described in the following Chapter, XXX Corps was ordered to act as a reserve force to stop any German break-through to Brussels. In consequence of this, the Regiment, when it left Amstenrade on 21st December, reverting to the command of XXX Corps, proceeded to take up a defensive position along the River Meuse from Dinant to Liege.

Before concluding this chapter on the Geilenkirchen battle, the problems of security in Holland are worth mentioning. The first instance was something of a shock and concerned the XXX Corps Commander, Lieut. General Horrocks. He was approached by a civilian in Nijmegen, who was, no doubt, a very important local personage, who asked if he could be presented to King George VI when he visited Nijmegen on the following day. To the General's knowledge, he was the only one in the area who knew of His Majesty's visit! The second, more local, instance was when some civilians in Sittard greeted members of 'Y' Troop on their arrival, informing them that they had been told by friends in Nijmegen to expect them, although the move of the 4 Survey Regiment from Nijmegen to Sittard was supposed to be secret!

This Chapter should not be closed without mentioning the unfortunate accident which put the C.O., Colonel Whetton, out of further active service. Lt. Col. Clegg, C.O. of the 7 Survey Regiment, came to RHQ in Amstenrade to visit the Regiment, and the Colonel invited him to lunch. Whilst Colonel Clegg was taking off his webbing, his revolver fell out of its holster, hit the ground and went off, the bullet hitting Colonel Whetton in the leg and breaking his fibula. Although unlucky to be hit in such a way, he was also lucky that the random shot did not do more damage. The result was that he had to be evacuated and was later invalided out of the Army. The 2 i/c, Major Ogden, took over command and his appointment was later confirmed. It was later learned that Colonel Clegg had been awarded the DSO, and Major Senior, BMRA XXX Corps, enquired of, now, Colonel Ogden, if he had recommended the award!

CHAPTER TWENTY

THE BATTLE OF THE ARDENNES – 19TH DECEMBER, 1944, TO 14TH JANUARY, 1945

XXX Corps HQ planning activity was suddenly interrupted by General Runstedt's advance into the Ardennes. The development of this attack from the intelligence reports, which were continuously circulated to regiments and other units, is an interesting study. These reports gave information regarding the whereabouts of enemy divisions along the front and, for some time before the attack was launched, several Panzer and SS Divisions seemed to disappear off the map. Moreover, the Americans had assumed that the Ardennes forests would not be a likely area for serious enemy activity and, in consequence, the holding units, which were American as this was part of the US front, were somewhat sparse. The daily intelligence reports began to indicate that enemy patrolling was becoming active in the Ardennes area and then the missing enemy Divisions were identified and it became clear by the 19th December that this patrolling was the start of a major attack. Bearing in mind that the original "blitzkrieg" by the Germans in 1940, after the phoney war period, came through this very forest, it is surprising that it was not held more strongly. Again Ultra apparently missed this enemy concentration also.

Although the spearhead of the attack was on the American front, General Montgomery considered that it would be prudent to assemble what reserves he had in a position between the Ardennes and Brussels. As XXX Corps had just been withdrawn from the front at Geilenkirchen to prepare for the Reichswald battle, this Corps and its Divisions comprised the bulk of Monty's available reserves. In consequence, on the 18th December, XXX Corps were ordered by Monty to take up a back-stop position in case the enemy broke through towards Brussels. Corps HQ moved to Hasselt, some 30 miles east of Brussels, and the Divisions took up positions on a line from Louvain on the River Dyle, to Maastricht. This line was later moved forward to the River Meuse. The Divisions involved were 53 (Welsh) Division on the River Dyle, Guards Armoured Division south of Diest, 43 (Wessex) Division in the Hasselt area and 51 (H) Division east of Maastricht. RHQ of the 4 Survey Regiment left Amstenrade on 21st December and was established in the same day at Wesemael. 47 Battery was put in support of 53 (Welsh) Division, arriving at Terveuren on 21st December, and 48 Battery in support of 43 (Welsh) Division, with its HQ located in the Tongres area. HQ Troop with No. 1 4 Pen Section and a short base flash spotting party were allocated to the Guards Armoured Division south of Diest.

On the 19th December, General Eisenhower gave Monty overall command of the Allied forces on the north of the German salient, which included the 1 and 9 US Armies.

On 22nd December, CCRA XXX Corps issued orders for the whole of the Meuse line from Dinant to beyond Liege to be reconnoitred in detail for potential flash spotting and sound ranging bases, so that these could come into action quickly at any point on this front and meet any threat from the enemy at a moment's notice. The survey of numerous flash spotting and sound ranging bases, as well as for possible gun positions, was a considerable task and, in order to assist, 'F' Survey Troop of 9 Survey Regiment was put under command. The magnitude of the task can be appreciated when it is realised that seven different sound ranging bases were surveyed in along this front. The artillery under command XXX Corps at this time comprised 3, 4 and 5 AGRAS, 80, 101 and 106 AA Brigades and one super heavy group, in addition, of course, to the artillery of the Divisions in the Corps.

On the 31st December, there was a move forward south of the River Meuse, RHQ and HQ XXX Corps moving to Godinne. The Corps came into the line, taking over from 2 US Armoured Division on this date and making contact with the forward elements of the enemy penetration. However, the enemy resistance was only light in character and very soon afterwards, by the 14th January, 1945, contact with the enemy was lost. From this point, the Americans took over the task of re-establishing their front line as held before Runstedt's attack, and XXX Corps was

withdrawn to resume planning the "Veritable" operation.



Whilst the Corps was in contact with the enemy during this battle, 'A' Flash Spotting Troop deployed a 3 post base in the Marche/Rochfort area and, later, a short base near Laroche. Neither base obtained any locations due to the good flash cover the enemy were fortunate to have. 'R' Sound Ranging Troop deployed a 6 microphone base in the Marche area, but again, no locations were made. This Troop moved forward with the advancing Allied resistance to the German attack and deployed another 6 microphone base in the Hotton area. From this base, eight locations of HBs were obtained. No. 1 4 Pen Section deployed to the south west of Rochfort, but no locations were obtained. No. 2 4 Pen Section deployed near Hotton, this base being in action from 2nd - 5th January and location 4 enemy gun positions. On the 8th January this base was moved forward to south of Marche and, by the time this came out of action of the 10th January, 9 enemy mortar positions and 21 gun positions had been located. Two more bases were established south of Marche and south west of Laroche, which located 3 gun positions and 9 mortar positions. On the 11th January the Regiment was ordered out of action and it was concentrated in the Louvain area where it remained during the planning stages of the Reichswald operation.

Apart from the general surprise that the enemy had recovered sufficiently from his drubbing in Normandy to man such an operation, the main recollection of the Ardennes chapter will always be the atrocious weather conditions. These were arctic, extremely cold and the whole area covered deep in snow.

It should be mentioned that the German attack was accompanied by heavy air attacks on RAF and American Air Force bases.

CHAPTER TWENTY ONE
OPERATION "VERITABLE"
8TH FEBRUARY TO 10TH MARCH, 1945

As soon as XXX Corps were no longer needed in the Ardennes battle, Corps HQ returned to Boxtel and the planning of the next operation, code-named "Veritable", was resumed. The objective of this operation was to clear the enemy from the area west of the River Rhine. The situation at this time was that 2 British Army had reached the River Maas, whilst 9 US Army, as has been related earlier, had reached the River Roer. The area which had to be cleared, therefore, lay between the River Maas and the River Rhine and this was to be undertaken by 9 US Army attacking from the south and 1 Canadian Army, with XXX Corps under command, attacking from the north.

During this planning period, XXX Corps front experienced the German V2 weapon. The port of Antwerp, since it had been opened to shipping in November, became a target for these rocket attacks.

For the forthcoming attack, XXX Corps comprised 15 (S) Division, 51 (H) Division, 43 (Wessex) Division, 53 (Welsh) Division, Guards Armoured Division and, in the initial stages, 2 and 3 Canadian Divisions. 15 (S) Division was in the centre of the attack with an axis of advance along the northern edge of the Reichswald Forest - a dense coniferous forest which occupied the greater part of the area held by the enemy immediately in front of XXX Corps. 53 (W) Division, on the right, was to advance straight into and through the forest, with 51 (H) Division on their right, moving along the southern boundary of the forest. To the north of 15 (S) Division and on the left flank of the advance were 2 and 3 Canadian Divisions - the attack involving five Divisions in line.

As soon as 15 (S) and 51 (H) Divisions had reached their objectives and taken the Forest, 43 (W) Division was to pass through and maintain constant pressure on the enemy over the whole front. Guards Armoured Division was held in reserve until the enemy resistance collapsed, in which event the Division was to push for the Wesel Bridge over the River Rhine and to capture it, intact if possible.

Prior to the attack itself, there was to be an intensive artillery programme provided by the guns of all the Divisions involved, as well as the medium and heavy artillery of 3, 4, 5 and 9 AGRAS. In total, this amounted to some 1,400 guns, and the whole operation of XXX Corps involved a strength of more than 200,000 men. On this occasion the artillery programme was augmented by every gun that was available firing into the enemy lines - medium guns, anti-tank guns, A.A. guns - and this was called the "Peppepot".

There were two major requirements for the attack - surprise and reasonable weather. The concentration of such a large force before the attack was a difficult operation to conceal, especially in the somewhat shaky security situation in which it was being carried out. All movement took place at night. The security arrangements provided for the guns of the attacking Divisions and the four AGRAs being held back until three days before D-Day. The statistics of this preliminary activity are of interest - 35,000 vehicles were used to bring forward supplies and troops, some 1,300,000 gallons of petrol were assembled, five special bridges were erected by the Royal Engineers over the River Maas, and 100 miles of railway were constructed. During the hours of daylight, only such movement was permitted as to indicate to the enemy that the situation was comparatively normal. The objective of achieving surprise was, in the outcome, completely successful.



The other major requirement was the continuation of the freezing weather. In these conditions the ground would be sufficiently hard to support the weight of tanks, other tracked vehicles and the motor vehicles that were to be involved in the operation. It was hoped that these conditions would last at least until 9th February. In the outcome, a thaw set in during the build-up period, which resulted in the collapse of most of the temporary roads which had been constructed during the build up to the attack, and the attack was undertaken in the most atrocious conditions of rain and mud.

The deployment of the 4 Survey Regiment was co-ordinated with that of the 2 Canadian Survey Regiment. The initial survey north of the River Maas was undertaken by the Canadian Regiment whilst that on the south of the River, in the 3, 4 and 9 AGRA areas, was carried out by the 4 Survey Regiment. Flash spotting and sound ranging information was provided from the existing flash spotting and sound ranging bases of the Canadian Survey Regiment, together with new bases being deployed by the Regiment south of the River Maas. The new bases came into action on 27th January.

Once the attack was launched, the survey plan was for the Canadian survey bases and those of the Regiment, south of the Maas, to remain in action covering the front until the Regiment had deployed bases further forward and just behind the advancing troops. From that moment the Regiment was responsible for covering a zone from a bearing of approximately 60° to due south, the Canadians being responsible for the zone 60° to the north and to the north west.

Prior to the attack being launched, both survey regiments studied probable areas for the

deployment of flash spotting and sound ranging bases from air photographs which had been taken by the Air Survey Group of the Royal Engineers, covering the whole of the area held by the enemy up to the River Rhine.

Detachments from the Regiment were allocated to each Division for the commencement of the attack, as follows:

15 (S) Division	Survey Section 'Y' Troop No. 2 4-Pen Recorder Section
53 (Welsh) Division	Survey Section 'Y' Troop 'R' Troop, S. R. Recce Party 'A' Troop, short base F.S. Party Tac. BHQ 47 Battery
51 (H) Division	Survey Section 'X' Troop No. 1 4 Pen Recorder Section 'S' Troop, S.R. Recce Party 'B' Troop short base F.S. Party Tac. BHQ 48 Battery
43 (W) Division	Survey Section HQ Troop
Guards Armoured Division	Survey Section HQ Troop

During the build up period, some efforts were made by XXX Corps to provide a little relaxation for all. One, which will be remembered by officers, was the establishment of a 'pub' called the "Flying Pig" at Graves - very pleasant but Bols Dutch gin was the only available beverage!

D-Day was the 8th February, the attack being supported by heavy bombing by the RAF of enemy communications, including the town of Cleves, which was carried out during the night of the 7th February. The attack itself was preceded by a heavy artillery counter battery programme. This ceased just before H-Hour, which was at 7.30 a.m., after which a smoke-screen was laid down across the whole front. There followed a momentary lull before the guns switched to providing a continuous barrage in front of the advancing troops.

During this lull the enemy trained his guns to bring down defensive fire - the result was that a number of new H.B. locations were obtained, largely by sound ranging.

The conditions, as mentioned, were appalling, the mud bogging many tanks and vehicles. It was hoped to take Cleves by D+1, but this was not achieved. Things were made worse by the Germans blowing dams on the River Roer. This caused flooding which seriously impeded the attack of 9 US Army in the south, which was being co-ordinated with the XXX Corps attack. The effect of this flooding was also felt along the XXX Corps front, where further breaches made by the enemy in the banks of the Rhine upstream of the battle put much of the area north of the Reichswald Forest, on the Canadian Divisional front, under water shortly after the attack opened. The Canadian Divisions' operations were frequently maritime in character, and the strange amphibious vehicles, the Alligators, DUKWs and Buffaloes were much in use. At one time on the whole Corps front there was only one route available, this was the road through the Reichswald Forest.

As Cleves was approached, the German Siegfried Line defences were faced. These consisted of anti-tank ditches, concrete emplacements and barbed wire entanglements, the whole area being generously provided with mine-fields. This major obstacle was first attacked by the tanks of 15 (S) Division, those in front being flail tanks which beat the ground and exploded the mines, making safe passages through the mine-fields. These were followed by flame throwing tanks, which dealt

with the concrete emplacements and then infantry in sawn-off tanks called "Kangeroos".

The following day, 9th February, it was reported to XXX Corps HQ that 15 (S) Division were on the outskirts of Cleves and General Horrocks, in accordance with the plan, ordered 43 Division to move, passing through 15 (S). This led to a terrific jam, due largely to the fact that 15 (S) Division had not really taken Cleves at this time and, because of the flooding and ground conditions, there was only one road available for movement. However, Cleves was taken on D+2. It was interesting to see that General Montgomery appeared on the scene on D+2 to investigate the reasons for the hiatus that had occurred. This personal appearance close to the front line in an open touring car with the Corps Commander and 43 Division Commander was a re-assuring sight.

As General Horrocks graphically described in his book, "A Full Life", the 53 (W) Division "disappeared into the Reichswald Forest", where a slogging match was entered into with the enemy. It was about a week before the Division emerged on the far side of the Forest into open country!

To the south, 51 (H) Division also met heavy resistance. During this period the enemy brought up reinforcements and at the peak of the battle the enemy had over 1,000 guns and over 700 mortars, and comprised ten Divisions. The advance, in consequence, was slow - the enemy doing their utmost to keep the British away from the banks of the Rhine. There is no doubt that the advance was made possible largely by the artillery support to which the Regiment contributed. The slogging match continued for five days until 16th February, when 43 (W) Division advanced some 8,000 yards to an escarpment overlooking Goch, which was later captured by 51 (H) and 15 (S) Divisions. In the south the US Army experienced the same tough opposition and it was 23rd February before they crossed the River Roer. After capturing Goch, XXX Corps moved south east to Geldern, 2 Canadian Corps advancing to the Rhine at Wesel. By the 10th March, the battle was over and the whole area to the western bank of the Rhine cleared of the enemy.

The Regiment's role in this battle commenced with the deployment before D-Day of FS and SR bases south of the Maas and within the Nijmegen position by 'B' and 'S' Troops of 48 Battery. These were in action from 30th January to 13th February, D+5, when the extent of the advance rendered them inoperative. By this time, 'R' Troop of 47 Battery had deployed a base overlooking Cleves, which was in action from 11th to 13th February, after which a forward base was deployed in the Reichswald Forest, along a road leading in a south westerly direction from Cleves. This base came into action on the 12th February. 'A' FS Troop also deployed a base at Cleves which was in action from the 13th to 18th February.

When the bases of 47 Battery came into action, 48 Battery bases were reeled in. New bases were deployed by 48 Battery in the vicinity of Gennep, a town on the eastern bank of the Maas, and on the right of the XXX Corps front, which had been captured by 52 (L) Division. Here, No. 14 Pen Section was also in action. As the front became extended, the courses of the Maas and the Rhine diverging as the advance moved eastwards, 52 (L) Division was brought in on the right of 51 (H) Division, and the capture of Gennep was its first objective, 51 (H) Division's objective being Goch.

On the 18th February, Brigadier Stewart Rawlins, CCRA XXX Corps, called the CO, Lieutenant Colonel Ogden, to his Tac HQ and stated that he felt the sound ranging bases were now too far behind the forward troops to get good results, and he ordered the deployment of a base further to the south east of the deployed base and in the depth of the Forest. It will be remembered that at this time the SR base deployed by 'R' Troop was in the Forest, along the Cleves/Gennep road. In this position, along a straight road, it was comparatively easy to deploy the base and survey in the microphones. The base was, moreover, on wire, which was much more reliable than wireless, and it could be taken out of action quickly for redeployment. In the position suggested by the CCRA, all these advantages did not apply. At this time, the enemy held all the open land outside the southern and eastern fringes of the Forest, so a deployment here was impossible. The CO,

therefore, decided to take a calculated risk to leave the deployed base in position along the road until first light of the next morning, in the hope - and confidence - that XXX Corps would have made some advance into open country by that time, which would enable a base to be deployed and come into action quickly. Fortunately, this forecast proved to be correct and, early on the 19th, a base comprising four microphones was in action just south of the Forest and overlooking Goch. The CO reported this new deployment to Brigadier Rawlins, who expressed surprise and extreme satisfaction that the base had been located so far forward, and so quickly! It can be imagined how, in deploying a number of microphones of a sound ranging base in a dense forest, the difficulties in penetrating the undergrowth, locating microphone positions and surveying them in by tedious and time consuming traverse surveys, would have resulted in considerable delay in the bases coming into action and, on top of this, especially when the base is connected by wire, the time taken in reeling in would have been considerable.

By this time the detachments of the Regiment to the various Divisions in the advance had been re-assembled and the Regiment was working as an entity on the whole Corps front. On the 18th February, 'B' Troop deployed a 3 OP base just north of Hassum - a town some 6 kilometres west of Goch. 'S' SR Troop moved its Gennep base further eastwards and partly into the Forest, occupying the new position from the 18th to 27th February. This base also overlooked Hassum.

From the start of the battle to the capture of Goch and Gennep, the bases deployed by the flash spotting and sound ranging troops, together with the results obtained, were as follows:

47 Battery

		Location of Enemy <u>Gun Positions</u>
<u>'R' SR Troop</u>	Krannenberg (11-13 Feb)	1
	Reichswald (12-19 Feb.)	21
	Pfaisdorf (19-23 Feb.)	47
	Shoiya (Goch)(23-27 Feb.)	20
	Shoiya extended (27 Feb. -3 March)	6

'A' FS Troop

Cleves (13-18 Feb.)	0
Pfaisdorf (19-28 Feb.)	7
Pfaisdorf (1-2 March)	0

48 Battery

'S' Troop

Nijmegen (30 Jan.-13 Feb.)	7
Gennep (14-17 Feb.)	8
Gennep (2nd baseX 18-20 Feb.)	13
Hassum (20-28 Feb.)	32
Goch (1-4 March)	8

B' FS Troop

Nijmegen (30 Jan.-13 Feb.)	0
Gennep (14-17 Feb.)	1
Hassum (18 Feb.)	1
Goch II (1-3 March)	0

No. 1 4-Pen Section

Gennep (12-14 Feb.)	1
Heckens(15-17 Feb.)	12
Goch No. 1 (17-21 Feb.)	71
Goch No. 2 (22-24 Feb.)	27
Goch No. 3 (24-27 Feb.)	1

	Hulm (28 Feb.-3 March)	5
<u>No. 2 4-Pen Section</u>	Reichswald (16 Feb.)	0
	Varche (north of Goch) (17-19 Feb.)	1
	Dormansdorf (east of Goch) (19-25 Feb.)	20
	East of Goch No. 1 (24-27 Feb.)	19
	East of Goch No. 2 (27 Feb.-2 March)	11
	TOTAL	340

There was an interesting moment shortly after 48 Battery flash spotting and sound ranging bases were ordered by the CO to stand down and move across the River Maas. The Brigadier in charge of one of the AGRAs came on the field telephone requesting from the CO "on whose orders had the bases been moved?". The CO was able to tell the Brigadier that they had been moved on his, the CO's, orders and if the Brigadier would look at the artillery plan of the battle, he would know that this was the step that was to be taken at this juncture. Not often is one in a position to make such a point to a senior officer!

About a week after the operation commenced, the widening of the front, which had resulted in 52 (L) Division coming in on the right flank, enabled 2 Canadian Corps to come into the battle on the left of XXX Corps, with 2 and 3 Canadian Divisions then coming under command of 2 Canadian Corps. At this point, the front was divided between the two Corps, XXX Corps being directed in a south easterly direction and being routed towards Geldern.

When Goch was taken, the Guards Armoured Division and 3 (British) Division, which was brought in the join XXX Corps at this stage, passed through 43 (W) and 51 (H) Divisions. Again, sections from the Regiment were allocated to the two Divisions which were to push through to Geldern and thence to the Rhine at Wesel. The advance of these two Divisions was, however, very slow and the Regiment, in the outcome, continued to work as an entity. The towns of Weeze and Kevelear were captured and the Corps pressed on to Geldern, where contact was made with the forward elements of the American 9 Army. XXX Corps then advanced to the Rhine at Wesel with 2 Canadian Corps on the left, where, after stubbornly holding a bridgehead, the enemy retired to the east bank of the Rhine on the 10th March.

After the deployment of these bases just south of the Reichswald Forest, 'A' FS Troop was divided into two short base parties, one with Guards Armoured Division and the second with 3 (British) Division. One of these parties deployed a short base at Udem for two hours on the 3rd March, but only one location was obtained. 'R' SR Troop deployed a five microphone base in the same area on the 3rd March, this remaining in action for 24 hours, but no locations were obtained.

During this operation, the third 4-Pen Section was formed and this came into action on 28th February in support of 52 (L) Division and, later, with 3 (British) Division. Two bases were deployed, the first with 52 Division at Afferden, which did not locate any HBs or mortars, and the second with 3 (British) Division on the Bonninghardt Ridge, near a village called Sonsbeck, which was successful in obtaining 32 locations.

So far as survey activity was concerned, a preliminary operation, which was undertaken before the attack was launched from Nijmegen, was to fix by intersection a number of recognisable points in the enemy's area. Identifying these points in advance enabled the sections, when they were dispersed with the various Divisions as already described, quickly to fix themselves on the theatre grid and to supply data to the gun regiments. The survey parties left their vehicles behind and were transported in vehicles of the artillery recce groups. In the initial stages of the advance all the survey was done on foot, partly because of the fact that the troops' transport had been left

behind, but largely due to the atrocious ground conditions resulting from the thaw. In spite of this, all gun positions were provided with survey data based on the theatre grid before the guns actually arrived. The number of gun positions to be surveyed in was probably the greatest that the Troops had experienced. For example, 'Y' Troop had as many as four divisional artillery groups as well as medium and heavy regiments from the four AGRAs in the field to keep provided with survey information to ensure the gun fire had the maximum effectiveness.

Although initially broken down into groups with each Division, as described earlier, the groups re-formed into Troops by the 23rd February and, in consequence, were from that point even more effective. The experience here was almost identical with that of the battle of El Alamein where, it will be remembered, the survey troops became more effective when working as a whole rather than when broken down into individual sections.

From the Goch area, as XXX Corps advanced to Geldern and thence to the Rhine at Wesel, 'A' FS Troop deployed at Bonninghardt. This was initially a 3 OP base but was later extended to 5 OPs. This base remained in action until 11th March, and was successful in locating 10 HBs. From the 2nd to the 4th March, 'R' SR Troop deployed along the Udem/Wesel Road, but the base was not successful in obtaining any locations.

As XXX Corps approached the Rhine at Wesel, the contracting enemy bridgehead was monitored by a five microphone base deployed by 'S' SR Troop, a 3 OP FS base deployed by 'A' Troop, a short FS base deployed by 'B' Troop and bases deployed by the three 4 Pen Sections. These came out of action on 11th March when the bridgehead collapsed and the enemy retreated to the east bank of the Rhine.

During this period, locations obtained were as follows:

Flash Spotting

'A' Troop	10
'B' Troop	6

Sound Ranging

'R' Troop	Nil
'S' Troop	4
No. 1 4 Pen Section	51
No. 2 4 Pen Section	40
No. 3 4 Pen Section	32

These results show that the 4-Pen Sections were particularly effective during this period. This was due largely to the field of their activity being concentrated on a comparatively narrow front, as compared with the normal sound ranging bases. The general noise of the battle made it difficult for the APs of the larger sound ranging base to identify individual guns, whereas in the case of the 4 Pen Sections slight local lulls in artillery and mortar activity enabled these bases to detect the fire from individual enemy guns on all the microphones of their bases.

In this operation, of course, the British Army had at last crossed the frontier into Germany proper and it was interesting to note that, once the frontier had been crossed, the reception which was encountered in the villages and towns was, as one would expect, vastly different from the Army's earlier experience in France, Belgium and Holland. This difference was exemplified by the flags flown from the windows of nearly every house. In the friendly countries these were national flags, together with a smattering of Union flags but once Germany itself was reached, whilst the total number of flags were about the same, they were all white!

CHAPTER TWENTY TWO

OPERATION "PLUNDER" - 24TH MARCH TO 2ND MAY, 1945

Two days before the bridgehead at Wesel collapsed, XXX Corps HQ handed over responsibility for completing the operation to 1 Canadian Corps. This was to enable XXX Corps HQ to begin planning the next operation, to cross the Rhine. This operation was given the code-name "Plunder". Before this was launched, the front was held by VIII Corps covering Wesel, with 1 Canadian Corps on the left and the Americans on the right. The VIII Corps sector was divided into two divisional responsibilities, with 3 (British) Division on the left, from Emmerich to opposite Marienbaum, and 52 (L) Division on the right from Marienbaum to Wesel. In this area, survey support was provided by 10 Survey Regiment, the Survey Regiment of VIII Corps, assisted by both 7 Survey Regiment of XII Corps and the 4 Survey Regiment. Whilst VIII Corps held the front at this time, in the forthcoming Operation "Plunder", XII Corps were to move through the 52 (L) Division and XXX Corps through the 3 (British) Division sector. In consequence, XII Corps and 7 Survey Regiment deployed flash spotting and sound ranging bases in the 52 (L) Division area and the 4 Survey similarly deployed in the 3 (British) Division area.

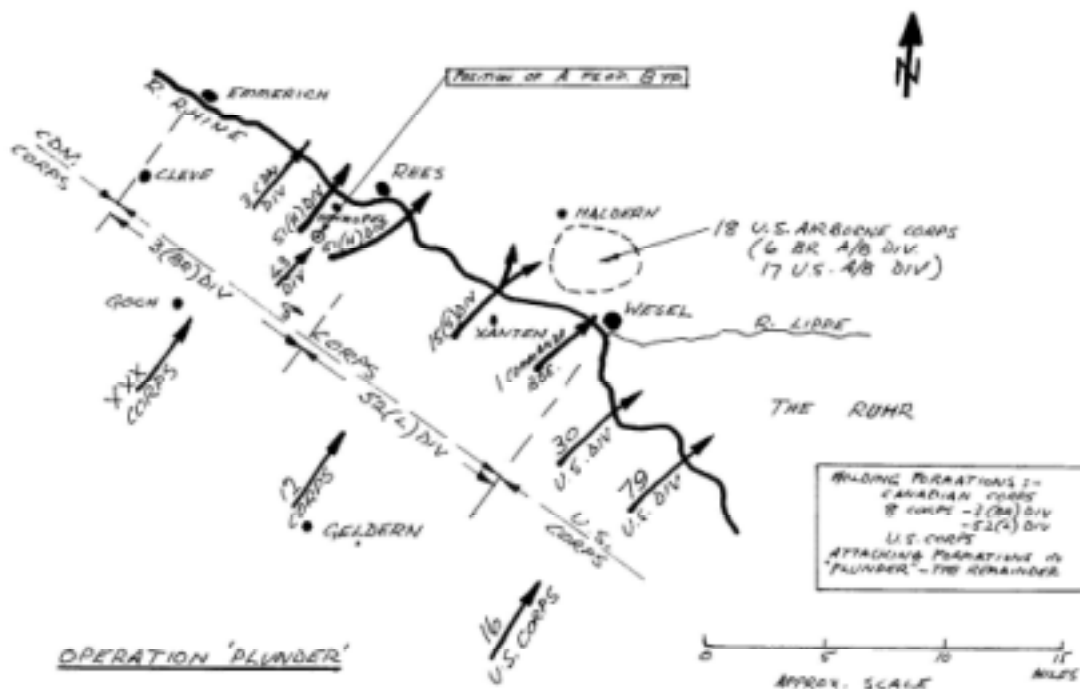
To cover the crossing of the Rhine by XXX Corps and its advance into Germany, 48 Battery deployed on the 3 (British) Divisional front, whilst 47 Battery concentrated at a town called Kessel, to prepare to move with XXX Corps. 'S' SR Troop deployed a six microphone base forward of Calcar, looking in an east to north east direction, whilst 'B' FS Troop deployed a 4 OP base at Calcar. These two bases were supported by No. 3 4-Pen Section, which deployed some 1,000 yards from the Rhine itself, the AP being within 200 yards of the river, and by 'D' SR Troop and No. 1 4-Pen Section of 10 Survey Regiment, which deployed to the north, these two elements of the 10 Survey coming under command of the Regiment during this period. These bases came into operation on the 12th March and remained in action until 28th March, covering the "Plunder" attack which was launched on the 24th March. During this period, 'S' SR Troop obtained 117 locations, the weather conditions being ideal for sound ranging purposes and, by utilising a railway line as the route for the wire communications, little trouble was experienced in maintenance. By H-hour for the "Plunder" operation on the 24th March, it was believed that all the enemy gun positions had been located. When the XXX Corps and 5 AGRA artillery programme commenced, sound ranging became impossible but, later, when the British firing became spasmodic, further enemy gun positions were located, which showed that the enemy had been able to move some of their gun regiments to new positions during the artillery programme. At 0200 hours on the 25th March, after the artillery programme had been completed, a further 19 locations of new enemy gun positions had been obtained. This information enabled 5 AGRA and XXX Corps to lay on another very useful counter battery programme almost immediately, which had a tremendous impact on reducing the enemy's artillery capability to resist the advance.

During the same period from the 12th - 28th March, 'B' FS Troop obtained only six locations. This poor result was again because of the cover available to the enemy's guns. However, OPs of this base were valuable in obtaining a considerable amount of general intelligence information. 'A' OP, just south of Calcar, became popular with commanders, largely due to its excellent field of view, but also due to its easy access, being located alongside a good road leading to Calcar. Because of this popularity, RA HQ XXX Corps suggested that copies of the panorama drawn by the OP party should be made available to hand to visiting officers. Copies were therefore prepared by the Corps RE Map Making Section - with an interesting consequence which will be related later. It will be recollected that the purpose of preparing a panorama by a flash spotting OP was explained in Chapter 1 of this history.

The 4 Pen base deployed by No. 3 4 Pen Section near to the Rhine from the 12th to 26th March was most successful, obtaining 111 locations, the majority of which were guns, during that period.

At this time, a new piece of equipment arrived to assist the flash spotters. This was a mobile OP,

consisting of a small metal platform, sufficient to hold only one observer, and supported on a vertical telescopic arm, the whole being mounted on a 3-ton truck. The OP was positioned hydraulically, being swung first into an upright position and extended to the appropriate height by operating the hydraulic jacket system. This proved useful, but had two major defects. The first was that the glands in the main telescopic support did not stand up well to wear and tear and, after a short time, they leaked slightly, which resulted in the OP slowly descending when it was in use. The other difficulty was that the hydraulics were operated by the driver on the ground from instructions of the observer in the OP, via the telephone. This frequently resulted in the OP being shot up well above the concealment provided by trees and buildings, the OP becoming clearly visible to the enemy before the observer could correct the driver's operation. This difficulty appeared to arise especially when an officer was in the OP, and particularly one who was not very popular with the troops! In spite of these difficulties, however, the equipment did some good work, especially in short base deployments.



For Operation "Plunder", XXX Corps was made responsible for the first crossing of the Rhine in the 2 Army sector, the initial crossing being undertaken by 51 (H) Division. This Division was to be followed by 43 Division and 3 Canadian Division. The leading elements of 51 (H) Division crossed the river using Buffaloes and DD Sherman tanks, as used in the initial invasion. The first objective was to secure a bridgehead over the Rhine, extending from the town of Haldern to Mullingen, and thence to Praest. This bridgehead was to be held by 51 (H) Division on the right, 43 Division in the centre and 3 Canadian Division on the left. When these objectives were reached, Guards Armoured Division and 3 (British) Division were then to pass through these holding Divisions, their task being to penetrate into enemy territory as far as they could.

47 Battery, with HQ Survey Troop, crossed the Rhine with 51 (H) Division and 43 Division, and deployed in the bridgehead, 48 Battery remaining in action on the west bank of the Rhine until the Guards Armoured Division and 3 (British) Division moved through. When this occurred, 48 Battery was to form into two detachments to join the Guards Armoured Division and 3 (British) Division, which detachments each consisted of a survey section, a 4 Pen Section and a short

base flash spotting party. Initially, the balance of the Regiment remained at Calcar.

Although XXX Corps was allocated the task of crossing the Rhine first, the main attack on the 2 (British) Army front was on the right, on the XII Corps front, and the attack here was to be assisted by two Airborne Divisions, 6 British and 17 US. This attack was launched later than the attack by XXX Corps. The XXX Corps artillery programme opened at 1700 hours, the forward elements of 51 (H) Division landing on the east bank of the Rhine at 2100 hours on the 23rd March. The XII Corps attack was launched later the same night. On the following day, 24th March, just before 10 a.m., the air was full of the airborne armada, large transport planes carrying paratroops and others towing gliders, some one glider, others two or even three. There were Dakotas, Sterlings, Halifaxes, Lancasters, Fortresses and Liberators escorted by British and US fighter planes. This air fleet carried the 6 British Airborne Division, who had flown from England and the 17 US Airborne Division, who had flown from airfields near Paris. This was a fine sight, but the excitement was dampened by seeing a number shot down by enemy anti-aircraft guns and, in one or two instances for some inexplicable reason, the breakup of the gliders as they were being towed.

On the XXX Corps front at Rees, although the initial attack and landing on the east bank went off without serious resistance, the enemy quickly recovered and resistance stiffened. This took the form of a counter attack by the 15 Panzer Grenadier Division and the fighting was intense. Mention should be made of the fact that the initial attack was assisted by smoke, this being part of the artillery programme. Although this covered the attacking forces, it did seriously interrupt the survey and flash spotting work.

When the bridgehead became large enough, 'R' Troop crossed the river and immediately deployed a four microphone base, which came into action on the 26th March. During the Panzer Division counter attack, this base obtained five locations of enemy batteries. The base finally came out of action on 30th March. 'A' Troop deployed a short base at Millingen on 28th March, within 500 yards of the front, but no locations were obtained. No. 24 Pen Section deployed in two positions in the bridgehead, from which five locations of enemy gun positions were obtained.

Before continuing the narrative from the crossing into Germany, the importance of the FSOP near Calcar as an observation point is worthy of further comment. On the morning on which Operation "Plunder" was embarked upon, the Prime Minister, Mr. Winston Churchill, with his party, arrived at the OP and witnessed the whole operation from this viewpoint. In his History of the Second World War, Volume VI he recounts the moment, the quotation being as follows: "In the morning, Monty had arranged for me to witness from a hill top amid rolling downland the great flight in. It was full daylight before the subdued but intense roar and rumbling as swarms of aircraft stole upon us. After that in the course of half an hour over 2,000 aircraft streamed overhead in their formations. My viewpoint had been well chosen..." Yes, there is no doubt that his viewpoint had been well chosen, as it formed part of the flash spotting base!

There was an interesting outcome in that, some few days later, Major Senior, the CCRA's Brigade Major, sent to Colonel Ogden, as a souvenir of the visit, one of the copies of the panorama signed by the Prime Minister, Field Marshal Montgomery and Field Marshal Sir Alan Brooke. It was fortunate that Sgt. Launder was in charge of the OP and responsible for producing the panorama, since he was one of the Regiment's most accomplished draughtsmen.

To return to the operation, the resistance met by the Airborne Division and the supporting parachute troops finally petered out on 29th March and the advance into Germany commenced. XXX Corps advance proceeded along three axes, 43 (W) Division on the left, Guards Armoured Division in the centre and 51 (H) Division with 7 (British) Division on the right. As the advance was expected to be rapid, survey detachments were again allocated to these Divisions. These were as follows:

43 (W) Division

47 Battery Tac. HQ
FS Short Base 'A' Troop
No. 2 4-Pen Recorder Section
Survey Section of HQ Survey Troop

Guards Armoured Division

48 Battery Tac. HQ
FS Short Base 'B' Troop
No. 1 4-Pen Recorder Section
Survey Section of 'X' Troop

51 (H) Division

47 Battery HQ
FS Short Base 'A' Troop
Survey Section of HQ Survey Troop

3 (British) Division

48 Battery HQ
No. 3 4-Pen Recorder Section
FS Short Base 'B' Troop
Survey Section of 'X' Troop

Along with XXX Corps, VIII and XII Corps were to advance on the right and 2 Canadian Corps on the left. XXX Corps seemed to encounter stiffer resistance than the other Corps and their advance was not as rapid as had been hoped. However, progress was sustained, the survey detachments continually deploying in support of their Divisional artillery. On 3rd April, Guards Armoured Division captured a bridge over the River Ems at Lingen and the advance proceeded - again somewhat slowly - deeper into Germany.

Greater resistance was encountered as the Corps approached Bremen on the River Weser and here, on 14th April, 47 Battery deployed in the 3 (British) Division sector. At this point 51 (H) Division was on the left of 3 (British) Division, with 52 (L) Division on the right, under command of XII Corps. At this time Guards Armoured and 43 Divisions were out of action.

On 21st April, 52 (L) Division came under command of XXX Corps and 'S' SR Troop moved into this sector, 'R' Troop's position in the 3 (British) Divisional sector being taken over by 'S' SR Troop of 48 Battery. The reason for this move was the intense shelling to which 52 (L) Division was being subjected and immediate action had to be taken to counter this activity. 'S' Troop at this time were in the Vechta area - some 30 miles to the west - and 'R' Troop, being much closer to this action, could be quickly redeployed in the 52 (L) Division sector. With the arrival of 'A' Flash Spotting Troop in this area on the 24th April, 47 Battery were fully deployed in support of 52 (L) Division, whilst 48 Battery were covering the 3 (British) Division area. The two survey troops, however, were exchanged, 'X' Troop being with 47 Battery and 'Y' Troop with 48 Battery.

The attack on Bremen came from two directions, 3 (British) Division from the south west and 52 (L) Division from the Verden area to the south east. The town was taken on 25th April. During this battle the sound rangers of 'R' Troop, 47 Battery, deployed six bases, usually of six microphones each, which in total located 56 enemy gun positions.

The sound rangers of 'S' Troop, 48 Battery, deployed two bases in addition to taking over one of the bases of 'R' Troop, succeeding in obtaining a total of 27 enemy gun locations. The flash spotters deployed generally using short bases, 'A' Troop deploying four bases, obtaining three locations, and 'B' Troop, with three bases, obtaining six locations.

On 1st May, a fourth 4 Pen Section was formed and this was put into action in support of 52 (L) Division. From the Bremen position the enemy quickly retreated in a north easterly direction, followed closely by 51 (H) Division on the right and 43 (W) Division on the left. 52 (L) Division remained in the Bremen area, securing the left flank of the advance, and 3 (British) Division remained to the west of the River Weser. Later, Guards Armoured Division came through and pushed on to Stade, with a view to supporting XII and VIII Corps. Whilst this operation was under way, the Germans came out on the 2nd May to negotiate the surrender of the City. In consequence, Monty ordered a pause in the advance; at this moment XXX Corps front extended from Stade, in the east, to Bremevorde and thence to Bremerhaven in the west.



Thus the Regiment's active service in war conditions came to an end. The cease fire was followed by duties involving the maintenance of the German civil population and, of course, the gradual run down of the fighting services as demobilisation began. Some of the duties which were undertaken on the cessation of hostilities are described in the next chapter, but, before doing so, the reaction of everyone to the news of the cease fire, which was quite unusual, should be referred to.

This reaction, which appeared to apply to most servicemen, but certainly to those in the Regiment, was, first, one of intense relief that the business of war was over at last. This, however, was followed, not by jubilation, but by something approaching depression. This probably came from the knowledge and the appreciation that war had taken some six years out of everyone's life, that many friends and comrades had lost their lives or had been badly wounded in this period, and because, all at once, there was a loss of direction. For six years everyone in the Services had one clearly defined objective - to do his best to beat the common enemy. Although, no doubt, many had other objectives, such as those, for example, who were involved in the black market at home, for those at the sharp end, this common objective filled their lives. Apart from a few random shots being fired and some of the allied forces - especially the Poles - living it up a bit, a feeling akin to shock pervaded the lines of the Regiment. The sudden change from having a firm and finite objective to doubts as to what objective or objectives were to take its place was mentally being questioned by everyone. Would the old comradeship and mutual support remain in civilian life? What did civilian life hold for those who, in their early manhood, had known only war and the killing that was accepted? Would the return home be an anti-climax? Would everyone find that they had been left behind in their jobs, careers, etc. by those who had

remained at home? How would men adjust themselves to civilian life? These were the questions uppermost in everyone's mind. It was interesting to note the reaction of some, one evening during the Sanbostel Camp period, which is referred to later, when listening on the radio to revelries in London. The general comment was, "They should see the conquering heroes now - in a stinking horror camp attempting to clean up the mess!"

It is interesting to note that whilst the cease fire negotiations were being undertaken, the forward light armoured troops of XXX Corps were ordered to advance as quickly as possible to the east coast of Schleswig Holstein to intercept the advance of the Russians from the coast and prevent them from reaching the Danish border! This objective was achieved. It will forever remain a tragedy that the Allies did not take the same action in relation to Berlin.

CHAPTER TWENTY THREE

IN GERMANY ON CESSATION OF HOSTILITIES

One of the most extraordinary spells of duty undertaken by the Regiment after hostilities ceased was during the period when XXX Corps became responsible for the administration of an enemy horror camp, known as Sanbostel Camp, some 20 miles south of Cuxhaven. Statistics relating to this camp are vague, but it was stated that there were between 20,000 and 40,000 political prisoners in the camp. These were in a terrible state, emaciated and all appearing to suffer from dysentery and similar diseases, sitting about and permanently excreting and all dressed in the striped pyjamas as worn by the inmates of the Belsen and Buchenwald camps. There were many dead lying about, and others dying at the rate of something like 100 to 200 per day. Hospital facilities were provided by the 10 CCS, the XXX Corps Field Hospital Unit, which was really much too small to deal with the problem that it had to face. The CCS strength was about half a dozen Queen Alexandra's nurses who were looking after some 2,000 of the inmates who were put into a local permanent hospital. As can be imagined, this was a tremendous task, and the nurses' normal routine was to work until they virtually collapsed, when they had an hour or two's sleep, then taking a stiff dose of benzedrine, they started again.

To bury the dead, the Sappers dug a large grave with their bulldozers. The Corps Commander, General Horrocks, thought it would be a good idea, in order to show the local inhabitants what the Nazis had been doing with the political prisoners in their name, to get some of the local residents to assist in the burial of the dead. Accordingly the Burgermeisters of a number of surrounding towns and villages were ordered to parade their young women between 20 and 30 years of age, in their best clothes, early one morning so that they could be picked up by the Corps transport and brought to the Sanbostel Camp. On arrival, they were given stretchers to carry the dead to the common grave. While they were doing this work, it was noticed that the German women did not appear to be emotionally affected at all by this grim procedure - in fact mostly they were laughing and joking between themselves. This performance seemed to be astounding until it was discovered that the locals knew all about the conditions in the camp. It was not a revelation to them at all! Apparently, it had been a popular Sunday afternoon sport to take one's family and a loaf of bread, bribe the outer guards with a few pfennigs and go to the wire surrounding the camp to throw bread over and watch the inmates fight for the morsels! To say that the German population did not know what was going on was clearly nonsense.

The Regiment did sentry duty and helped with the general chores in this camp. The smell was abominable. Apart from the German reaction to the situation in the camp - which was difficult, if not impossible to understand - it was surprising to discover that the facilities in the camp were excellent - very good huts, showers, communal rooms, etc. It was clear, however, that the administration had broken down completely, or had been allowed to collapse, and the life of the inmates was the lowest it is possible to conceive.

From Sanbostel the Regiment moved to a place called Zeven, where there was a camp of prisoners of war who had been captured by the Germans. These prisoners were largely Russians, with a sprinkling of Poles, Czechs, French and other nationalities. The Regiment took over this camp from a Scots Guards Battalion whose CO, when he learned that Major Balfour was 48 Battery commander, was most accommodating, if not almost obsequious, in handing over his responsibilities - Major Balfour's father being the Commander-in-Chief of the Scots Guards!

Apart from the general administrative duties in this P.O.W. camp, the main task was to organise convoys to return the Russian prisoners of war to their countrymen in the Russian zone. These happy men decorated the lorries in festive style, excited at their return home. Their reception by the Russian Army, however, dampened this down. It was a sorry sight to witness their debussing from the lorries, these ex-prisoners of war being hustled, with the aid of a rifle butt or two, into yet another concentration camp in the Russian sector. Apparently the Russian concern was that

these prisoners of war had seen something of capitalist western life and standards (they frequently escaped from the prisoner of war camps in Germany and visited local farms) and the Russians were ensuring that these men did not contaminate their fellow Russians by, no doubt, sending them all to the Steppes!

On two occasions, the return of the German prisoners of war repatriated by the Russians was witnessed. These men travelled in goods vans by rail. Their condition was terrible - many with old bandages and, seemingly, in a very weak state. Their condition was exemplified by the lack of any proper footwear, their feet being wrapped in old clothes or even paper - a marked difference from the condition of the Russian prisoners of war transported back to the Russian zone.

From the camp at Zeven the Regiment came under command of 4 Armoured Brigade and assisted that Brigade in administering an area about the size of an English county. The Regiment was concentrated in a village called Gehrden, near Hanover. The arrival of the Regiment at Gehrden was the final deployment of the Regiment in an operation code-named "Eclipse". The object of the operation, apart from carrying out duties in connection with the administration of the civil population, was to instil into the German that, this time, he had been soundly beaten - hopefully to discourage him from thinking of starting another war in the future. This was to be achieved by a policy of non-fraternisation with the native population and generally adopting a cold and uncompromising attitude.

So far as the men were concerned, preparations for entering civvy street were embarked upon. Courses were made available for training in many vocations and, in this, the Army Education organisation played a major part. Lectures on current affairs and the affairs of the B.L.A. (British Liberation Army), which was the title now given to the British Army of Occupation, were organised. Information about post-war employment opportunities and the Government re-settlement plans was given. This involved explaining the Re-Instatement in Civil Employment Act of 1944, and the provisions of National Insurance.

At this time XXX Corps had set up a holiday area in the Hartz Mountains at Bad Hartzburg, and the men and officers of the Regiment were, in rotation, allowed a week or two's leave in these pleasant surroundings. A very fine hotel had been taken over at Goslar for the officers, where the cuisine left nothing to be desired.

One of the few buildings which still remained standing in Hanover was a cinema, which was put to good use by the welfare organisation of XXX Corps. That the cinema had survived, together with a few buildings in the town centre of Hanover, was surprising - the destruction elsewhere was complete and indescribable. Streets in all directions, for their full length as far as one could see, were bounded by piles of debris with no standing buildings at all being visible. There was one oddity - and this was a very large industrial complex in a rural setting just outside Hannover, which had escaped the bombing entirely. It was rumoured that the Allied Forces had been given instructions not to damage it. If this was correct, it speaks well of the accuracy of the allied bombing offensive!

During this period both batteries undertook theatrical productions of some considerable merit, which were enjoyed by many. As the area surrounding Gehrden was extremely rural, some good rough shooting was had by those who enjoyed the sport. Many a good day's shooting was had with the local gamekeeper and his rough looking lurcher dog, the gamekeeper providing some old shot guns. 21 Army Group also arranged recreational facilities, the most attractive of which was a sailing club on a lake near Bad Oyenhausen called Steinhuder Meer.

As hostilities drew to a close many units had acquired a lot of civilian transport in the shape of Mercedes cars and other exotic makes. Many were driving around in great luxury! However, an order went out to hand in all such booty and this episode was over. It was said that some troops, assisted by landing craft of the Royal Navy, managed to get some of these cars back to the U.K., but no real evidence of this little operation has been found. So far as general booty was

concerned, there is also the tale of a group of Guardsmen who "liberated" a grand piano, brought it back to the U.K. in parts, re-assembled it on one of the platforms at Victoria Station and there and then auctioned it off! Again, probably something of a shaggy dog story!

Later General Horrocks adopted a policy of making the occupation as pleasant as possible for the civilians, particularly the children, in the Hanover area, and he ordered the units under his command to do what they could to help the German children by opening youth clubs and arranging parties. This did not go down well with some of the press correspondents, who made a lot of this. The policy of non-fraternisation, however, continued and further instructions were issued about this. To enforce this order, check points were set up on the main roads in the area. Within 24 hours of the check points being set up in the 4 Armoured Brigade area, orders were received to stand these check points down - apparently two very high ranking officers from XXX Corps HQ had been caught with a couple of German lasses in a car on their way to Bad Hartzburg!

The wide spectrum of activity undertaken by the Regiment during this period is illustrated by an incident in which the CO was involved. He was ordered to act as President of a military court, which was to deal with a German who had apparently deserted from his disorganised unit when hostilities ceased and was attempting to return home. He had been found hiding in some bushes and, unfortunately for him, in possession of a firearm.

Colonel Ogden en route for the court, which was to be held in Osnabruck, picked up a second member of the court, a Gunner Major. On arrival in Osnabruck he was met by a senior officer of the Corps of Military Police, who said that he was to conduct the prosecution. He told Colonel Ogden that he was going to demand the supreme penalty. Colonel Ogden said, "I suppose that means something like 10 years." The officer replied, "Certainly not - what I want is the death penalty!" Apparently, under regulations issued by the occupying British Military Government, it was an offence for a German to be in possession of a firearm, which offence carried the penalty of death. The M.P.'s comment, of course, put the seriousness of the charge into proper perspective and, bearing in mind the lack of professional knowledge of both the President and the second member of the court, Colonel Ogden was very relieved to meet the third member of the court, who turned out to be a Captain from the Judge Advocate General's branch, who knew all about the law! The case for the defence was put by a German barrister, who spoke fluent English, and, after consideration of all the evidence, the verdict was guilty - that is, that the accused did, at the time of his arrest, have a revolver in his possession. The defence counsel stated that the accused had only just found the gun in the copse in which he was hiding when he was arrested. The gun, produced as Exhibit A, was rusty and in a condition generally indicating that what the defence counsel had said was true. In view of this, the court decided on a sentence of 10 years' penal servitude. This apparently severe sentence was greeted with expressions of considerable relief by the prisoner and his family. They had fully expected the worst! The advice of the Judge Advocate General's officer in the deliberations of the court and in the formalities of the hearing was, as expected, invaluable.

At the end of the case, reporters from the local German paper requested, and were given, details of members of the court - one wondered whether the result of this might be an attack by a group of German guerrillas, who called themselves the "Werewolves". However, nothing untoward occurred and, in fact, so far as was known in the Regiment, there never was a single incident of harassment which was attributed to this so-called underground movement.

Toward the end of May, the 4 Survey Regiment was selected to move to the Far East to help finish off the war with Japan and, in consequence of this, most of those who were due for demobilisation in the foreseeable future were posted to other regiments in exchange for other soldiers or regular soldiers in those regiments. The CO, the RSM and a number of others were posted to 7 Survey Regiment at Osnabruck, and the new CO of the Regiment was Lt. Col. Clegg from the 7 Survey Regiment. In the outcome, however, the atomic bomb was dropped and the Regiment did not proceed to the Far East. In consequence the Regiment was run down with

others, and disbanded from their village at Gehrden in Gemany.

During the war the families and friends of those in the Regiment formed an association called the 4 (Durham) Survey Regiment Reunion Association. To celebrate the return of the Regiment to Gateshead, this Association arranged a welcome home banquet in the Old Assembly Rooms, Newcastle-upon-Tyne, on the evening of 6th September, 1946. The event was honoured by the Regiment's Corps Commander during the campaigns in the Middle East and North West Europe, Lt. General Sir Brian G. Horrocks, as the principal guest. Later, a plaque was unveiled in Durham Cathedral in memory of those gallant men who gave their lives and those who were wounded.

On the 1st May, 1947, the Regiment re-formed in Gateshead as a Territorial Army unit, still with the name 4 Durham Survey Regiment, R.A. By now, however, the composite battery organisation had been abandoned, the reformed Regiment consisting of survey, flash spotting and sound ranging batteries, together with a radar battery. A radar section had operated with the Regiment in North West Europe, first being tried out during the Reichswald attack, to locate mortars. This was an experimental unit which was not really under command of the 4 Survey Regiment, and it was only marginally successful during its short period in operation.

Later, in 1948, the name of the Regiment was changed to 377 Observation Regiment. In 1950, it was commanded by Lt. Col. L. J. Bell, one of the original T.A. officers who had joined the Regiment before the War.

The Regiment was later amalgamated with one of 50 (N) Division gun regiments, the 274 Field Regiment R.A., as 'R' 4 Durham) Battery. This was later disbanded and it is believed that, at the time of writing this narrative, that is in 1976, the only representative of the survey discipline in the British Army is the 94 Locating Regiment R.A., with B.A.O.R. in Germany.

EPILOGUE

This record has been largely concerned with the role that the 4 Survey Regiment R.A. played in the last war, which role, it is felt, made an important contribution to the successful outcome of the operations of the British and Allied forces. However, it must not be forgotten that the success achieved was accomplished by many of the Regiment paying the supreme sacrifice in the defence of their homeland and by others who were wounded or taken prisoners of war. The records which have been obtained show that 83 members of the Regiment were either killed in action or died of wounds or from other causes and two more were reported missing, presumed killed. 90 men were wounded and 211 taken prisoner of war. Those who paid the supreme sacrifice are shown in Appendix I to this narrative.

The efforts of the Regiment were rewarded by 17 officers and 27 other ranks being decorated or mentioned in dispatches for their individual or collective efforts, and these are listed in Appendix II.

To conclude, a quotation from the official report made by the Adjutant, Captain T. G. Boaz, on the work of the Regiment during the North West Europe campaign, would seem apt:

"It is only to be hoped that now the war is over, R.A. survey will not be relegated to the Cinderella position in the gunner world, and that its importance, which was fully realised and appreciated by commanders and others in battle, will not be forgotten. At the beginning of the war R.A. survey had nearly died, largely due to the lack of appreciation of its capabilities. One trusts that when the next war starts, another period of demonstration by a few stalwarts under difficulties will not be necessary."

We hope that there will not be another war, but in this insecure world, preparedness is essential.

APPENDIX I

ROLL OF HONOUR

Alldrick, H.	Hildrew, N.
Allingham, P.W.N.	Holmes, J.
Anderson, J.R.T.	Holton, G.T.
Atkinson, T.T.	Howes, T.H.
Aynsley, P.S.	
	Jackson, G.H.
Backhouse, G.C.	Jackson, R.G.
Bailey, E.	Jeffrey, W.J.
Ball, G.H.	
Bates, A. (Army Catering Corps)	Lee, D.
Batty, C.C.	Linnington, E.V.T.
Boome, A.H.	
Broadbridge, F.A.	McGough, J.G.
Brougham, R.E.	Macdonald, A.
Burini, A.E.	Maskell, R.G.
Burnett, D.A.	McDougall, J.G.
Button, J.K.	
	McGregor, L.L.
Cairns, J.	Moffatt, C.R.
Carr, T.	Moore, A.W.
Catterall, W.	Morris, C.
Clark, G.	Mort, L.
Coltas, G.E.	
Cook, W.G.	O'Donoghue, J..F.P.
Crosland, H.L.	Ogden, E.R.
	Owen, F.
Dingwall, C.T.	Parbutt, J.W.
Dahoo, J.M.	Picker, M.
Duggan, P.H.	Prigg, H.J.
Dunn, R.	Proud, J.T.
	Purvis, W.A.
Eckford, L.	
Ellison, J.T.	
Entwhistle, W.E.	
Farlam, V.E.	Richardson, D.C.
	Rigby, H.
	Robertson, A.K.
Gallacher, H.E.	Scott-Miller, A.
Garbutt, L.	Skelton, S.
Gilfillan, S.	Simpson, L.
	Smith, G.A.
	Smith, R.B.
	Sutton, J.W.
	Thomas, D.L.G.
	Todd, J.N.
Goldsmith, L.N.	Wagstaff, V.C.
Goodridge, A.	White, W.H.
Graham, C.H.	Wilkinson, R.D.
Graham, S.I.	Wood, C.A.
	West, T.J.
Hague, H.A.	
Hamilton, J.	
Hannan, T.W.	
Hibbs, A.S.	

APPENDIX II

LIST OF AWARDS

DISTINGUISHED SERVICE ORDER

Whetton, J.T. Lieut. Colonel

ORDER OF THE BRITISH EMPIRE

Whetton, J.T. Lieut. Colonel

MEMBER OF THE BRITISH EMPIRE

Abbot, B. Major
Boaz, T.G. Captain
Radford, R. Lieut. (Q.M.)

MILITARY CROSS

Balfour, J.C. Major
Blackburn, J.D. Captain
Finch, C.G. Captain
Hamer, F. Major
Kemsley, J. Captain
Ogden, R.H. Lieut. Colonel
Smith, F.H. Captain
Taylor, C.S. Major

Bar to the Military Cross

Hamer, F. Major

DISTINGUISHED CONDUCT MEDAL

Thompson, L. Sgt./Sur.

MILITARY MEDAL

Atkinson, T. Bdr/Sur.
Beadling, T. Bdr/Sur.
Bradley, T. Sgt/Sur.
Gordon, S. L/Sgt/Sur.
Graham, S.I. L/Sgt/Sur.
Hutchinson, N. Sgt/Sur.
Jackson, D.M.H. Bdr/Sur.
Luxton, H.N. Sur.
Mellis, W. Sgt/Sur.
Turnbull, D. Bdr/Sur.

BRITISH EMPIRE MEDAL

Parker, W.G.R. Sgt/A.C.
Redfern, J.W. S/Sgt/Fitter

MENTION IN DISPATCHES

Abbot, B.	Major
Berry, L.J.H.	Captain
Birkett, J.H.	L/Bdr/Sur. (twice)
Bryant, C.W.	Captain
Burton, K.J.	Captain
Chambers, R.	L/Sgt/Sur.
Finch, C.G.	Captain
Gitcham, W.G.	Sgt/Sur.
Harrison, A.A.	L/Sgt/Sur.
Hoggett, R.	Sgt/Sur.
Hopkins, N.B.	Sgt/Sur.
Howard, E.	Sgt.
Kirk, W.R.	Captain
Lennard, E.	BSM/Sur.
Marshall, T.E.	Sgt/Sur.
Parker, W.G.R.	Sgt/A.C.
Radford, R.	Lt. (Q.M.)
Redmore, V.C.	L/Sgt/Sur.
Stretton, N.	BQMS
Wedderburn, J.	L/Bdr/Sur.
Williams, J.P.	Sur.
Youngman, H.A.G.	Sur.

FRANCE Croix de Guerre with Gilt Star

Kirk, W.R.	Captain
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NETHERLANDS Netherlands Order of Orange

Crowe, L.G.	Lieutenant
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PHOTOGRAPHS



One of the flash spotting O.P. towers at El Alamein



A 4.5 in. medium gun of 7 Medium Regiment R.A.



A location cairn, Little Sister Area, Western Desert



First experiences of desert driving,
Unditching in the Nubian Desert



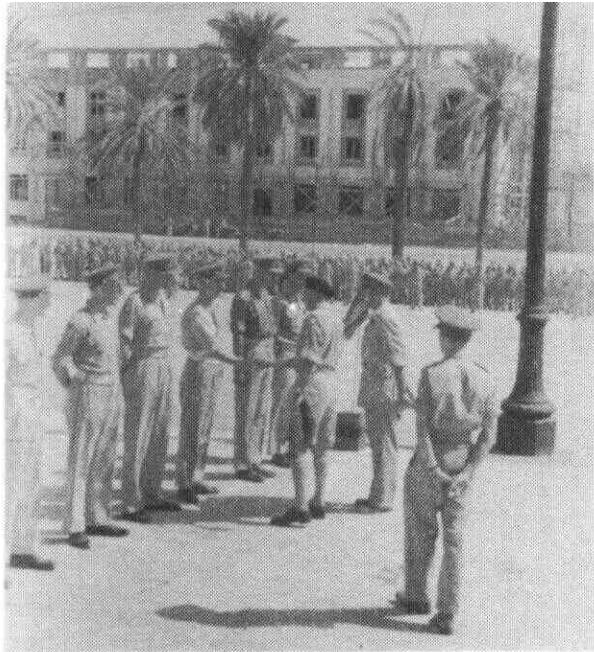
'Y' Troop approaches Kassala



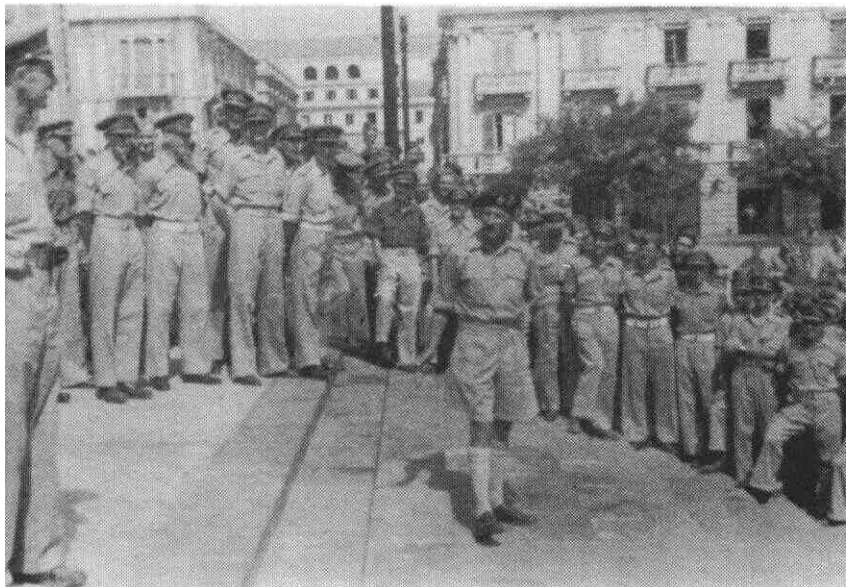
Inside 'A' Flash Spotting Troop H.Q. at El Alamein



One of 7 Medium Regiment's 4.5 guns firing at El Alamein



Monty's parade in Messina



Monty with the Troops at Messina

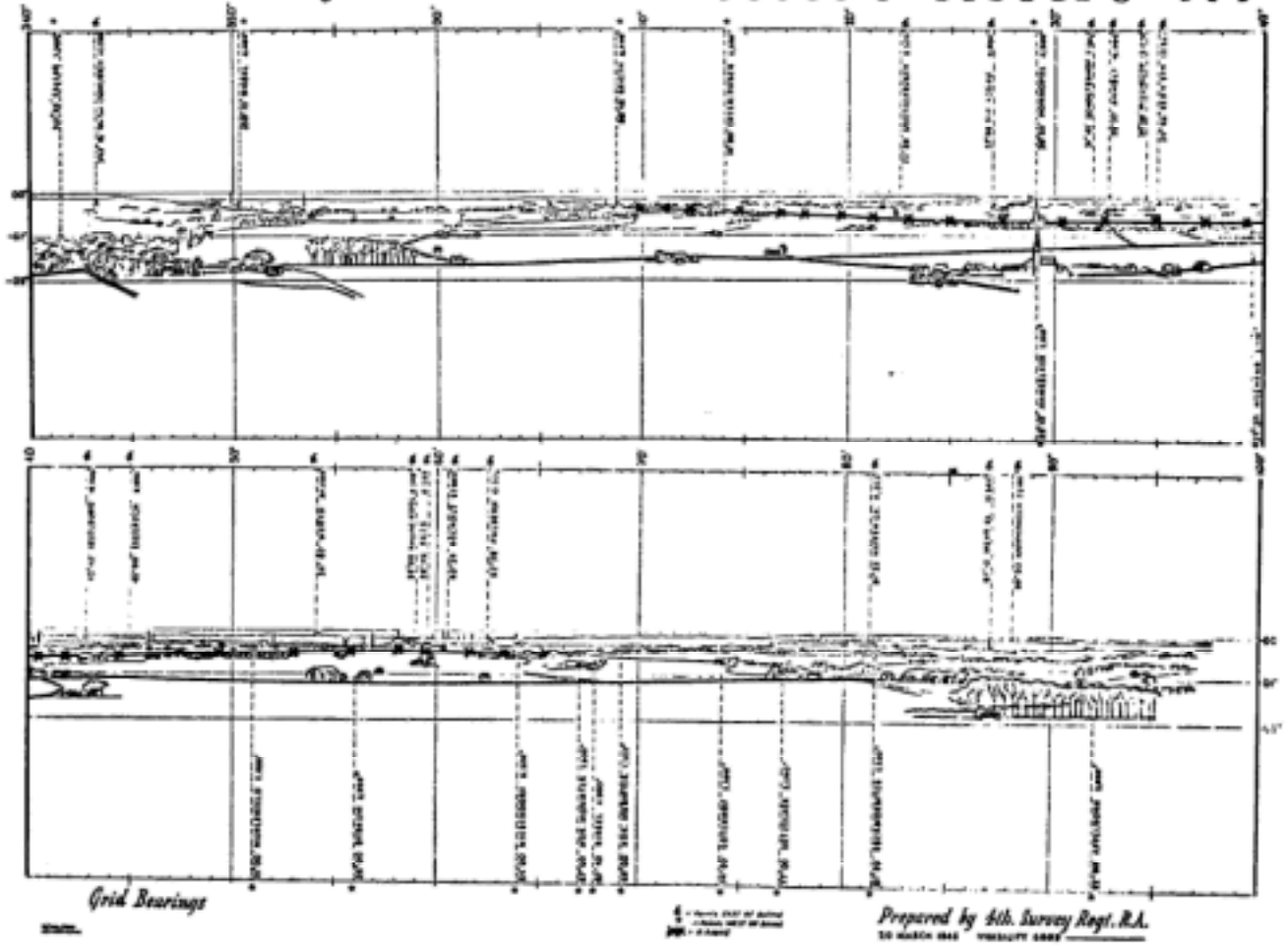


First elements of the Regiment to land on D-Day



Arrival in Brussels

PANORAMA from 'A' POST: 500986-8 548082-0 74-4



Discussed in Chapter 22 'Operation Plunder'