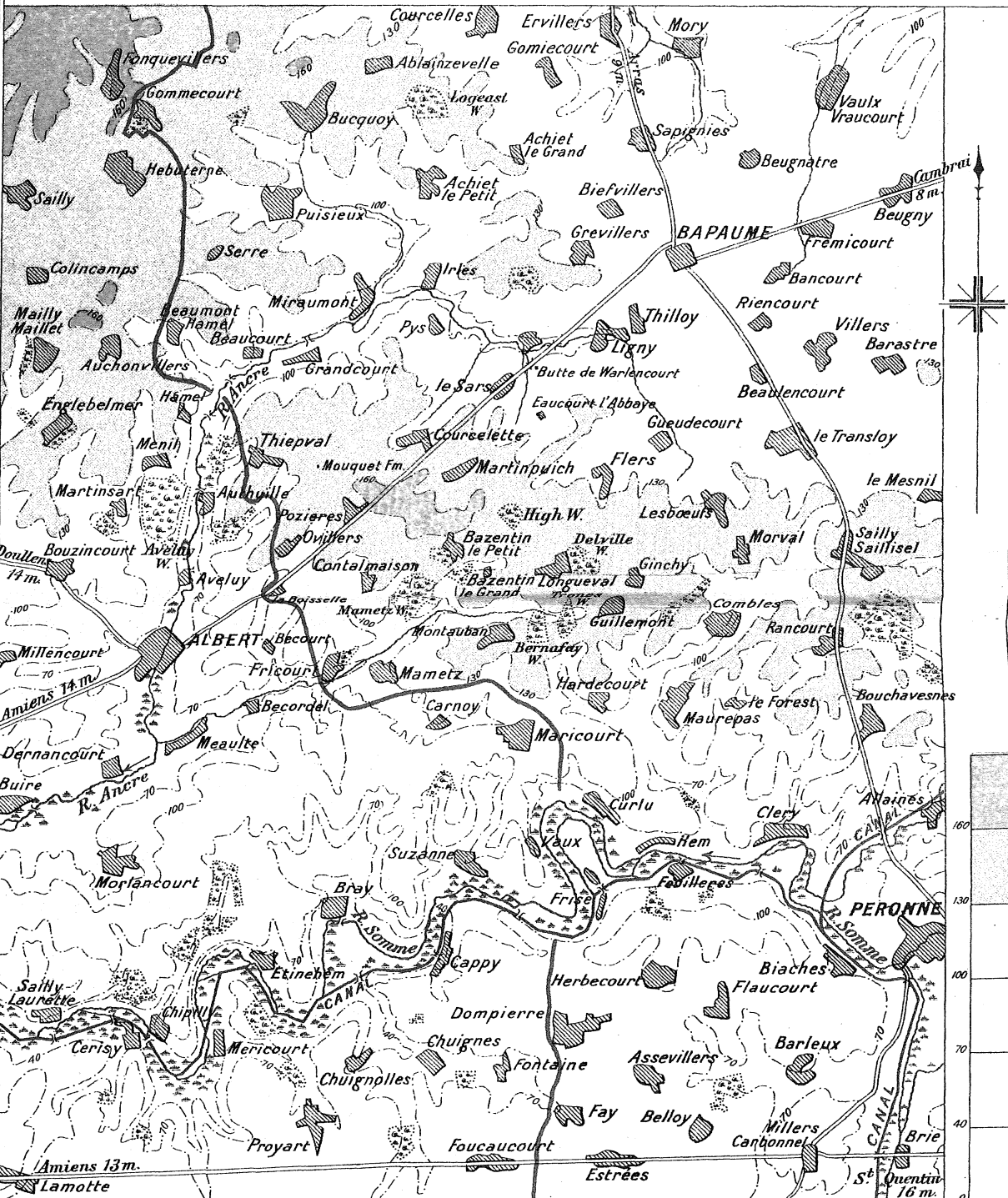


Sketch A.

Sketch A.

THE SOMME, 1916.



Only main roads are shown.

Railways are omitted.

German Front Line, 1st July

Heights of Layers in metres.

SCALE.

Mile 1/2 0 1 2 3 4 5 6 7 Miles.

Prepared in the Historical Section (Military Branch)

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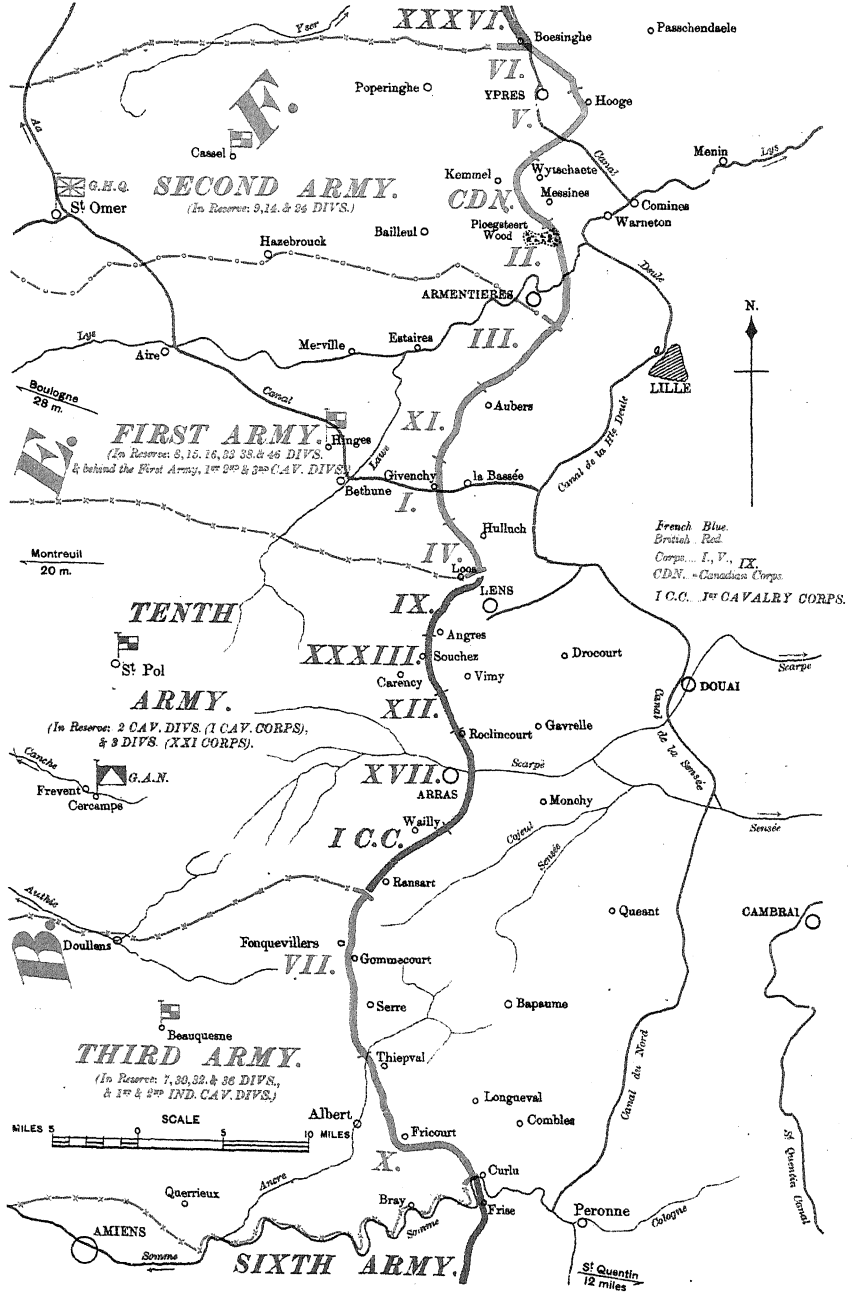


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THE BATTLE FRONT OF THE B. E. F.
SUNDAY, 19TH DECEMBER 1915.



ADDENDA AND CORRIGENDA TO VOLUME II (1914 * *)

Additional to those issued with Vols. III. and IV.

Page 101, line 11. For "south-westerly" read "south-easterly".

Page 109, line 2 from bottom. After "Menin" add footnote :

"The order for the isolated advance of the IV. Corps seems to have been due to a request on the 16th October from General Foch to Sir John French 'to advance Rawlinson's 'corps from Ypres in the direction of Roulers, in order to 'divert the German attack from the Belgian Army.' (Memoirs of Maréchal Foch, English edition, p. 153.)"

Page 119, footnote 1. For "XXVIII." read "XXVII."

Page 128. Add to footnote 3 : "According to the German official account, Volume V. (published 1929), Falkenhayn's plan throughout the 'Race to the Sea' was the envelopment of the Allied outer flank combined with a break-through further south (e.g. at Roye and then at Arras), so as to surround and capture the troops between the two attacks. When the Belgians and British reached the neighbourhood of Ypres, he planned, as stated in the text, to pierce their front and roll up the Allied line ; but this operation, similarly, was to be combined with a break-through at La Bassée. When the attempts to carry this out failed, Falkenhayn gradually reduced the scope of his manœuvre, until, in order to finish off the operation of the year with some sort of success, his objective became merely the town of Ypres."

Page 251, lines 4-11. For "eastwards to Zandvoorde . . . no attack followed." substitute : "to the west shoulder of the reverse slope of Zandvoorde ridge. The leading squadron then crossed the ridge, opened out, and, in the fading light, cantered towards the enemy trenches ; but, receiving heavy though erratic fire, turned and rode at a gallop for some hundreds of yards parallel to and two hundred yards from the Germans and then back into the British lines, with hardly a casualty. The other two squadrons did not follow the leading one, but were moved to the right behind the ridge to the western outskirts of Zandvoorde. Here they dismounted and filled a gap in the line of the 6th Cavalry Brigade, and by order fired 50 rounds per man."

Page 434, line 20. After "front line." add "All available ammunition wagons had been sent up by Br.-General E. M. Perceval, G.O.C. 2nd Division artillery."

Page 452, line 6 from bottom. For "Verey" read "Very".

Page 474. In *14th Brigade* under *5th Division*. For "2 Suffolk R." read "1 Devon. R. (replaced in 8th Bde. 3rd Div. by 1/Gordons 1st Oct. 1914)."

Page 536. Index. For "Perceval, Lieut.-Col. E. M." read "Perceval, Br.-Gen. E. M."

ADDENDA AND CORRIGENDA TO VOLUME III (1915 *)

Additional to those issued with Vol. IV.

Page 9, line 7 from bottom. After "modern battle." add footnote :

"See '1914' Vol. II. pp. 11-12, where the reserve of ammunition is discussed."

Page 21, line 6 from bottom. After "difficult." add footnote :

"On this day occurred the first recorded case of bombing down a trench. Captain R. G. G. Robson, R.E. (killed three days afterwards), 3rd Company 1st K.G.O. Sappers & Miners, had taken a load of jam-pot bombs into the front line trench in order to instruct the infantry in their use. He found himself on the flank of a length of trench just captured by the enemy, and initiated a system of attack by lobbing a bomb into the next bay, and, as soon as the explosion had taken place, rushing round the traverse between him and the enemy with two or three infantrymen. By continuing this process a considerable length of trench was recovered."

Page 24. Add to Note II: "Falkenhayn's plans for 1915 are given in full in the German official account, Volume VII. (published 1931). He did intend to attack on the Western Front in the spring of 1915, but circumstances prevented him from doing so. The first reserve of 6 corps (4½ new organizations) which he collected for the purpose was taken from him by the Kaiser's order, under Hindenburg's influence, to reinforce the Eastern Front as the Tenth Army, and fight in the Winter Battle in Masuria. The second reserve, 14 divisions, which he organized by April, by reducing the number of battalions in a division from 12 to 9 and various other economies, eked out by new units, was to be assembled in France. The crisis in Turkey brought about by the landing of the Mediterranean Expeditionary Force on Gallipoli compelled him, however, to decide that before he could attack again in the West a way through Serbia to Constantinople must first be forced. Even this had to be postponed; for Austria, in fear of declaration of war by Italy, declared that she would make her peace with Russia, even at the cost of surrendering Galicia. In consequence, Falkenhayn's striking force, as the Eleventh Army, was sent to the Austrian front and made the successful breakthrough at Gorlice-Tarnow.

"During the discussions regarding the theatre in which the Eleventh Army should be employed, Falkenhayn had directed some of the greatest of the German strategists, Generals von Kuhl, von Seeckt, Krafft von Delmensingen Wild von Hohenborn, and Tappen to consider where best an offensive could be made on the Western Front. The Aisne, Roye and Arras sectors and northwards of Arras were examined: Verdun was not. The schemes prepared are of interest because they appear to have had some influence on Ludendorff in 1918. Seeckt's plan contemplated a break-through on a front of 15 to 20 miles, north of the Somme, somewhere between the river and Arras, Flicheux—Thiepval being recommended.

ADDENDA AND CORRIGENDA

This accomplished, the Allied line was to be rolled up northwards, the line of the Somme being used to hold off French assistance. Krafft's and Wild's plan was much the same on a smaller scale, and it laid down 'in the first place, the British 'army must be broken and crushed.' If the forces available were not sufficient to extend to the Somme, the line Albert—Doullens and thence the course of the Authie was to be held, instead of the Somme, to protect the left of the operation. The main attack was to be made on either side of Arras and then directed north-westwards to the coast. Kuhl decided against an attack in the Roye area (the line taken by Hutier's Army in March 1918), as it could not be decisive, and selected the Aisne front (the Chemin des Dames offensive of 1918). What Falkenhayn's decision would have been is not known."

Page 32, footnote 1. Substitute for the last four lines :

"appears to be that carried out by order of the Garhwal Brigade on the night of the 9th/10th November 1914 by two parties of fifty men each from the 1st and 2nd Battalions 39th Garhwal Rifles, under Major G. H. Taylor, in order to render unfit for occupation an enemy trench fifty yards from its right flank, which enfiladed the line of the 1st Battalion."

Page 157. Add at end of Note : "The actual dispositions of the German attack seem to have been slightly changed (*vide* pp. 181-6)."

Page 165, line 24. Add footnote :

"It appears from the paper "Volonté," 25th April 1929, that the prisoner mentioned on p. 163 was captured by the 11th Division, and the warning he gave was not passed on to the 45th or 87th Divisions."

Page 259. Before the last paragraph, beginning "Directly . . ." add :

"It was supposed that the German trenches were not more than four hundred yards distance, and a formation in lines, suitable for a charge, was ordered."

Page 259, line 8 from bottom. After "artillery fire," add : "and discovered that the German trenches were at least six hundred yards further on and that the ground to be traversed was devoid of cover. The charging lines scattered in the long advance,"

Page 294, line 14 from bottom. After "W. W. Seymour," add : "each of the two last-named reinforced by two companies of the 4/East Yorkshire,"

Page 317, line 13. After "batmen," add : "and supported by the fire, sometimes at 1,600 yards' range, of the 39th Battery (XIX. Brigade R.F.A.), the 1/Wessex Field Company R.E., acting as escort and carrying ammunition,"

Page 318, last line. Delete last five lines and first four on page 319.

Page 369. Under "14th Bavarian Reserve Brigade" delete "9th Bavarian Reserve Regiment."

ADDENDA AND CORRIGENDA TO VOLUME IV (1915 * *)

- Page ix, line 27. For "of proofs" read "or proofs".
- Page xv, line 3. For "Sketch B" read "Sketch C".
- Page xv, line 12. For "Sketch C" read "Sketch B".
- Page 7, footnote 1, line 5-6. For "on their arrival" read "soon after their arrival".
- Page 35, last two lines. For "to get across . . . towards the 2/Rifle Brigade." read "to endeavour to support the 1/13th London in the mine crater and from there work westward to join up with the 2/Rifle Brigade."
- Page 74, line 5 from bottom (footnote). After "Chief Engineers" add :
" (still remaining advisers and not executive) ".
- Page 95, footnote 1, line 2. For "W. M. King" read "W. Martin Kay" and correct also in Index.
- Page 100, lines 8-9 from bottom, and also in footnote 1. Transpose "Liverpool Scottish" and "Lincolnshire".
- Page 100, line 9 from bottom. After "Liverpool Scottish" add : " (nearly 2 companies of whom were already with the 1st Line, having attacked as they moved through Railway Wood on finding that the enemy front line opposite them had not been taken) ".
- Page 100, footnote 1. The 1/Northumberland Fusiliers should be shown with 2 companies in front line and 2 in second line instead of all in front line. Sketch 12 opposite page 97 should be corrected to agree.
- Page 101, line 1. After "artillery fire" add : " directed on the second objective ".
- Page 101, lines 12-15. For the sentence beginning " Nevertheless . . ." substitute :
" Nevertheless, the German second line was reached, and B Company of the 1/Lincolnshire, some of the Royal Scots Fusiliers and Northumberland Fusiliers, and most of the Liverpool Scottish actually got through to the final objective. "
- Page 101, line 22. After "exception of" add : " the survivors of those companies who had reached the final objective and ".
- Page 101, line 24. For "which" read "who"; and for "south" read "south and west".
- Page 102, footnote. At beginning add : " The Liverpool Scottish, 21 officers and 378 men out of 23 and 570. "
- Page 102, footnote, line 1. For "four" read "five"; and add to the lieut.-colonels wounded "E. G. Thin of the Liverpool Scottish." Make necessary addition to Index.

ADDENDA AND CORRIGENDA

- Page 105, last line and top of page 106. Delete the six lines " At 2 A.M. . . . relieved by the 43rd ", and substitute : " At 2.20 A.M. violent rifle fire was opened from the German trenches in the woods, and there was an alarm that another attack with liquid fire was taking place. Nothing, however, happened except a half-hearted advance towards Zouave Wood which was driven back by machine-gun fire. No further efforts were made by either side on the 31st, and in the afternoon the 41st Brigade was completely relieved by the 43rd."
- Page 105, line 5 from bottom. For " through " read " fifty yards inside ".
- Page 105, line 4 from bottom. Delete " along " ; and after " Zouave Wood " add " with posts along the edge ".
- Page 140, footnote 1. Add at end : " At Field-Marshal Earl Kitchener's suggestion, a pioneer battalion formed part of each of the new divisions. Recruited with suitable men, the battalions were intended to carry out field engineering work requiring more skill and handiness than could be expected of the infantry but less technical skill than the Royal Engineers provided, and also to act as infantry when required. By June 1916 all divisions possessed a pioneer battalion."
- Page 155, line 13. For " Cuinchy and the Canal " read " Haisnes and the Canal ".
- Page 169, line 28. For " their rest billets " read " the reserve trenches and dug-outs ".
- Page 174, line 8. After " amount of ammunition " insert " (although nearly three times as much per yard as at Festubert)."
- Page 175, line 2 from bottom. Add after " adequately " : " , as far as time shrapnel was effective,"
- Page 176, line 10. After " buried cables " add " (insufficiently deep as it proved)".
- Page 179, line 29. After " killed." add : " Only opposite the 2nd Division were the Germans (*14th Division*) prepared to meet a gas attack."
- Page 182, line 5 from bottom. For " Hemin—Liétard " read " Henin Liétard ".
- Page 191, footnote 3. For " 12 per battalion " read " nominally 12, but actually only 4 per battalion ".
- Page 253, line 5. For " strawfires " read " fire boxes ".
- Page 255, line 10. For " two belts " read " ten belts ".
- Page 256, line 25. After " main assault." add : " An hour before zero the gas officer here also protested against the opening of the cylinders, reporting that he ' could not guarantee the effect ' on enemy or our own men ' ; but he was ordered by the division to carry on."
- Page 263, footnote 5, last two lines. For " Major L. C. Sprague " read " Lieut.-Colonel G. A. Weir ". And make necessary corrections to Index.

ADDENDA AND CORRIGENDA

Page 272, line 7 from bottom. For "south-east" read "south-west".

Page 452, line 5. Add footnote: "This seems to be the first official use of zero hour for starting time." Also index "zero hour".

MAPS AND SKETCHES

Map 2. For "Gahrwal" read "Garhwal".

Sketches 4, 6, 7 and 8. For "Gahrwal" read "Garhwal".

Sketch 12. Transpose the positions of "1/Lincolnshire" and "10/L'pool R."

Sketch 14. "A and B 6/Som. L.I." should be shifted to the right into Zouave Wood.

HISTORY OF THE GREAT WAR

BASED ON OFFICIAL DOCUMENTS

BY DIRECTION OF THE HISTORICAL SECTION OF THE
COMMITTEE OF IMPERIAL DEFENCE

MILITARY OPERATIONS

FRANCE AND BELGIUM, 1916

SIR DOUGLAS HAIG'S COMMAND TO THE 1ST JULY : BATTLE OF THE SOMME

COMPILED BY

BRIGADIER-GENERAL SIR JAMES E. EDMONDS

C.B., C.M.G., R.E. (Retired), p.s.c.

MAPS AND SKETCHES COMPILED BY

MAJOR A. F. BECKE

R.A. (Retired), Hon. M.A. (Oxon.)

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PREFACE

THIS volume, the fifth of the series, deals with the first six and a half months of Sir Douglas Haig's Command, that is from the 19th December 1915 to the 1st July 1916. It contains five main sub-divisions: the first deals with the general programme of the Allies for 1916 and the evolution of the Franco-British plan for an offensive on the Western Front; the second with the expansion and reorganization of the British Expeditionary Force and its rearward services; the third with the minor operations and trench warfare during the six months before the Somme¹; the fourth with the preparations for the Somme and the preliminary bombardment; and the fifth with the opening of the battle.

The expansion and reorganization of the British Expeditionary Force could not be overlooked. Not only had the force greatly increased in size, but the various arms and services in it, particularly the artillery, engineers, signals, flying corps, army service corps and ordnance, had taken over a number of new duties; trench-mortar and machine-gun units had been formed, and mining, gas discharge and camouflage had been organized and brought into use. The bases and lines of communication likewise had grown in even greater proportion in order to supply the wants of the increasing forces. As a background to the fighting, it was thought desirable to give some account of this essential machinery, and also to put on record the work of the organizations which did so much to ease the life of the soldier: the churches, the auxiliary social services, the Expeditionary

¹ The "Official Nomenclature" for the operations on the Somme 1st July to 18th November 1916 is "The Battles of the Somme 1916", divided into twelve battles: Albert, Bazentin Ridge, Delville Wood, Pozières Ridge, Guillemont, Ginchy, Flers-Courcelette, Morval, Thiepval Ridge, the Transloy Ridges, the Ancre Heights, and the Ancre 1916. The operations are, however, invariably spoken of as "the Battle of the Somme", or simply "The Somme", and, for shortness, the latter name is used throughout this volume.

Force Canteen, the post and the press. Of work in the Homeland, only recruiting and munitions are touched on. The question of munitions was all-important, and it will be seen that the British Expeditionary Force was seriously handicapped in 1916 because there were not sufficient munitions, about half the number of guns which our Allies the French considered sufficient for the infantry engaged, and because both weapons and ammunition exhibited grave defects: in fact, neither the quantity demanded nor the quality required was provided.¹

It was originally intended to cut down the account of the minor actions and trench warfare to a few pages; but it has, on advice, been left at its present scale in order, first, to show that the British Expeditionary Force was by no means resting or merely preparing during the six months before the great battle: it was, indeed, never at rest, and its casualties from the 19th December 1915 to the 30th June 1916 were more than 125,000. Secondly, because the preliminary actions afforded most valuable experience and were an introduction to the Somme fighting: some of them greatly embarrassed Sir Douglas Haig in his preparations for the offensive, although they did not induce him to change or modify his plans.

It will be shown that the great battle of the year was fought, like the Battle of Loos, not only on ground and on the day chosen by the French, but at the very hour selected by them; and that neither place, nor date or time was what the British Commander-in-Chief would have chosen had he been free to do so.

The history of the plan for the Somme offensive makes it clear that the three commanders principally concerned had different conceptions for its conduct. General Joffre desired an attrition battle (to be fought mainly by the British) to exhaust the enemy's reserves. As it turned out, he was compelled to ask for a battle to relieve Verdun. The Somme achieved both these objects. In proof that the second of them was gained, there is Maréchal Pétain's generous testimony in 1930, that by the Somme Verdun "était dégagé et sauvé".² That this was the case is fully corroborated by the German records quoted in this volume: on the day that the Somme bombardment began General von Falkenhayn ordered drastic economy of men, material and ammunition before Verdun; and from the day of the infantry assault on the 1st July onwards began shifting

¹ See page 121.

² "Verdun", p. 119.

men and munitions from Verdun to the Somme. Finally, on the 11th July, he ordered the "strict defensive" before Verdun.

General Haig took quite a different view of the situation to that of the French commander. He believed that a break-through—that is an advance through the three German positions (the 3rd was hardly more than marked out) was possible; he designed, when this had been consummated, to send a force, not wildly ahead into the blue, but northwards, so that, working in co-operation with the troops on the Gommecourt—Arras front, it should settle with the opposing Germans in that sector, and definitely upset the enemy equilibrium: that is, he wanted penetration followed by rapid exploitation. General Rawlinson, the commander of the British Fourth Army, which was to play the chief part in the coming battle, thought that no more was possible than a step-by-step advance, each step made from a secure footing and preceded by a thorough bombardment. The battle took this general form. Whether the successes gained at Montauban on the 1st—and at Longueval—Bazentin on the 14th July—could have been exploited in the sense of Sir Douglas Haig's conception must for ever remain an unsolved question: all that can be said is that no attempt was made to do so.

There was no way round, no means of evading a frontal attack on a fortified position; for the enemy's line extended from Switzerland to the sea. If a break-through could be made and exploited, the Germans, even if a large number of them were not captured and a real disaster brought about, would be forced to retire on a broad front and take up a new position, which could not be made so strong as the one abandoned, which represented the work of nearly two years. There were as yet no great "back lines"; the Hindenburg Line had not been thought of. Against any new enemy position taken up in the field after his expulsion from the Somme defences the offensive could be repeated with still better chances of success. Whilst the Germans were fully engaged at Verdun there seemed to be every chance of a definite break-through. If an attempt to make one failed in the first half of July 1916, before the Germans could rush reinforcements to the Somme, nothing probably was possible but a step-by-step advance, and this would bring "attrition" in its train. Decisive success and final victory could not be expected until there

was a breakdown in German morale, and the Germans of 1916 were such doughty opponents that nothing but continuous hard pounding could bring them to this state. The effects of Allied persistence were not to be clear for another two years when, on the 8th August 1918, the same British Fourth Army, again in co-operation with a French Army on its right, began the Advance to Victory.

Considerable space (six chapters) has been devoted to the operations of the 1st July, and the greater part of another to an analysis of them: it was the first occasion of the engagement of the troops of the New Army on a large scale, and it marked the turn of the tide. Henceforth the British Army, which previously had been auxiliary to the French, gradually took the larger share of the fighting, and the day also coincided with the beginning of Allied supremacy in the field, which was only to be broken for a time in the early part of 1918, when, in spite of the collapse of Russia, adequate reinforcements from the United Kingdom were not forthcoming. Even then the Germans, although they employed overwhelming numbers, were unable to drive their successes home.

It had required two long years to reach this turn of the tide: years of steadfast resistance under unequal conditions on the part of the British Expeditionary Force whilst the Homelands were making ready to pull their full weight. Even then the Empire failed to produce as great an effect as it might have done in the decisive theatre, because it continued to dissipate its strength in "side shows"—"colonial expeditions", as M. Clemenceau called them—which absorbed not only military but, what was even more vital, naval power.

The British divisions raised since the war were matched at the Somme against the toughest troops in the world. All went forward most gallantly, but the results of the 1st July varied on different parts of the field in proportion as the attempt at surprise, the strength of the enemy position, and the success of the bombardment varied. Only on the extreme right, where there was assistance from French heavy artillery, was the victory complete; for in many cases the new guns and new ammunition, owing to lack of skilled inspection, were found to be woefully defective. The tactical methods in which the infantry had been instructed also proved faulty and unsuitable and, added to the extraordinary bravery of the troops, brought about unnecessarily heavy losses. It may be

that there would have been complete victory everywhere on the 1st July had the infantry been ordered to cross No Man's Land at the fastest speed possible, instead of at "a steady pace", although there was no creeping barrage to help them in this first stage. An officer, who rose from the rank of captain to that of major-general during the war on the Western Front, has said that the Battle of the Somme was lost by three minutes. In any case, it was a hard lesson, the apprenticeship to war on a large scale for the British Army, as General Mangin put it; but the staff and troops took the experience to heart and the difference between the handling of the divisions and units on the 1st and, say, the 14th July was most remarkable. The principle of mutual assistance, for instance, which was entirely neglected on the earlier date, was practised with valuable results on the latter.

The question of casualties at the Somme presented a problem. The British returns rendered were really the record of absentees, with only those who were definitely known to be dead and wounded reported as such. The number of dead was comparatively few, the number of "missing" excessive.¹ It was therefore decided to examine, as regards the infantry, the heaviest sufferers, the Part II. Battalion Orders, which account sooner or later for every man. To do this for the 1st July 1916 alone took a member of the staff of the Historical Section just under six months, and for reasons of economy the enquiry could not be pursued further. The examination showed that the original returns for the 1st July were nearly 7 per cent. too high. The corrected figures are given in the text.

Owing to lack of accurate figures, there has been much misconception, and many false deductions have been drawn, as regards the relative cost of life in the Allied offensives and counter-offensives.² Verdun and the Somme have been represented as holocausts of French and British soldiers at small cost to the Germans. The subject cannot

¹ See page 488 where they are set out, for the 1st July: 8,170 killed, 17,758 missing.

² As it is proposed to publish next a volume on 1918, the first draft of which has already been circulated to "all concerned", it may be some time before the final volume on 1916, completing the Battle of the Somme, is issued. It has therefore been considered desirable to make a few general remarks on the battle in this volume, and print two notes at the end of it on German views of the fighting, and on the comparative casualties, which otherwise would be more appropriate at the close of the narrative of the battle.

yet, and perhaps never can be, dealt with entirely satisfactorily, as the method of "accounting" of the British was different to that of the Germans. The latest available figures are given at the end of the book,¹ and appear to indicate that the losses on the two sides were not greatly different. For Verdun, where the casualties were computed in much the same way by the two belligerents, it seems definitely established that the French lost 362,000 and the Germans 336,831. There is the most interesting feature that so long as the Germans were the attackers they lost, month by month, less than the French; whilst when the tide turned, from August onwards the Germans lost more than the French. At the Somme the Allies appear to have lost rather more than 600,000, the Germans rather less than that total.

A mere comparison of casualties sustained, or even an enumeration of villages and ridges gained, presents, however, no indication of the results achieved on the Somme. The struggle between the two opposing forces had a very definite bearing on the final decision. The losses on the Somme staggered the Germans. In the first ten days of July they lost 40,187 men (on their net reckoning, excluding lightly wounded), and in the worst ten days at Verdun the total had been only 25,928.² As the Somme battle began so it went on; in September the three 10-day periods showed totals of 49,500, 52,000 and 37,500 = 139,000. Taking the net figures, in the five months (July-November) the Germans lost 437,322 (average 85,000 a month), and at Verdun, in the first six months, 281,333 (average 47,000 a month), and 336,831 in ten months (average 33,600).

It is shown at length in a Note, on German evidence, that the 24th June 1916 saw the German Army at its zenith, still possessing large numbers of officers and N.C.O.'s of the Old Army, and well-trained men. These troops sacrificed their lives to obey the order not to give up an inch of ground; and after this loss the Army never fought so well again. Its morale for the first time was shaken, never quite to recover. There were other results: General von Falkenhayn, who realized that Germany could not win the war and was fighting for a "draw" in her favour, was dismissed from his post of Chief of the General Staff of the Field Army, and Field-Marshal von Hindenburg, with General Ludendorff as his chief assistant, was appointed

¹ See page 496.

² Wendt, p. 175.

in his place : in the end, as it proved, to our advantage. They decided that the German Army could not continue such a battle on equal terms, and immediately set about organizing a chosen line in rear ; and on a March night in 1917 the divisions of the German Army on the Somme and adjacent front slipped away to man the Hindenburg Line. This signified more than the giving up of a little territory ; it was a sacrifice of ground of immense military importance. General Hunter-Liggett, the commander of the American First Army, has pointed out what it meant : " Had the German attack that was to come in March 1918 been launched from the old position rather than from the Hindenburg Line to which the enemy retreated in March 1917, the Germans would have been in Amiens. That retreat, caused by the British successes on the Somme in 1916, may well have saved the Allies from defeat in 1918 before we could aid them in force." ¹

Even to a greater extent than in the previous volumes, I have been assisted by the loan of private diaries (or extracts from them) and regimental narratives and papers, and by the additions and corrections furnished by officers who kindly read the chapters in typescript or in proof. Without these, a detailed account of the 1st July at the Somme could not have been compiled, as, in many cases, the official diaries were, owing no doubt to the large number of casualties, somewhat scant, and important documents were missing. In some few cases not a surviving officer of a battalion could be traced. For the information given as regards the auxiliary social services, postal services, press and war correspondents, and canteens, I had the help of a number of ladies and gentlemen, without whom, owing to the nearly total lack of official records, it would have been impossible to compile the chapters.

The sections dealing with the operations of the St. Eloi Craters and Mount Sorrel, in which the Canadian Corps took the principal part, were circulated to officers concerned by Colonel A. Fortescue Duguid, D.S.O., the Director of the Historical Section of the Department of National Defence, Ottawa, who was also kind enough to furnish me with his own comments and other material which I required as regards the Canadian Forces.

As all officers interested may not have seen the draft or proofs, I beg, as I did in previous volumes, that any

¹ The late General Mangin made much the same remark in " Comment " finit la Guerre ", p. 119.

further information available, or any corrections thought necessary, may be sent to the Secretary of the Historical Section, Committee of Imperial Defence, 2 Whitehall Gardens, S.W.1. At the same time, I tender my hearty thanks to those who have done so for the earlier volumes. A sheet of "Addenda and Corrigenda" is enclosed in this volume.

For the air operations and the medical arrangements I have been able to refer to the official histories already published, and for the railway arrangements to the typescript of the railway volume in preparation by Colonel A. M. Henniker, C.B.E., late R.E. I was in correspondence with Major-General A. Forbes, the author of the History of the Ordnance Services, at the time of his much lamented death, which occurred just as his book was published, but after I had had the advantage of his views on my typescript.

For the French operations on the Somme, as the Official History has not yet reached 1916, the Service Historique of the *État-Major de l'Armée* was good enough to furnish a typewritten account, with maps. As regards the plans for 1916, the Annexes of the Official History, Tome viii. (i), dealing with the Salonika campaign, give a number of documents.

The German Official Account also has not yet reached 1916, but the *Reichsarchiv* has published a preliminary monograph, "Somme-Nord", in two parts, with excellent sketch maps, which goes into details of the fighting north of the Somme in the month of July. This has proved most valuable. The Director of the *Reichsarchiv*, General Freiherr Mertz von Quirheim, as is noticed in footnotes and in Notes at the end of the chapters, kindly furnished a good deal of additional information both as regards the Somme and the earlier fighting in 1916. The German regimental histories, of which the Historical Section now possesses over five hundred, provided a good many useful details and are frequently quoted.

In all, the number of officers and others with whom I have corresponded, and visitors who were kind enough to call on me, with regard to the Somme alone, well passes the thousand. The picture given, therefore, is a composite one, a mosaic, one might say, and the most extraordinary thing about it is how nearly every piece, however strange it seemed at first, has fitted into its place.

A military author has recently complained that an

official account "does not contain anything which cannot "be verified by chapter and verse", and I am proud to accept the implied compliment. Contemporary history cannot be written on a basis of Club gossip and "Dunkirk "intelligence", as he would apparently prefer.

A "Calendar of Principal Events" has been provided, as in the last volume, in order to afford means of a rapid survey of the war as a whole; but it was not thought necessary, as the Sketches are so numerous, to compile a "List of Place Names and Their Location".

The Appendices, as the documents selected for printing were nearly all lengthy, have been put into a separate volume issued with this. The British Expeditionary Force having in 1916 reached nearly its maximum strength, the orders of battle for this and the succeeding volumes would be practically the same and would take up a good deal of space. It has, in consequence, been decided, following the example of the French Official History, to issue later a separate order of battle volume, with the composition of staffs and other details. It has been judged necessary, however, to print in this volume abbreviated orders of battle of the British and German infantry and British pioneer battalions, so that readers may at any time be able to refer to them and verify to which divisions the various battalions belonged.

As in the case of the volumes previously issued, I have received very great assistance in the compilation from the staff of the Historical Section (Military Branch): from Mr. E. A. Dixon and Mr. A. W. Tarsey in the collection of material, and from Captain W. Miles in revision and preparation for the press. I have again had the benefit of invaluable criticism from Mr. C. T. Atkinson of Exeter College, formerly in charge of the Branch, and of my brother-in-law, Mr. W. B. Wood, M.A., and similar help, for the first time, from Lieut.-Colonel H. G. de Watteville, C.B.E., late R.A.

J. E. E.

26th July 1931.

NOTES

THE location of troops and places is given from right to left of the front of the Allied Forces, unless otherwise stated. In translations from the German the order is left as in the original, but otherwise enemy troops also are enumerated in relation to the British front. Where roads running through both the British and German lines are described by the names of towns or villages, the place in British hands is mentioned first, thus : " Albert—Bapaume road ".

To save space and bring the nomenclature in line with " Division ", " Infantry Brigade " has in the text been abbreviated to " Brigade ", as distinguished from Cavalry Brigade and Artillery Brigade, and " Regiment " similarly means " Infantry Regiment ".

The convention observed in the British Expeditionary Force is followed as regards the distinguishing numbers of Armies, Corps, Divisions, etc., of the British and Allied Armies, *e.g.* they are written in full for Armies, in Roman figures for corps, and in Arabic for smaller formations and units, except Artillery Brigades, which are Roman ; thus : Fourth Army, IV. Corps, 4th Cavalry Division, 4th Division, 4th Cavalry Brigade, 4th Brigade, IV. Brigade R.F.A.

German formations and units, to distinguish them clearly from the Allies, are printed in italic characters, thus : *First Army, I. Corps, 1st Division.*

The usual Army abbreviations of regimental names have been used in the narrative : for example, " 2/R. West Kent " or " West Kent " for 2nd Battalion The Queen's Own Royal West Kent Regiment ; K.O.Y.L.I. for the King's Own Yorkshire Light Infantry ; K.R.R.C. for the King's Royal Rifle Corps. To avoid constant repetition, the " Royal " in regimental titles is sometimes omitted : for instance, the Royal Warwickshire are occasionally called " the Warwickshire ".

In this volume it becomes necessary to distinguish between First-line and Second-line Territorial Force units, thus: "1/8th London", "2/5th Lancashire Fusiliers", "2/3rd London Field Company R.E."

Abbreviations employed occasionally are:—

B.E.F. for British Expeditionary Force;

G.H.Q. for British General Headquarters;

G.Q.G. for French Grand Quartier Général (usually spoken "Grand Q.G.");

O.H.L. for German *Oberste Heeresleitung* (German Supreme Command). *N.B.*—"G.H.Q." in German means *Grosses Haupt-Quartier*, that is the Kaiser's Headquarters, political, military and naval, as distinguished from O.H.L.

R.I.R. (on maps) for Reserve Infantry Regiment.

The spellings of "lacrymatory" and "strongpoint" are arbitrary, and were selected as being shorter than the usual ones.

Officers are described by the rank which they held at the period under consideration. To save space the initials instead of the Christian name of knights are generally used.

The German pre-war practice of writing the plain name without "von", when it is applicable and no rank or title is prefixed, has been adopted, *e.g.* "Falkenhayn" and not "von Falkenhayn".

Summer Time was introduced in the German Army on the night of 30th April/1st May; in the French and British, on the night of the 14th/15th June.

Time in German narratives and orders, which in the period dealt with was therefore sometimes one hour, sometimes two hours earlier than British, has been corrected to our standard, unless it has specifically stated against it, "German time".

MAPS AND SKETCHES

THE layered end-paper, Sketch A, has been provided to show in a general way the configuration of the battlefield of the 1st July 1916, and the German front line has been overprinted on it so as to show its position with reference to the ground. The other end-paper, Sketch B, shows the front line held by the B.E.F., as well as the divisions that were in reserve in the Fourth Army area, on the 1st July. It will be sufficient for the ordinary reader to refer to Sketch A for the form of the ground fought over on the 1st July; but for military students a layered map of the battlefield is included in the map volume, which can be laid on the table with the appropriate situation map on top of it. To assist the military student in reading the various operation orders, another map (at the same scale as the layered map) is also given in the map volume, squared on the system in vogue in the B.E.F. in France on the 1st July 1916.

The situation Sketches, if not otherwise described, give the position of the troops at the beginning of the day for the date they bear, and show the advances made.

Practically all the maps refer to the 1st July. The length of the front of attack on that day prohibited the provision of a large-scale map similar to those provided for the Battles of Loos, Aubers Ridge, and Neuve Chapelle. The separate maps showing the attacks made by the six British corps have all been reproduced on the same large scale (approximately 1/12,500).

Endeavour has been made to insert on the maps and sketches all the place and trench names mentioned in the text; but, to avoid overcrowding and thus unduly obscuring the movements of the troops, some small localities have been omitted and adequate description is in such cases given in the text. Students should consult the large-scale map of the corps area for additional topographical

detail that it is impossible to give on a page-size sketch of a corps front of attack.

For the spelling of the place names, except in the case of Maps 1 and 1A (which are portions of maps prepared during the war), the spelling used on the French 1/80,000 maps has been followed ; for the few Belgian names on the sketches of the Ypres area the spelling used in the latest edition of the Belgian survey has been accepted.

As in previous volumes, the accents in place names have been omitted, with the exception of the accent on a final or penultimate *e*.

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3. Note for the War Committee by the Chief of the Imperial General Staff with reference to the General Staff Paper dated 16th December 1915. (Signed by General Sir William Robertson, Chief of the Imperial General Staff, 23rd December 1915.)
4. Future Military Operations. Paper submitted to the War Committee by the Chief of the Imperial General Staff, 31st March 1916. (Signed by General Sir William Robertson, Chief of the Imperial General Staff.)
5. Instructions for General Sir D. Haig, G.C.B., K.C.I.E., K.C.V.O., commanding the Expeditionary Force in France. (Signed by the Secretary of State for War, Field-Marshal Earl Kitchener, 28th December 1915.)
6. Organization and Execution of a Raid. (5th and 7th Canadian Battalions, 16th/17th November 1915.)
7. Orders for a small Operation. (36th Infantry Brigade, 1st March 1916.)
8. The Somme. Plan for Offensive by the Fourth Army submitted to G.H.Q. 3rd April 1916.
9. The Somme. G.H.Q. Letters O.A.D. 710 and 710/1 to General Sir H. Rawlinson, 12th April 1916, with reference to the Fourth Army Plan.
10. The Somme. Amended Plan submitted by the Fourth Army to G.H.Q., 19th April 1916.
11. The Somme. G.H.Q. Letter O.A.D. 876 to General Sir H. Rawlinson, 16th May 1916, with reference to the Fourth Army Plan.
12. The Somme. G.H.Q. Letter O.A.D. 912 to General Sir H. Rawlinson, 27th May 1916, with General Instructions as to the Preparation for the Battle.

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13. The Somme. G.H.Q. Letter O.A.D. 12 to General Sir H. Rawlinson, 16th June 1916, stating the Objectives.
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15. The Somme. Note O.A.D. 17, dated 21st June 1916, of Commander-in-Chief's instructions in amplification of O.A.D. 12 issued 16th June. (Appendix 13.)
16. Preparatory Measures to be taken by Armies and Corps before undertaking Offensive Operations on a large scale, with appendices. Issued by the General Staff G.H.Q. (O.B. 1207, 2nd February 1916.)
17. Training of Divisions for Offensive Action. Issued by the General Staff G.H.Q., SS. 109, 8th May 1916.
18. Fourth Army. Tactical Notes, May 1916.
19. The Somme. Fourth Army Artillery Programme of Preliminary Bombardment.¹
20. The Somme. Fourth Army Memorandum of 28th June 1916 with regard to action to be taken if the enemy's resistance breaks down.
21. The Somme, 1st July. XIII. Corps Plan of Operations.
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 - (1) Artillery instructions for forthcoming operations ;
 - (2) Artillery Operation Order No. 12 of 28th June 1916.
26. The Somme, 1st July. 20th Infantry Brigade. Instructions for forthcoming operations, dated 17th June 1916.

¹ The Fourth Army Operation Orders are in the text.

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3. Situation, Western Front, 30th June 1916.
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11. The Somme, 1916. VII. Corps Attack, 1st July.
12. The Somme, 1916. Position at Nightfall, 1st July.

LIST OF BOOKS

TO WHICH MOST FREQUENT REFERENCE IS MADE

FALKENHAYN : " General Headquarters 1914-16 and its Critical Decisions ". By General Erich von Falkenhayn. (English translation, Hutchinson & Co.)

FRENCH OFFICIAL ACCOUNT : " Les Armées françaises dans la Grande Guerre ", compiled in the *État-Major de l'Armée*, Service Historique. (Paris : Imprimerie Nationale.)

Tome iii., with four volumes of " Annexes " and a case of maps, deals with the period from 1st May 1915 to the 21st February 1916, the beginning of the battle of Verdun.

Tome viii., Vol. I., with two volumes of " Annexes " and a case of maps, deals with the Gallipoli and Salonika campaigns from April 1915 to the intervention of Rumania in August 1916.

The " Annexes " contain many important documents with reference to the Allied Plans for 1916.

FREYTAG-LORINGHOVEN : " Menschen und Dinge wie ich in meinem Leben sah ". By General Freiherr von Freytag-Loringhoven.

Reminiscences. The author was German plenipotentiary at Austrian Headquarters from the outbreak of war to February 1915, and then Deputy Chief of the General Staff until September 1916.

GERMAN OFFICIAL ACCOUNT, RAILWAY VOLUME : " Der Weltkrieg 1914. Das deutsche Feldeisenbahnwesen. Band I. Bearbeitet im Reichsarchiv. " (Berlin : Mittler & Sohn.)

This deals with the German railway organization. There is further information of movements by rail from West to East in Volume VI. of the general narrative.

GORLICE : " Schlachten des Weltkrieges. Gorlice ". Issued by the Reichsarchiv (Oldenburg : Stalling).

An official monograph on the Gorlice-Tarnow campaign.

OEHMICHEN : " Essai sur la doctrine de Guerre des Coalitions. La Direction de la Guerre " (November 1915-March 1917). By Colonel Oehmichen. (Paris : Berger-Levrault.)

LIST OF BOOKS

An authoritative work, based on official documents, dealing with the general direction of the war by General Joffre. The author was one of the two officers detailed in December 1915 to organize a section of the 3rd Bureau (Operations) of the General Staff to co-ordinate the Allied operations.

PALAT XI. : "Bataille de la Somme". By General Palat. (Paris : Berger-Levrault.)

The eleventh volume of a valuable unofficial compilation on the French operations on the Western Front.

POINCARÉ : "The Memoirs of Raymond Poincaré". Vol. IV. (1915). Translated by Sir George Arthur. (Heinemann.)

RUPPRECHT : "Mein Kriegstagebuch". By Crown Prince Rupprecht of Bavaria. Edited by E. von Frauenholz. (Munich : Deutsche National Verlag.)

Extracts from the diaries and papers of the Crown Prince in three volumes, Volume I. going up to the 27th August 1916. A very valuable source and commentary.

SCHWABEN : "Die Schwaben an der Ancre". By M. Gerster (Heilbron : Salzer.)

This is an account of the story of the 26th Reserve Division in the sector astride the Ancre where it was from the end of September 1914 to October 1916. It had no serious fighting before the battle of the Somme.

SCHWARTE ii. : "Der deutsche Landkrieg". Edited by Lieut-General M. Schwarte. (Leipzig : Barth.)

A compendium of the war in 12 volumes. Volume II. covers the operations on the Western Front from the spring of 1915 to the winter of 1916-17.

SOMME-NORD : "Schlachten des Weltkrieges. Somme-Nord." Issued by the Reichsarchiv. (Oldenburg : Stalling.) Two parts.

An official monograph on the battle of the Somme in July 1916, north of the river, with a number of sketch maps.

VERDUN : "Verdun". By Maréchal Pétain. (Paris : Payot.)

A short account of the great struggle.

VERDUN : DIE TRAGÖDIE VON VERDUN. "Schlachten des Weltkrieges." Issued by the Reichsarchiv. (Oldenburg : Stalling.) Four Parts.

An official monograph on the Verdun fighting.

WENDT : "Verdun 1916". By Hermann Wendt. (Berlin : Mittler & Sohn.)

An examination of General von Falkenhayn's strategy in 1916, with a number of new documents and statistics furnished to the author by the French and German military authorities.

WÜRTTEMBERG OFFICIAL ACCOUNT: "Die Württemberger im Weltkrieg". By Lieut.-General Otto von Moser. (Stuttgart: Bellsen.)

There is also a numbered series: "Württemberg's Herr im Weltkrieg" (Stuttgart: Bergers) by various authors, treating separately of each Württemberg division, the Foot Artillery, Signal Service, etc. etc.

REGT. NO. . . . These are references to war histories of German regiments. Most of them are in the series "Erinnerungsblätter deutscher Regimente", published by Gerhard Stalling of Oldenburg. The volumes vary in length and value: some give detailed accounts of the fighting with extracts from the reminiscences of combatants; others merely reproduce the official war diaries.

Note:

- | | | | |
|-----------------------|--|-----|-----------|
| " 1914 " Vol. I. | The Official History of the Great War, Military Operations France and Belgium, Volume I. (first part of 1914); | | |
| " 1914 " Vol. II. | Do | do. | Vol. II. |
| | (close of 1914); | | |
| " 1915 " Vol. I. | Do. | do. | Vol. III. |
| | (first part of 1915); | | |
| " 1915 " Vol. II. | Do. | do. | Vol. IV. |
| | (close of 1915). | | |
| " EGYPT & PALESTINE " | } Vol. I. The Official History of the Great War, Military Operations. (1914 to June 1917.) | | |
| | | | |

CALENDAR OF PRINCIPAL EVENTS

Mainly extracted from "Principal Events 1914-18" compiled by the Historical Section of the Committee of Imperial Defence, London. His Majesty's Stationery Office. 10s. 6d. net.

Other Theatres. Naval Warfare and General Events.

Western Theatre.

DECEMBER 1915

19th. Gen. Sir D. Haig succeeds F.M. Sir J. French as C.-in-C. of the British Armies in France.
First German phosgene gas attack.
Gen. Sir W. R. Robertson succeeds Lt.-Gen. Sir A. Murray as C.I.G.S.

28th. *Dardanelles*: Final evacuation ordered.

JANUARY 1916

4th. *Mesopotamia*: First attempt to relieve Kut begins. (Ends 21st.)
7th-8th. *Dardanelles*: Evacuation of Gallipoli peninsula completed.
11th. *Caucasus*: Russian offensive towards Erzeroum begins.
15th. First Serbian troops landed at Corfu.
16th. *Balkans*: Gen. Sarrail assumes command of all Allied forces at Salonika.
24th. First Military Service Bill passed by House of Commons.
31st. Zeppelin raid over Suffolk and Midlands.

CALENDAR OF PRINCIPAL EVENTS—(continued)

Western Theatre.	Other Theatres.	Naval Warfare and General Events.
	FEBRUARY 1916	
14th-15th. Action of the Bluff.	10th. Remnant of Serbian army concentrated at Corfu.	9th. Seaplane raid on Margate and Broadstairs. Serbian Government set up at Corfu. Military Service Act comes into force in Great Britain.
	15th. <i>Italy</i> : Fifth Battle of the Isonzo begins. 16th. <i>Caucasus</i> : Erzeroum taken by Russians.	16th. War Office take over Air defences of London from the Admiralty.
	18th. <i>Cameroons</i> : Conquest by Entente forces completed.	
	19th. <i>East Africa</i> : Lt.-Gen. Smuts takes command of British forces.	20th. Seaplane raid on Lowestoft and Walmer.
21st. Battle of Verdun begins. 22nd. Lt.-Gen. Sir G. H. Fowke succeeds Lt.-Gen. Sir C. F. N. Macready as Adjutant-General, B.E.F.		23rd. Ministry of Blockade formed.
	26th. <i>Egypt</i> : Senussi defeated at Agagiya. 27th. <i>Balkans</i> : Durazzo captured by Austrians.	
	MARCH 1916	
1st. Battle of Verdun continues. 2nd. Fourth Army formed.		1st. German intensified submarine campaign begins.
2nd-18th. Hohenzollern fighting.		

- 5th. At Verdun Germans begin the attack on the western bank of the Meuse.
- 8th. *Mesopotamia*: Second attempt to relieve Kut begins.
- 12th. Allied Military conference at Chantilly regarding the summer offensive.
- 14th. *Egypt*: Sollum reoccupied by British 14th. Admiral v. Tirpitz, German Minister of Marine, resigns (appointed 1897).
- 16th. Gen. Roques succeeds Gen. Gallieni as French Minister of War.
- 17th. *Italy*: Fifth Battle of the Isonzo ends. 17th. Admiral v. Capelle succeeds Tirpitz as Minister of Marine.
- 18th. *Russia*: Battle of Lake Naroch begins. (Ends 30th April.)
- 19th. *Egypt*: Gen. Sir A. Murray takes over command from Gen. Sir J. Maxwell.
- 27th. Actions of St. Eloi Craters begin.
- 28th. Inter-Allied conference in Paris. Declaration of unity drawn up.
- 30th. First hospital ship, *Portugaliya* (Russian), sunk by a German submarine in the Black Sea.
- 31st. Zeppelin raid over Lincolnshire, Essex and Norfolk.
- 24th. Outbreak of rebellion in Ireland.
- 1st. Battle of Verdun continues. 1st. *Mesopotamia*: Third attempt to relieve Kut begins.
- 15th. *Balkans*: Serbian headquarters land at Salonika.
- 15th-18th. *Asia Minor*: Trebizond taken by the Russians.
- 16th. Actions of St. Eloi Craters concluded.
- 27th-29th. Fighting at Hulluch. 29th. *Mesopotamia*: Capitulation of Kut.
- 30th. Wulverghem gas attack. 30th. *Russia*: Battle of Lake Naroch ends.

APRIL 1916

CALENDAR OF PRINCIPAL EVENTS—(continued)

Western Theatre.	Other Theatres.	Naval Warfare and General Events.
	MAY 1916	
1st. Gen. Pétain receives command of Group of Armies of the Centre; Gen. Nivelle of the French Second Army.	9th. <i>Balkans</i> : Lt.-Gen. Sir G. F. Milne takes over command as British C.-in-C. Salonika.	1st. Collapse of Irish rebellion.
11th. Fighting at the Kink.	14th. <i>Austria</i> : Trentino offensive begins. (Ends 3rd June.)	
21st. German attack on Vimy Ridge.		17th. Air Board formed.
		25th. Second Military Service Bill, extending compulsion to married men, becomes law.
		31st. Battle of Jutland.
	JUNE 1916	
1st. Battle of Verdun continues.		1st. Battle of Jutland ends.
2nd-18th. Battle of Mount Sorrel.	4th. <i>Russia</i> : Brusilov offensive begins.	5th. Field-Marshal Earl Kitchener drowned.
20th. German attack at Verdun with a new diphasogenic gas shell.	16th. <i>Italy</i> : Italian counter-offensive in Trentino begins.	
24th. Somme bombardment opens.		
1st. Battle of the Somme (Battle Ist. of Albert) begins.	<i>Russia</i> : Brusilov offensive continues.	
	JULY 1916	

CHAPTER I

THE ALLIED PLANS FOR 1916

ON the 19th December 1915 General Sir Douglas Haig took over from Field-Marshal Sir John French the command of the British Expeditionary Force, General Sir Charles Monro succeeding him in command of the First Army. Four days later Lieut.-General Sir William Robertson became Chief of the Imperial General Staff. Those of the old Army who had served under the new chiefs felt that the right men had been put into the right places; and they had the most complete confidence that the Commander-in-Chief in France and the C.I.G.S. in London would work together with no thought but how best to employ the forces of the Empire to win the war.

The situation with which the Allies were faced at the close of 1915 was not an encouraging one. During the year, on the Western Front, there had been two great offensives: the Second Battle of Artois in May, and the Third Battle of Artois, combined with the Second Battle of Champagne, in September. In these offensives the British contributions had been the Battles of Aubers Ridge—Festubert and of Loos. In spite of the Allies' great efforts and heavy losses, little impression had been made upon the defensive lines of the enemy, and large tracts of France and Belgium still remained in his possession. The German offensive at Ypres, owing to the surprise created by the first use of poison gas, had inflicted heavy casualties on the Allies, had driven the French back and had obliged the British to abandon part of the Ypres Salient, making what was already a none too tenable position even more unsatisfactory and costly to defend. On the Eastern Front, the great Austro-German offensive, Gorlice—Tarnow, in May had, by its strategic direction, forced the Russians, though not decisively defeated, to

¹ See "1915" Vol. II. pp. 407-10.

abandon an enormous tract of country. Poland was lost to them and their front line now ran, north and south, 180 miles east of Warsaw. Italy, with 50 divisions against 35 Austro-Hungarian, had fought the first four battles of the Isonzo, but had been unable, owing to the mountainous nature of the country, to do more than gain a little ground. At the end of 1915 she had not yet declared war against Germany. Bulgaria had joined the Central Powers, and with her assistance Serbia and Montenegro had been overrun: the Serbian army, cut off from retreat southwards, had at the end of November been forced to a disastrous retirement south-westward across the Albanian Alps to the coast of the Adriatic near Scutari and Durazzo. The Franco-British expedition sent to assist the Serbians had arrived too late, and was reduced to holding on at Salonika, in Greek territory, with the attitude of Greece, still nominally a neutral, uncertain. The Gallipoli expedition had failed, and the evacuation of Suvla and Anzac was proceeding on the day on which Sir Douglas Haig took over command in France. In Egypt the Suez Canal was passively defended by holding its banks; an attack on it had been repulsed, but the Turks still remained in a threatening position in the Sinai peninsula.¹ On the western frontier of Egypt the Mahdi-el-Senusi had in November become actively hostile, so that it had been found necessary to send a force against him. In Mesopotamia the battle of Ctesiphon had been fought on the 23rd November; General Townshend's advance on Baghdad had failed, and his column had been obliged to fall back on Kut, where it was besieged. In East Africa an expeditionary force sent from India to Tanga had been defeated and driven back to its ships; the enemy had then taken the offensive and made raids into British East Africa, Nyassaland, Northern Rhodesia and the Belgian Congo. A substantial local success had, however, been gained in German South-West Africa, that colony being surrendered to General Botha in July 1915.

The Central Powers, to their great advantage, enjoyed a genuinely central position in Europe. Although neither Germany nor Austria-Hungary had as yet taken full advantage of the possession of interior lines to shift large

¹ A commission, of which Major-General H. S. Horne was a member, had on the 10th December made a report to the War Office, in which it was proposed to push the defence line forward so that it would run roughly 11,000 yards east of the Canal. See "Egypt & Palestine" Vol. I. pp. 85, 88-90.

bodies of troops from east to west, withdrawing them from Russia to overwhelm France or Italy, or from the Western to the Eastern Front to settle with the Tzar's legions, the combined hostile Powers might at any time decide to do so. On the other hand, the Allies had practical command of the sea, not as yet seriously challenged by the submarine, and possessed greater numbers of troops and far greater resources than Germany, Austria-Hungary, Bulgaria and Turkey together.

Yet, in spite of these advantages, it began to appear that, if they were not more effectively applied, the Coalition might fail after all to win the war, or even to expel the invaders from France, Belgium, Poland and Serbia. Hostilities between two evenly matched adversaries are bound to involve a long and arduous struggle with varying fortunes. Germany not only enjoyed a definite and constant advantage owing to her vast pre-war preparations, a nearer approach to unity of command, and interior lines as opposed to our slower sea-borne communications on exterior lines,¹ but she had gained an important start through her instant action on declaration of war. The main Armies of France and Russia had, however, survived their first surprise, suffered by Germany getting her blow in first, although Great Britain was not yet in a position to pull her full weight. The highly unsatisfactory state of the military affairs of the Allies as a whole—and, in a minor degree, of the British expeditions to various theatres—could no longer be attributed solely to that initial surprise. It was due, in the main, if not to absence of unity of command, at any rate to want of unity of effort. There were further contributory causes: conflicting aims, wasteful dissemination of forces, and inadequate study of the courses open to the enemy. In fact, there had been lack of a comprehensive policy and a suitable plan, attributable largely, so far as the British Empire was concerned, to the absence in France of the principal members of the General Staff, with the consequent lack of a trained body of military opinion in London.

The new C.I.G.S., and the Commander-in-Chief of the British Expeditionary Force found the ground to some extent prepared for a wholesome change. As early as June 1915 General Joffre had taken up the question of concerted effort and the co-ordination of the Allied operations, and on the 7th July 1915 the first Inter-Allied

¹ See f.n. page 7.

Military Conference had been held at his headquarters at Chantilly.¹ The delicacy of the subject, however, had prevented any definite settlement being arrived at except that each national army should be active in its own way. Still the conference bore fruit, and the various Allies took the solution of the difficult problem into consideration, realizing at last that the war might be lost unless it were conducted on more scientific lines. In October the committee which from June 1915, with the name of the "Dardanelles Committee", had, under the Cabinet, been the British co-ordinating authority, became, with reduced numbers, the "War Committee of the Cabinet".² At the first meeting of this Committee, on the 3rd November, it was arranged that Lord Kitchener himself should proceed to Gallipoli and Egypt to examine the whole situation there and decide whether the Dardanelles operation should be continued. Subsequently the question of establishing a better system of control, both for British operations and those of the Coalition, was discussed by the whole Cabinet.

On the 17th November a meeting of the Prime Ministers of France and Great Britain took place in Paris, and "the principle of a mixed permanent committee designed to co-ordinate the action of the Allies" was adopted.

Matters were now ripe for a further step, and the French Commander-in-Chief suggested the assembly of a second Inter-Allied Military Conference at Chantilly on the 25th November; but, in order to allow time for the Russians to send a suitable representative, the date was postponed to the 6th December.

To strengthen General Joffre's position, the French Government, on the 2nd December, appointed him Commander-in-Chief of the French Armies instead merely of the Armies of the North-East. They provided him at the same time with a special staff to deal with all questions relative to theatres of operations outside France,³ and assist him in the general direction of the war. Soon after-

¹ See "1915" Vol. II. pp. 87-9.

² Consisting of the Prime Minister, the Secretaries of State for War, Foreign Affairs and India, the First Lord of the Admiralty and the Minister of Munitions. It held twelve meetings in November and eight in December, and discussed, *inter alia*, the retention of British troops at Salonika, the coercion of Greece, the scope of the operations in Mesopotamia, a Russian plan for a combined operation with Buda-Pesth as objective, and the supply of munitions to the Allies.

³ "Théâtres d'opérations extérieures": this staff was therefore known as T.O.E.

wards Colonel Huguet,¹ who since August 1914 had been Chief of the French Mission at British G.H.Q., was withdrawn from the Mission and promoted to *général de brigade*, that he might command in the field. He was replaced by Colonel des Vallières.

Previous to the assembly of the Conference, under the presidency of General Joffre,² a long memorandum on "The Plan of Action Proposed by France to the Coalition", was circulated to the Allied representatives.³

The proposals made in this paper, as summarized at the end of it, were :

A. In the Principal Theatres :

1. Great Britain, France, Italy and Russia will deliver simultaneous attacks with their maximum forces on their respective fronts as soon as they are ready to do so and circumstances seem favourable. This is our essential aim, the principal means by which we expect to force a decision.

2. Until this can be done, the Austro-German forces will be worn down by vigorous action, to be carried out principally by those Powers which still have reserves of man power (Great Britain, Italy and Russia).

3. Each of the Powers will unceasingly continue to accumulate material and equipment. Russia and Serbia will be helped by their Allies to reorganize their Armies in this respect.

¹ As military attaché in London, in collaboration first with Major-General Sir James Grierson and subsequently with the latter's successors as Director of Military Operations (Major-Generals Sir Spencer Ewart, 1906-10 and H. H. Wilson, 1910-14), Colonel Huguet had been the first to bring about, and then maintain, the military entente between France and the British Empire, although when final victory came little was said about his services.

² Great Britain was represented by Field-Marshal Sir John French, Lieut.-General Sir Archibald Murray, C.I.G.S., Lieut.-General Sir William Robertson, Chief of the General Staff of the B.E.F., and Lieut.-General Sir Henry Wilson, chief liaison officer with the French Army.

France, by General Pellé, Major-General (that is Chief of the Staff) of the French Armies, and Colonel Huguet, Chief of the Mission with the B.E.F., assisted by Colonel Billotte and Chef de Bataillon Oehmichen of the General Staff.

Russia, by General Gilinsky, Chief of the Russian Mission, and Colonel Ignatieff.

Italy, by General Porro, sub-Chief of the General Staff.

Serbia, by Colonel Stephanovitch, military attaché.

³ Printed at length in the French Official Account, Tome viii. (i), Annexes (2), pp. 726 et seq., and translated in Appendix I.

B. In the Secondary Theatres :

The Allies will allot to the secondary theatres only the minimum forces required—in principle those which are already in the East—and will use them to bar the way to German expansion, conforming to the programme given below. One commander-in-chief for all the Allied forces in the East will be charged with its execution :

1. The Coalition will first try to establish in the Balkans the effective barrier which they failed to form at Constantinople. With this object, it is necessary :

(a). To continue in occupation of the Salonika region, in default of southern Serbia (Franco-British Expeditionary Force, remnants of Serbian army).

(b). To occupy Albania in force (Italy), to re-assemble and reorganize the Serbian army.

(c). To continue pressure on Greece (France, Great Britain, Italy), in order to obtain the maximum co-operation from her, and to organize on her coasts operations against enemy submarines.

(d). To take economic and military action (Coalition and Russia) to keep Rumania free from German control.

(e). To follow closely the trend of events in the Balkans and profit by all opportunities to bring neutrals over to our side, and take advantage of changes which are always possible in view of the diverse interests at stake.

2. At the same time, the Coalition must provide for the adequate defence of Egypt. With this object, we must :

(a). Evacuate Gallipoli by degrees and send the British troops thus relieved to Egypt for rest and reorganization.

(b). Create a strong defensive system east of the Suez Canal.

C. Economic War :

The economic war will be organized and carried out to its fullest extent, the necessary steps being taken at once by common Allied agreement.

The conference lasted three days, and the conclusions reached at its third and final sitting on the 8th December were as follows :¹

¹ The *procès-verbaux* of the conference and the conclusions are

Principal Theatres of Operations :

The representatives of the Allied Armies are unanimous in recognizing that the decision of the war can only be obtained in the principal theatres, that is to say in those in which the enemy has maintained the greater part of his forces (Russian front, Franco-British front, Italian front).

The decision should be obtained by co-ordinated offensives on these fronts. All the efforts of the Coalition should therefore be directed to giving these offensives their maximum force from the point of view both of men and material.

Decisive results will only be obtained if the offensives of the Armies of the Coalition are made simultaneously, or at least at dates so near together that the enemy will not be able to transport reserves from one front to another.¹

The general action should be launched as soon as possible.

The Allied Armies will therefore endeavour to hasten the augmentation of their resources in men and material

given at length in the French Official Account, Tome viii. (i), Annexes (3), pp. 30-5, 52-6, 69-76.

¹ A footnote states, "Calculations made show that about a month is required to effect a strategic transport of a certain importance from one front to the other", roughly a journey of 600 miles.

This seems a very good estimate in the light of the knowledge we now have. According to the German Official Account, vi. p. 2, four corps could be transported simultaneously from one front to the other, each being allotted forty trains a day. At a pinch a fifth corps could be carried. The German Official Account, Railway Volume, i. p. 236, which gives the timetables of actual moves, shows that several complete corps, including columns and trains, requiring 130-156 trains each, were transported in nine days. Thus, the III. Corps was entrained near Lille 20th-25th November 1914, and detrained in the Ostrovo-Kalisch area 23rd-28th November. In a month, therefore, twelve corps, say 500,000 troops, could be transported.

In comparison may be given the times taken to convey Allied troops by sea between the various theatres :—

England to Egypt : Average of 89 passages by transport between January and September 1916 was 11½ days ; shortest 8 days.

England to Salonika : Average of 60 passages between the same dates was 12½ days ; shortest 7 days.

Marseilles to Egypt : Average 6 days ; usually 5 to 8 days.

Marseilles to Salonika : Average 7½ days ; usually 6 to 8 days.

Taranto to Egypt (route opened July 1917) : Average 4½ days ; usually 3 to 7 days.

Taranto to Salonika : Average 4 days ; usually 2 to 6 days.

In the spring of 1916, owing to the shortage of ships, it took nearly four months to transport nine divisions by sea from Egypt to France. See Chapter II. A division required about 200,000 tons, or some 30 ships.

so that they can make their maximum effort as soon as possible.

It is very desirable that their maximum effort should materialize at a date as soon as possible after the end of March.

The exact date will be fixed after taking into account:

- (1) Climatic conditions ;
- (2) The situation of the enemy and political circumstances, which may lead the Coalition to attack even before this date and even without all the most favourable conditions being obtained.

In order to guard against any action of the enemy which might interfere with the execution of the plan :

- (a). Each of the Allied Powers will hold itself in readiness to stop any enemy offensive on its own front with its own resources.
- (b). In the case of an enemy attack directed against one of the Allied Powers, all the others will assist to the fullest possible extent.

The wearing down (" usure ") of the enemy will henceforward be pursued intensively by means of local and partial offensives, particularly by the Powers which still have abundant reserves of men.

Secondary Theatres :

The Conference are unanimous in recognizing that only the minimum forces should be employed in the secondary theatres, and that the troops now in the Orient seem, as a whole, sufficient to meet requirements.

1. The members of the Conference, with the exception of the representatives of the British Army, consider that the Franco-British Expeditionary Corps should remain in the Salonika area. Field-Marshal Sir John French considers that he cannot express an opinion on this subject, not knowing sufficiently either the ground or the situation of the troops.

In any case, whatever decision is taken by the Governments, the Conference unanimously consider that the organization of the defence of Salonika should be treated as a matter of extreme urgency

2. As regards the Gallipoli peninsula, the Conference

are unanimous in requesting its immediate and complete evacuation.

3. As regards the defence of Egypt, the importance of which for the issue of the war cannot be contested, the Conference unanimously consider that in any circumstances this should be ensured, but that only the minimum force should be devoted to it. From the study of the question it appears that an attack on Egypt will not be possible before the month of April, and that one could not be carried out with a force of more than eight Turkish divisions at most, by reason of the difficulties involved in such an expedition.

Immediately after his return from this conference, the Chief of the Imperial General Staff, on the 16th December, placed before the War Committee of the Cabinet a long memorandum entitled "A Paper by the General Staff on the Future Conduct of the War". General Murray had had this paper in preparation ever since he assumed office, and he now took into account the recommendations of the Chantilly Conference. His appreciation seems to have been the first of its kind drawn up by the General Staff in London.¹ After consideration of ways and means, the number of divisions required for defensive purposes, the possibilities of offensive operations, the Balkan problem, and the best course of action for the Allies, certain recommendations were made. They were based on the "ruling principle . . . to place every possible "division, fully manned and equipped in every respect "in France next spring"; for, it was said, "we require "every man we can find to break the enemy's resistance "in that theatre". Salonika was to be abandoned, and commitments elsewhere reduced to a minimum, "although "the possibility of a landing in England will be held in "view constantly". In considering the courses open to the enemy, it was suggested that "an offensive against France "would, if successful, give far more immediate results "than an attack in Russia [this, as we shall see, was

¹ Appendix 2. From the 2nd October 1915 onwards, a weekly "appreciation by the General Staff of the actual and prospective military "situation in the various theatres of war", consisting of two or three pages, had been issued; but this was a summary of actual operations in progress and their possible developments rather than a reasoned appreciation with a view to future plans. These weekly appreciations, for the use of the Cabinet, were continued under General Robertson, and after him until the end of the war.

“ Falkenhayn’s view], especially if the Allied forces are “ seriously weakened for operations elsewhere ”.

At the meeting of the War Committee on the 23rd December, at which it decided to recommend the Cabinet to order the immediate evacuation of Cape Helles,¹ the members had General Murray’s appreciation before them. His successor, Sir William Robertson, who attended for the first time as Chief of the Imperial General Staff, stated that as a whole he agreed with it, and asked for a decision on the principles which it asserted.²

In consequence, on the 28th December the War Committee placed the following definite decisions on paper, and they were approved by the Cabinet :

1. From the point of view of the British Empire, France and Flanders will remain the main theatre of operations.

2. Every effort is to be made for carrying out the offensive operations next spring in the main theatre of war in close co-operation with the Allies, and in the greatest possible strength. The actual plan of attack is left to the discretion of the commanders in the field.

3. An adequate force is to be maintained in Egypt for its defence—that force being at present estimated at approximately eight divisions with some garrison troops.

4. The operations in East Africa are to be carried on on the general lines approved by the War Committee and with the force already determined.³

5. The mission of the force now employed in Mesopotamia is to be of a defensive nature after Kut has been relieved, and it is intended for the present to rely on the existing garrison of India for the defence of that country (India).⁴

¹ The Cabinet had on the 7th December approved of the evacuation of Suvla and Anzac, retaining Helles.

² Appendix 3.

³ General Sir Horace Smith-Dorrien had on the 16th December been instructed to undertake the offensive-defensive, expel the enemy from British East Africa and then prevent further incursions. The forces at his disposal were : British, 2,500, British-African, 3,500, British-Indian, 9,500 ; total 15,500. Preparing to reinforce him were two Indian regiments, 1,500 ; British South African (white) infantry, 10,000 ; mounted brigade (white), 2,400 ; Cape Boys, 1,000 ; total 14,900. General von Lettow-Vorbeck was believed to have 2,200 Germans, and 15-20,000 native troops.

⁴ In February 1916 the operations in Mesopotamia, which had been conducted directly under the Government of India, were placed under the control of the Chief of the Imperial General Staff.

Nothing was said about Salonika in the decisions taken by the War Committee, as Lord Kitchener and Sir Edward Grey, who had proceeded to Paris on the 9th December at the desire of the Committee, had previously come to an agreement with the French Government. The condition under which Great Britain had originally agreed to co-operate in that theatre : " if the communications with the Serbian army cannot be opened and maintained, the whole force to be withdrawn ", had become operative. The British military authorities were strongly opposed to locking up eight Entente divisions in Salonika,¹ when they were badly needed in France. But both the French and Russian Governments were anxious, nay insisted, that the whole of the Allied contingents should remain in order to exert pressure on Greece and encourage Rumania, ensuring thereby that neither of these nations should attempt to throw in its lot with the Central Powers. The French Government and General Joffre, who for political reasons gave the scheme his support, not only objected to any withdrawal, but asked that the Salonika troops should be reinforced from Egypt with the British divisions about to be recalled from Gallipoli, which the C.I.G.S. proposed to transfer, when reconstituted, to France. One of the arguments adduced was that the occupation of Salonika by the Allies would serve to mask the failure at the Dardanelles.

In order to avoid serious discord, Lord Kitchener and Sir Edward Grey agreed at the conference in Paris (9th-11th December) to waive the condition under which the British troops had been landed, and consented to their remaining. They further assented to defensive works being constructed around Salonika to protect the force and to cover its re-embarkation in case of need. As an additional concession, the British Government, on the 31st December, agreed to General Sarrail, the commander of the French troops, being designated Commander-in-Chief of the Franco-British forces. Discussion as to whether or not there should be offensive operations on the Western Front was continued throughout the following months, and the questions arising out of the occupation of Salonika and the proposed coercion of Greece also took up much of the time of the War Committee. After the initiation of the great German attack on Verdun on

¹ By the end of 1915 there were 3 (by May 1916, 4) French and 5 British divisions at Salonika, besides L. of C. troops.

A volume on the campaign in Macedonia is in preparation.

the 21st February 1916, however, of which more will be said in the next chapter, the French dropped the proposals for reinforcing Salonika, and General Joffre concurred in the arrangements for sending to France all the available divisions then in Egypt. This new policy was accepted at an Inter-Allied Military Conference held at Chantilly on the 12th March, when it was decided not to modify the constitution of the "Army of the Orient", as General Sarrail's force was called, but to arrange for the transportation of the Serbian Army to Salonika, there to be reorganized and re-equipped in view of an eventual offensive.¹

At the same conference it was further unanimously agreed that the general offensive of all the Allies should be begun with the least possible delay in order to take pressure off Verdun, the date for it to be fixed by agreement between the commanders-in-chief.

None the less some members of the British War Committee appear to have become alarmed at the idea of committing the British Army prematurely to a great offensive in France; for at the meeting of the Committee on the 13th January, the recommendation of the 28th December, that "every effort is to be made for carrying out the offensive operations next spring", was amended to read:

"Every effort is to be made to prepare for carrying out offensive operations next spring in the main theatre in close co-operation with the Allied Armies, and in the greatest possible strength, although it must not be assumed that such offensive operations are finally decided on."

At a conference of the French and British Governments in Paris on the 27th March, both Premiers, M. Briand and Mr. Asquith, being present, General Joffre struck the key note of all future action with the words: "We have to destroy the morale of the German Army and nation". After a long discussion of the details of ways and means, particularly munitions, it was unanimously agreed to follow "common, methodical and concerted action" with "one policy, one army and one front".² Thereupon Sir

¹ A summary of what passed at this conference will be found in the latter part of Appendix 4.

An interesting account of the reorganization of the Serbian Army will be found in "Un Drame historique, La Résurrection de l'Armée Serbe, Albanie-Corfou 1915-16", by Lieut.-Colonel de Ripert d'Alauzier, a member of the French commission which superintended the work.

² At this conference it was also decided to constitute a permanent committee to co-ordinate and unify economic action in order to prevent supplies from reaching the enemy, and to organize a central international freight bureau.

William Robertson prepared a paper on "Future Military Operations" dated 31st March and pressed for a definite decision as to whether there was to be an offensive or not.¹ No reply being forthcoming, on the 4th April Sir Douglas Haig found himself obliged to ask the C.I.G.S. the direct question: whether His Majesty's Government approved of his combining with the French for a general offensive in the summer. This action greatly strengthened Sir William Robertson's hands, and on the 7th he was able to despatch a telegram informing the Commander-in-Chief of the Cabinet's approval of the combined offensive. On the 14th, Lord Kitchener, in answer to the same question, asked by Sir Douglas Haig during a visit to London, replied to him that all members of the Cabinet were agreed that the war could only be ended by fighting. From this time forward, therefore, it was accepted as a finally settled policy that the British were committed to an offensive on the Western Front.

The principles on which the decisions of the Allies had been based can hardly be called in question, and the decisions were unanimous. With Germany's attitude and supposed aims at that date, the war could only be ended by fighting; a decisive defeat could only be inflicted on her in one of the principal theatres; and it is obvious that to achieve this defeat the Allies must carry on combined offensives simultaneously with the maximum possible forces on their respective fronts. Diversions in minor theatres, as the situation stood at the beginning of 1916, would not produce even useful results: the Central Powers in their central position could easily deal with them. The only way Germany and her Allies could be seriously weakened otherwise than by fighting in the main theatres was by the operation of the blockade, and to make this more effective, measures were being taken.² Lest too much however should be expected from an offensive, at the end of May the C.I.G.S., at the suggestion of Sir Douglas Haig, informed the Government that, in view of the number of French and British divisions available on the Western Front, they must not think of the offensive as one which would produce a far-reaching result. Such a warning was not out of place, for in consequence of the German offensive against Verdun in February and the

¹ Appendix 4 (translation of the proceedings of the conference of the 27th March).

² See the official history, "Naval Operations" Vol. III. p. 272.

Austro-Hungarian attack in the Trentino on the 14th May, the scope of the Allied plans had to be changed. A great combined simultaneous offensive of France, Italy, Russia and the British Empire had been rendered impossible. France and Italy, indeed, were in sore straits to hold their own: France was appealing to Britain for an early offensive to relieve the German pressure on Verdun, and Italy was begging Russia to deliver immediate attacks to prevent the Austrians from withdrawing troops to reinforce their armies in Tirol.

An event of momentous influence upon the counsels of the Allies, and possibly upon the duration of the war, occurred on the 5th June through the death, by the sinking of H.M.S. *Hampshire*, of Field-Marshal Earl Kitchener, the Secretary of State for War, who was proceeding on a mission to Russia. His loss was, in a measure, irreparable. No one else commanded in such a degree the confidence of the Empire and of Britain's Allies. Another personality, who need not possess his exceptional experience and qualities, could be found to fill the office of Secretary of State for War now that the great work of organizing the nation for war had been well launched: the Ministry of Munitions was in action and the last New Army division (40th) actually crossing to France when the *Hampshire* went down. With General Sir William Robertson as Chief of the Imperial General Staff, assisted by a General Staff reinforced by officers from France, the military machine at home was running with a smoothness and efficiency it had never before attained during the war, in complete unison with the War Cabinet and the Commander-in-Chief in France. But, Lord Kitchener dead, there was little guarantee that there might not be interference with the state of affairs which he had done so much to bring about; and there was no military personality in any of the Allied countries of sufficient rank, reputation and character whose name could be put forward with any hope of approval by all as head of an united command of the forces of the Entente. It is believed that Lord Kitchener himself had anticipated a call to this post. For nearly two years after his death, especially after General Joffre at the close of 1916 was removed from the command of the French armies, until April 1918, when disaster forced the British to propose the appointment of General Foch to co-ordinate the action of the Allied armies on the Western Front, there reigned in that theatre division of counsel and

dispersion of effort. At times friction was only avoided by Sir Douglas Haig's yielding to French wishes to the utmost degree compatible with the safety of his forces.

The British Empire, looking on the past, and not unmindful of the future, could but echo the words of His Majesty's message to the Army :

“The King has learnt with profound regret of the disaster by which the Secretary of State for War lost his life whilst proceeding on a special mission to the Emperor of Russia. Field-Marshal Lord Kitchener gave 45 years of distinguished service to the State, and it is largely due to his administrative genius and unwearying energy that the country has been able to create and place in the Field the Armies which are to-day upholding the traditional glories of our Empire. Lord Kitchener will be mourned by the Army as a great soldier who under conditions of unexampled difficulty rendered supreme and devoted service both to the Army and the State.”

Who can now doubt that but for this man and his work Germany would have been victorious ?

CHAPTER II

THE EVOLUTION OF THE FRANCO-BRITISH PLAN BEFORE THE GERMAN ATTACK ON VERDUN

(Maps 2, 3 ; Sketches 1, 2)

THE wording of the instructions sent by the Secretary of State for War to General Sir Douglas Haig on his appointment as Commander-in-Chief of the British Expeditionary Force¹ differed considerably from those handed to his predecessor in August 1914.² Field-Marshal Sir John French had been directed "to coincide most sympathetic-ally with the plans and wishes of our Ally", but not to risk his troops in offensives "where your Force may be un-duly exposed to attack". He was distinctly warned to avoid heavy losses and wastage. Now Sir Douglas Haig was told that "the closest co-operation between the French and British as a united army must be the governing policy". Like his predecessor, he was informed that his command was an independent one; but, whereas the instructions to Sir John French continued: "You will in no case come in any sense under the orders of any Allied general", this phrase was now remodelled to read: "You will in no case come under the orders of any Allied general further than the necessary co-operation with our Allies above referred to".

A change was also made in the status of the Chief of the Imperial General Staff after Sir William Robertson's appointment. This was strengthened by the promulgation of an Order in Council, dated 27th January 1916, by which he was given a Deputy Chief of the General Staff to assist him,³ and was made "responsible for issuing the orders

¹ Appendix 5.

² See "1914" Vol. I. p. 442.

³ Major-General R. D. Whigham took up the post. At the same time, the Directorate of Military Operations at the War Office (which included "Intelligence") was divided into two separate Directorates of Military

“of the Government in regard to military operations”. Jan. This innovation meant that such orders after being drafted by the General Staff, instead of being signed as formerly by the Secretary of the War Office and sent out in the name of the Army Council, would go forth in the name of the General Staff. Thus orders would pass through fewer hands, and it would be clear to the Armies in the field that the General Staff was the highest executive military authority in the conduct of the war.¹ The change had also the effect of bringing the C.I.G.S. and his officers into closer contact with the Cabinet and the War Committee. Yet it by no means made the C.I.G.S. the virtual commander of the land forces of the British Empire as General von Falkenhayn was of the German Armies and Field-Marshal Conrad von Hötzendorf of the Austro-Hungarian. The former of these two high officers was responsible only to his Kaiser; the Austrian only to the Archduke Friedrich, appointed nominal Commander-in-Chief on account of Kaiser Franz Joseph's great age. The British C.I.G.S. was subject to the authority of the War Committee, composed, with the exception of Lord Kitchener, of civilians, and through them to the Cabinet, responsible collectively to Parliament.

There was almost daily correspondence between Sir Douglas Haig and Sir William Robertson: the latter frequently visited G.H.Q. and occasionally the Commander-in-Chief of the B.E.F. went to London. Both these high officers were cavalrymen, had been a year together at the Staff College, Camberley, and several years together at the War Office; their views as to the conduct of the war coincided, and in every way the C.I.G.S., whilst bearing in mind the requirements of the minor expeditions, did his utmost to assist the Commander-in-Chief in the main theatre. In pursuance of this object, on the 12th February Feb. he took the unprecedented step for a soldier of laying before the War Committee a memorandum containing suggestions as to the way in which diplomacy might render assistance

Operations and Military Intelligence, and a Commander-in-Chief Home Forces (Lord French) was appointed in the place of a Director of Home Defence at the War Office.

¹ There was also a change in the office procedure: all incoming telegrams and letters were marked first to the C.I.G.S., a copy going to the Secretary of State. The arrangements of 27th January 1916 were abolished by an Order in Council of 22nd February 1918, three days after Sir Henry Wilson had been appointed C.I.G.S.

to naval and military operations. He specially pointed out the advantages which would accrue if Turkey or Bulgaria, or both, could be detached from the Central Powers.

Jan. The distribution of the forces of the Empire on or about the 1st January 1916 was as follows :¹

	Infantry Divisions.	Cavalry.	Total.
United Kingdom	4 New Army	2 mounted divisions	1,413,724 ³
	13 2nd Line T.F.	5 mounted brigades	
	Home forces and recruits ²	..	
	Overseas reinforcements ⁴	..		63,376
France	38 (2 Canadian)	5 divisions (2 Indian)	987,200 ⁵
Egypt	6 (2 Indian) ⁶	1 mounted division	157,705
	3 (Australian ⁷ and New Zealand)	..	
Gallipoli	5 ⁸	..	39,206
Salonika	5	..	92,954
Mesopotamia	4 Indian (equivalent of)	2 brigades	47,500 ⁹
East Africa	1 (equivalent of)	..	18,310 ¹⁰
South Africa	1 (equivalent of) ¹¹	..	12,400

¹ No such table can be found in the records. There is a printed distribution of divisions (excluding Indian) for the 18th December 1915, with the following headings: In the field now, 50, about to take the field, 2, ready within a few weeks, 3, ready early next year, 2, ready in the spring, 2, could be got ready if men, etc., are provided, 13; total 72. What is here presented, also totalling 72 divisions, has been pieced together from various reports. The 46th Division, part of which was on passage to Egypt, is counted as in France (see f.n. 1, p. 22).

² Organized as 7 provisional infantry brigades, 26 reserve infantry brigades, and not including local garrisons and groups of 3rd Line T.F.

³ Of these, 103,737 were for Home Service. There were in addition to the total shown 148,644 sick and wounded in hospital.

⁴ Canadian 39,608; Australian 11,004; New Zealand 6,194; S. Africa 3,544; Newfoundland 605; West Indies 2,421.

⁵ Also 24,659 sick and wounded in hospital.

⁶ Includes 31st Division on passage to Egypt. The 2 Indian divisions (10th and 11th) were in course of being broken up.

⁷ The Australians numbered 86,062 and were soon expanded into 4 divisions; the New Zealand contingent numbered 23,514.

⁸ Includes the 42nd Division at Mudros.

⁹ Includes reinforcements just arriving, viz. 3rd (Lahore) and 7th (Meerut) Divisions from France, and three brigades from India.

¹⁰ Includes 2,638 Indian and 3,462 African troops.

¹¹ Being prepared for service in East Africa.

STRENGTH OF B.E.F.

19

	Infantry Divisions.	Cavalry.	Total.	Jan.
India . . .	3 T.F. 3 Indian 3 (equivalent of) ¹ }	{ British { Indian	78,468 196,500 ²	
Canada . . .	..	..	98,392 ³	
Australia . . .	..	..	48,620	
New Zealand	At sea, etc.	..	10,200 ⁴	
	..	..	10,180	
	At sea, etc.	..	814 ⁵	

The troops in France were organized in three Armies under Generals Sir Henry Rawlinson (in the absence of Sir Charles Monro on a mission to Gallipoli), Sir Herbert Plumer and Sir Edmund Allenby. The British at this time did not occupy a continuous front, a French Army being interposed between the British Third and First Armies. The Third Army (X., VII., XIII. and XIV. Corps) held about 22 miles from the Somme near Curlu to near Ransart (8 miles south of Arras); but from this point to Loos, some twenty miles, the front was occupied by the French Tenth Army (General d'Urbal). Then came the First Army (IV., I., XI. and III. Corps), holding 25 miles up to Armentières, and, beyond it, the Second Army (II., Canadian, V. and VI. Corps), with a 20-mile front to Boesinghe (exclusive), a little north of Ypres. The total of the three British Armies was five cavalry divisions and 38 divisions (12 corps), of which only three divisions, one per Army, were available to be moved by train to any threatened point.⁶ Of the 38 divisions, three had arrived in

Sketch 1.

¹ Two mobile infantry brigades, 9 divisional areas, frontier outposts, Imperial Service troops, Army troops, and Aden garrison.

² Does not include 24,200 followers.

³ The distribution of the total Canadian Expeditionary Force, 191,654 officers and men was:—France 51,165, Near East 1,229 (includes 249 nursing sisters), England 39,608, Bermuda 1,062, St. Lucia 198, Canada 98,392. In addition, not in the C.E.F., were 2,879 Permanent Force and 11,874 non-permanent Militia employed as guards in Canada.

⁴ Including 2,019 in Pacific islands, and 669 in France. The total embarkations from Australia up to 1st Jan. 1916 numbered 127,055.

⁵ In Samoa 223, in hospital ships 145; tunnelling company en route to England 446. Total New Zealand Expeditionary Force 34,508.

⁶ "Tactical trains" were kept in readiness—a set in each Army area—at six hours' notice, for moving infantry reinforcements short distances (15-30 miles). A set of 5 trains would carry a brigade (less all transport except machine guns).

"Strategical trains" were for transporting units complete. Each Army had a time-table, kept up to date, for moving one division complete by rail. It was arranged to give the French railway authorities 9 hours' notice.

Jan. September 1915, one in October, three in November, two in December, in which month the formation of the 3rd Canadian Division was begun in France.¹ Sixteen of the 38 divisions had not yet been engaged in anything more than trench warfare. The total strength in France and Belgium was just under one million men: fighting troops 849,200, lines of communication, 138,000; total 987,200.² But the divisions were 38,890 short of establishment, and, counting in a deficit of about 36,000 in the "ten per cent of establishment" which, according to regulation, should be kept at the bases to replace casualties, the total shortage was nearly 75,000.

The French divisions on the Western Front numbered 95, and the Belgian 6; so that there was a total of 139 Allied divisions, of which 23 were available for an offensive, that is were not actually holding the line. Intelligence reports, now known to be correct, showed that there were 117½ German divisions in the Western theatre, out of a total of 170, 16½ having arrived since September 1915. Of the 117½, 25 were available for an offensive.

Sir Douglas Haig after his appointment as Commander-in-Chief of the B.E.F., on the 23rd December, paid General Joffre a visit of ceremony. At this first official meeting, General Joffre, whilst stating that he was not yet in a position to discuss the plan of operations for the forthcoming year, at once raised the question of the British taking over more of the front and beginning to fill the twenty miles between the Third and First Armies held by French troops. The British commander agreed at once to comply as far as lay within his power, and, in proof of his goodwill, arranged that a short length of front near Loos, where the French had relieved the British during the 28th-30th October 1915,³ should be taken over again. For the moment he could do no more.

Sir Douglas Haig's first preoccupation, before he could consent to be made responsible for more of the front,

¹ The 7th and 8th Brigades were formed from the Patricia's (released from the 27th Division) and supernumerary Canadian units in France: Royal Canadian Regiment, 42nd (Royal Highlanders of Montreal), 49th (Edmonton), etc. The 9th Brigade arrived in France in February 1916. The field artillery brigades left behind by the Lahore Division were attached from 20th March to 13th July 1916, when newly raised Canadian artillery took their place. The other divisional units joined in March.

² On the 31st January 1916, it was 1,008,400; on 27th Feb., 1,047,700; on 31st March, 1,133,700; on 30th April, 1,263,500; on 31st May, 1,310,800; and on 30th June, 1,426,000.

³ See "1915" Vol. II. p. 363.

and to form or agree to any offensive plan, or even decide how best to organize his front to resist an enemy offensive, was to discover what reinforcements the Government meant to send to him. For the next six months, besides the command of the B.E.F., the question of ways and means, in regard to munitions as well as men, and the changes in General Joffre's plans which involved the British taking an ever-increasing share in the proposed offensive, claimed his attention and absorbed much of his time. Dec. 1915.

In view of the recommendations of the Chantilly Conference of the 6th-8th December, the Commander-in-Chief, having received a hint of the French plans, at once directed the Third Army to prepare schemes for an offensive: (1) on a 10-mile front, reporting what number of troops were required; and (2), with 20 divisions, reporting which part of the enemy front and what length of it should be attacked. He then, following his own line of thought, directed the Second Army, whilst securing its front which was in poor condition, to consider measures for attacks against Messines—Wytschaete (which materialized in June 1917), Lille and Houthulst Forest.¹ On the 9th January 1916 he assembled the first of the "Army Commanders' Conferences" which henceforward took place weekly. These meetings provided not only an occasion for the discussion of plans and interchange of experience as regards systems of offence and defence, but gave opportunity for the establishment of closer touch and the development of mutual understanding between the Commander-in-Chief and his Army commanders, and between their respective staffs.

REINFORCEMENT OF THE B.E.F.

To return to the all-important question of reinforcements, on the 27th December the C.I.G.S. informed Sir Douglas Haig that he was compelled to withdraw the 46th (North Midland) T.F. Division from France for Egypt, whither he had already despatched the 31st Division, there being no other formed division in the United King-

¹ To depute to subordinate commanders the drawing up of detailed proposals may seem strange to a non-military reader, but it was the usual practice in the French and German as well as in the British Armies. The local staffs who know the ground intimately are in fact in a better position to do so than the staff at G.H.Q.

Dec. 1915. dom ready to go.¹ He gave, however, a rough forecast that the remaining four New Army divisions in England would be transported to France at the rate of one a month, commencing in January, and promised to turn his attention to the completion, should the Cabinet permit, of the thirteen Territorial Force divisions still in the United Kingdom which were much below strength, and required equipment and material to fit them out to take the field.

The general distribution was more or less settled on the 4th February when the Cabinet "Committee on co-ordinating military and financial effort" recommended that by the end of June 62 divisions should be maintained overseas, "with the necessary 3 months' reserves in hand" and 5 divisions in first reserve for Home Defence (without reserves).²

What the C.I.G.S. had in mind is made clear by the supplementary instruction which he gave on the 29th December—*i.e.*, after the complete evacuation of Gallipoli and the assembly in Egypt of the troops engaged there had been decided on—to Lieut.-General Sir Archibald Murray, who on leaving the War Office had been appointed "General Officer Commanding-in-Chief of the forces protecting Egypt against attack from the east", and "to supervise the operations at Salonika".³ He was directed to assume that the force under his command in Egypt was of the nature of a strategic reserve for the Empire, and that for the moment it was uncertain what the future action of the enemy in the East and Near East might be, *i.e.*, whether the Turks would elect to make their main effort against Mesopotamia or Egypt, or would employ their forces to assist the Central Powers and Bulgaria in operations in the Balkans or against Rumania. It might be necessary to reinforce the troops in Mesopotamia or India, or both. He was informed that the War Committee had decided that, for the British Empire, France was the main theatre, and that as soon as the situation was clearer,

¹ The 46th Division had arrived in France in February 1915, and had been engaged at Hooge and in the battle of Loos. It began embarkation for Egypt at Marseilles in warships, no transports being available, on the 1st January 1916; but there was so much difficulty in finding sufficient ships that on the 21st January, when the move to Egypt was cancelled, only the infantry (less two battalions) and the engineers had sailed.

² The C.-in-C. Home Forces put his requirements at 454,680 men (of whom 129,000 were drafts available for overseas), organized in 9 Territorial divisions, 17 mounted brigades, 10 independent brigades, 23 cyclist battalions, and garrisons for defending ports, "vulnerable points", etc.

³ The instructions are printed in "Egypt and Palestine" Vol. I. p. 97.

no more troops would be retained in Egypt than were Jan. absolutely necessary. His first duty was to reorganize the units and get the tired and depleted divisions from Gallipoli into a condition to take the field again.

The Imperial strategic reserve collected in Egypt on the evacuation of Gallipoli (omitting the two Indian divisions which were broken up) contained at its maximum 12 divisions: from Gallipoli, the 11th, 13th, 29th, 42nd, 52nd, 53rd, 54th, 1st and 2nd Australian and the New Zealand and Australian Divisions; ¹ from the United Kingdom, the 31st; from France, the 46th; whilst the 4th and 5th Australian Divisions and the New Zealand Division (replacing the New Zealand and Australian Division) were formed in Egypt in March, after the 31st and 46th had left.² As the situation became clearer and sea transport available, this concentration was broken up. The 13th Division went to Mesopotamia in February; between the 4th February and the 20th June, nine divisions were transferred to France, five before the end of March, one in April, and three in June. Thus only four Territorial Force divisions, the 42nd, 52nd, 53rd, and 54th, remained in Egypt. Lack of shipping and the submarine danger prevented the nine divisions from being sent to France more rapidly: it took, as will have been noticed, nearly four months to do so, whilst the Germans could shift ten divisions from the Western to the Eastern Front in about

¹ This last division contained the New Zealand and the 4th Australian Brigades, the New Zealand Mounted Rifles Brigade, and the 1st Australian Light Horse Brigade.

The Royal Naval Division had reverted to Admiralty control, and was employed partly at Salonika and partly in garrisoning islands used as naval bases. It went to France in May.

² The Australian force was doubled in Egypt, the 4th and 5th Divisions being formed (the 3rd was raised in Australia) by the 1st and 2nd Divisions and the 4th Brigade of the N.Z. and A. Division (which now joined the 4th Division) giving up half their infantry as nucleus, the rest being found from reinforcements. After the artillery of the 1st and 2nd Divisions had been shared amongst the four, the whole of it was taken to France by the 1st and 2nd Divisions, and the new artillery of the 4th and 5th was raised from a nucleus of 450 officers and men taken from that of the older divisions, supplemented by volunteers, chiefly from the infantry and Light Horse. To provide engineers, two field companies were transferred from the 2nd to the new divisions, and four new companies formed by transfer and reinforcement. See the Australian Official Account, Vol. III.

The New Zealand Division was formed by expanding the New Zealand Infantry Brigade into two, the New Zealand Rifle Brigade making the third brigade; the two artillery brigades were expanded into four by raising the new batteries required; and the two field companies of engineers into three. See Colonel H. Stewart's "The New Zealand Division, 1916-19".

Jan.- nine days.¹ The tremendous value of the enemy central
July. position in contrast to the difficulties of the long sea communications of the British Empire could hardly be illustrated in more striking fashion.

As a result of General Robertson's endeavours—in the course of which the requirements in man power of the munition factories and other trades had to be weighed against the demands of the armed forces—the B.E.F. received before the 1st July 1916, as formed reinforcements from home and Egypt :

In January, the 34th and 35th Divisions.

In February, the 31st (E) and 46th T.F. (E).²

In March, the 29th (E), 39th, 1st Australian (E) and 2nd Australian (E).

In April, the New Zealand (E).

In May, the 41st, 61st (2nd South Midland) T.F. and 63rd (Royal Naval).

In June, the 40th, 60th (2/2nd London) T.F., 4th Australian (E) and 5th Australian (E). The 11th Division (E) began disembarkation, but did not complete it until the 3rd July.

The 55th (West Lancashire) T.F. and 56th (1/1st London) T.F. Divisions were reassembled in France in January;³ the Newfoundland Regiment (one battalion) arrived in France with the 29th Division on the 22nd March; and the South African Brigade on the 20th April.⁴

Thus, instead of the 17 divisions (four New Army and 13 Territorial Force of the 2nd Line fresh from England), which the C.I.G.S. informed Sir Douglas Haig was the maximum that might be expected, he actually sent or provided by readjustment rather more than 19. Ten of them were war experienced; for the 55th and 56th, being composed of Territorial Force infantry battalions with considerable service in France, and the 4th and 5th Australian and New Zealand Divisions, which had a good nucleus of Gallipoli men, must be counted as such. It

¹ See p. 7, f.n.

² (T.F.) signifies a Territorial Force division and (E) a division from Egypt. The others, except the 29th originally formed of Regulars from the overseas garrisons, are New Army or Dominion divisions.

³ Units of these two divisions had proceeded to France independently in 1914-15 and had been attached to various other formations. The extra T.F. battalions attached to all Regular brigades were now withdrawn, and all brigades reduced to four battalions. Some of the surplus battalions became Pioneers, a Pioneer battalion being added about this time to Regular and old T.F. divisions which had not got one.

⁴ It was posted to the 9th Division.

must be borne in mind in reading the pages which deal with the settlement of the plan of operations and the taking over of more line from the French, that the arrival of these reinforcements was slow and spread over a period of six months, and that after their arrival they had to be trained and gradually initiated into the methods of warfare on the Western Front. Jan.-
July.

New corps headquarters had been formed as the additional divisions arrived; the XIII. (Lieut.-General W. N. Congreve) on the 15th November 1915; the XIV. (Lieut.-General the Earl of Cavan) on the 3rd January 1916; the XV. on the 9th December 1915 (it was in Egypt in January-March 1916, Lieut.-General Sir H. S. Horne assuming command in France on the 22nd April); and the XVII.¹ on the 9th January 1916, Lieut.-General Hon. Sir J. H. G. Byng taking command on the 25th February. On the arrival of the Anzac divisions in France they were re-formed into the I. Anzac Corps (1st and 2nd Australian and the New Zealand Divisions) under Lieut.-General Sir William Birdwood and the II. Anzac Corps (4th and 5th Australian Divisions) under Lieut.-General Sir A. J. Godley. The VIII. Corps (Lieut.-General Sir A. G. Hunter-Weston) from Gallipoli was reconstituted in France in March 1916, and the IX., also from Gallipoli, under Lieut.-General A. Hamilton Gordon in June.

In each of the three Army areas, one corps, composed of divisions under training, was kept in reserve, and a fourth, the XVII., as soon as it was formed, became the general reserve.

As regards munitions, the mind of the Commander-in-Chief was set at rest by the declaration of Mr. Lloyd George, at an ammunition conference on the 30th January, that the supply would be ample by the end of April, and from May onwards all demands easily met. Unfortunately this forecast proved fallacious. As will be seen, throughout 1916 a careful watch had to be kept on expenditure, while a considerable proportion of the shells, fuzes—and guns—proved unreliable.

THE DEVELOPMENT OF THE PLAN OF THE OFFENSIVE.²

On the 29th December Sir Douglas Haig, by General Joffre's invitation, attended a conference at Chantilly, Dec.
1915.

¹ The XII. and XVI. Corps were at Salonika.

² The reader unacquainted with military procedure, and thinking perhaps that war is carried on by the instant decision of commanders followed

Dec. 1915. presided over by M. Poincaré, at which were present, besides the French Commander-in-Chief, the Prime Minister, M. Briand, the Minister of War, General Galliéni, and the three commanders of Groups of Armies, Generals Dubail, de Langle de Cary and Foch. The discussion turned mostly on the state of the defences, but the next day, General Joffre sent to Sir Douglas Haig a letter, in which, after pressing for the relief of the Tenth Army, since the interpolation of French troops in the middle of the British line would cause difficulties in a common offensive, he proposed the study of a great combined Franco-British offensive athwart the Somme, on a sixty-mile front: Lassigny—Arras. He wrote :

“ I have directed the General Commanding the Group
 “ of the Armies of the North [General Foch] to make a
 “ study of a powerful offensive south of the Somme in
 “ the region comprised between that river and Lassigny.

“ This study is part of a general plan drawn up for the
 “ French Armies as a whole, and will permit me to deter-
 “ mine the points against which our principal effort will be
 “ made in the coming spring.

“ It is part of a scheme of preparation of a great number
 “ of different areas of intended sectors of attack, some to
 “ be utilized in the general offensive, others designed for the
 “ purpose of holding the enemy in uncertainty as to the
 “ points of attack, which will be selected later.

“ Without prejudice to the area where our principal
 “ attack will be made, the French offensive would be
 “ greatly aided by a simultaneous offensive of the British
 “ forces between the Somme and Arras.

“ Besides the interest which this last area presents on
 “ account of its close proximity to that where the effort

by rapid dictation of orders, will perhaps be surprised at the number of conferences and discussions which took place between Generals Joffre and Haig before the plan for the 1916 offensive was settled. He may imagine that their many meetings indicate grave differences of opinion, which required settlement in an exceptional way. The procedure was however entirely normal and was used throughout both Armies. Before any offensive took place there were, as will be seen, not only conferences between the Commanders-in-Chief, but between the Commander-in-Chief and his Army commanders, between the Army commanders, their staffs, and their corps commanders, etc., etc. It continued right down to the company, even to the platoon. A writer, speaking of his arrival in France, records :

“ Accustomed to company commanders in England not taking their
 “ junior officers into their confidence, I was struck by the way that ques-
 “ tions of the day were settled at meal-times by a sort of board meeting,
 “ with * * * the captain as chairman.”

“ of the French Armies will be made, I think that it will be a considerable advantage to attack the enemy on a front where for long months the reciprocal activity of the troops opposed to each other has been less than elsewhere.¹ The ground is, besides, in many places favourable to the development of a powerful offensive. “ I request, therefore, that you will kindly let me know your views on the subject of an attack by the British forces on a large front in the area of your Third Army.”

Sir Douglas Haig at once agreed to take over from the French Tenth Army the line on the right of his First Army as far south as the Grenay—Lens railway on or after the 4th/5th January ;² but before he had made a formal reply to General Joffre’s letter, the French Commander-in-Chief, in the course of a ceremonial visit to British G.H.Q. on the 20th January disclosed a new line of action, forced on him, it is understood, by his Government, who were desirous of saving the French Army from further heavy losses.³ He intimated that by the end of April he would have five offensives prepared : three in the south-east, one in Champagne, and one on the Oise-Somme front, but which attack would be carried out and what date would be selected would depend on the military situation. It was important, however, that before the main attack the enemy should be worn out and his reserves exhausted by preliminary attacks ; and, for this purpose, he would like the British to attack north of the Somme on a large scale, on at least a 20,000-yards front, about the 20th April. He followed up this declaration on the 23rd January

¹ See Chapter III. regarding the situation when the British took over.

² Preparations had been made in view of this on the 23rd December, as General Joffre’s wishes had already been brought informally to Sir Douglas Haig’s knowledge. The change was carried out by sending up the Cavalry Corps to the Hohenzollern sector, the IV. Corps being thus enabled to extend its right.

³ According to the French Official Account, Tome iii. pp. 588-602, up to the 31st December 1915 the casualties had been :—

	Officers.	Other Ranks.	Total.
France . . .	49,509	1,882,542	1,932,051
Near East . . .	846	28,790	29,636
			<hr/> 1,961,687

of whom 1,001,271 were killed (or died) and missing, in the proportion of 3 to 2. The effectives numbered 2,752,000, plus 280,000 in the depots. The British losses to the same date totalled 21,747 officers and 490,673 other ranks, the killed and missing forming two-fifths of the total.

Jan. by a letter in which he plainly stated: "I regard it
 "as indispensable that before the general offensive, the
 "British army should seek to wear down ('recherche
 " 'l'usure de') the German forces by wide and powerful
 "offensives, as the French army did in the course of the
 "year 1915", with a minimum of fifteen to eighteen
 divisions. One "bataille d'usure" north of the Somme, it
 was suggested, should be fought on the 20th April, and
 another in May at some other part of the front.

Sir Douglas Haig at once replied that he was hastening
 on his preparations in the Third Army, and that if Russia
 were menaced, he would be prepared to take part in a
 general offensive with the greatest possible strength. But
 he could not agree to the proposal that the British should
 fight preparatory wearing-down battles weeks before the
 main effort. Such attacks, not being carried to a con-
 clusion, would be regarded by the enemy, by the public
 at home and by neutral countries as Allied defeats, and
 they would not prevent the enemy from replacing losses
 from his depots, as well as organizing new reserves in time to
 meet the main offensive. A succession of raids, he thought,
 would be more effective, as it would undoubtedly wear
 down the enemy's morale, and possibly attract reserves:¹
 preparatory actions fought shortly—say ten to fourteen
 days—before a general offensive at points some distance
 from the place selected for the decisive attacks and over
 a wide front, might induce the enemy to engage his
 reserves, without allowing him time to organize others
 to take their place: the British Expeditionary Force had
 not sufficient heavy artillery to carry out both a preparatory
 attack and then a decisive attack elsewhere ten to fourteen
 days later; but, with forethought and previous arrangement,
 it might be possible to transfer from one area to the other
 the batteries required.

The problem facing the Allies was in fact that of storming
 a fortress,² in which, according to history and precedent,
 there should be a main assault on the largest breach (or
 weakest spot), several subsidiary ones on minor breaches—
 which must be strong enough to be converted into main

¹ For the effect of the British raids in misleading the German Supreme
 Command, see Chapter XII.

² Perhaps a closer analogy would be the storming of a fortified position
 in the field, as, for instance, occurred at the battle of the Nivelle, 10th
 November 1918. On this occasion the Marquis of Wellington, after careful
 reconnaissance, made his principal attack against the weakest part, the
 gap of Amots, but he simultaneously assailed all important points.

assaults and carried through—and false attacks. The Jan. change from the Peninsular tactics lay in the scale. Commanders, instead of thinking in battalions, had now to think in corps, almost in Armies, and in correspondingly large dimensions in the width and the distance apart of the breaches: intervals of hours, even days, were permissible between the assaults instead of minutes. The intervals must not be too great, as the failure of the widely spaced successive offensives of the Germans in 1918 proved. In 1916, unfortunately, the resources at the disposal of the Allies, particularly in heavy guns, did not permit of the large scale methods, or of a series of assaults following quickly one after the other, which proved successful—after the enemy's morale was shaken—in 1918. Unless the heavy guns could be rapidly concentrated from the whole front on to the front of attack, there were barely enough of them for the main assault, and few could be spared for the subsidiary and false attacks in which artillery bombardment and simulated preparations must naturally form the main items.

Further correspondence and a conference with an amicable threshing out of the differences of opinion followed. Sir Douglas Haig continued to advocate a simultaneous attack by the two Allied armies, while General Joffre desired that the British should make preparatory attacks first in order to use up the German reserves, and at the same time take over more of the front.

An agreement was arrived at on the 14th February. Feb. General Joffre entirely abandoned his plan for preparatory offensives in April and May, and it was settled that, if the initiative were kept, a combined offensive should be carried out astride the Somme about the 1st July, preceded, one or two weeks before, by a partial attack in the La Bassée—Ypres area, which Sir Douglas Haig preferred to the flooded Ypres—Nieuport sector. It was also conceded, at considerable inconvenience to Sir Douglas Haig's plans, that the B.E.F. should relieve the French Tenth Army gradually as troops became available. General Joffre further demanded that the French Sixth Army should take over a corps front immediately north of the Somme in order to guard the left of his attacks.¹ If the Germans fell upon Russia, it was settled that the combined

¹ This sector was handed over to the French during the nights of the 1st/2nd and 2nd/3rd June. The difficulties occasioned thereby are referred to later.

Feb. attack should take place astride the Somme as soon as possible. Verdun was not mentioned at the conference, although the head of the French Intelligence, Colonel Dupont, after having been anxious about Verdun at the beginning of February, and then doubtful, had on the 11th informed Br.-General J. Charteris, the head of the British Intelligence in France, that the German concentration was towards this fortress. It was not until the 19th that General de Castelnau, now General Joffre's Chief of the Staff, definitely informed Sir Douglas Haig that the Germans were about to attack Verdun. The British Commander-in-Chief thereupon wrote to French G.Q.G. that if the enemy made a pronounced attack there he would at once begin taking over from the Tenth Army and do what he could to assist. At the Army commanders' conference on the same day measures to meet a German offensive were discussed: it was decided that officers should be sent to reconnoitre the front of the French Tenth Army with a view to taking it over, and the Third Army was directed to hurry on its preparations for attack. General Rawlinson, who on the 4th February had handed the command of the First Army back to General Monro preparatory to assuming command of the Fourth Army, when formed, was instructed to report to General Allenby for the purpose of assisting him to start his preparations for an attack on Thiepval.

The decision of the French Commander-in-Chief to make the main offensive of 1916 astride the Somme seems to have been arrived at solely because the British would be bound to take part in it. The reasons advanced by General Joffre will hardly bear examination. It was certainly true that the sector had for long months, about twenty, been a quiet one; but that it was so had merely given the Germans time to elaborate their defences. The phrase that "the ground is in many places favourable to the development of a powerful offensive" would have applied equally well to almost any part of the front, although it might be argued that the good ground observation rendered possible by the open rolling country of Picardy was a distinct asset when compared with the more restricted vistas of French Flanders. But against this possible advantage had to be set the fact that, owing to the number of villages and to the facility with which deep dug-outs could be excavated in the chalk, the sector was particularly strong for defence, in fact might be considered the strongest. The French

plans for the offensives of 1915¹ had had a definite strategic basis, which was to drive in from south and east on the flanks of the great German salient in France; thus success on one side would have cut the German communications to the other side, and success on both sides isolated the troops in the apex of the salient. The Somme offensive had no strategic object except attrition. Applied close to the apex of the salient, it might, if moderately successful, flatten it out; if highly successful it would make a pocket in the German front, leaving the Allies themselves with a vulnerable salient. Even a complete breakthrough, unless carried very far, would not have led to an interruption of the main German communications, which depended on railways converging for the most part on Mezières—Sedan and Brussels; and the Allies would have found themselves between two German Armies with intact communications.² Given that the Artois and Champagne offensives of 1915 were not to be renewed, and that the British must make an offensive, an attack nearer the coast in the Ypres—La Bassée area would, besides being less dangerous, have offered at least strategic advantages. There was the possibility of driving the Germans north of the point of rupture into the sea or neutral territory, and then of turning south, with the northern flank secure, to roll up the German line, taking it in flank and reverse. It was a plan of this kind that General Joffre had in his mind in October 1914 when the British Expeditionary Force reached Flanders.³ When, however, Sir Douglas Haig advocated that it should be revived for 1916, the French Commander-in-Chief would only say that an offensive in the north might form the final stage of the operations. General Haig, nevertheless, continued to bear the plan in mind. It had been one of his first thoughts on taking over from Sir John French, and on the 14th January he definitely instructed the G.O.C. Second Army (General Sir Herbert Plumer) to consider schemes for offensives against the Messines—Wytschaete ridge, Lille and the Forest of Houthulst. On the 4th February he directed General Rawlinson, whom he had selected to take command of the Fourth Army when formed, to consider the question, amongst others which he had in mind, as if he were medi-

¹ See "1915" Vol. I. pp. 66-8.

² When the Franco-British attack astride the Somme took place in July, the commander of the German Second Army, on which it fell, actually considered the plan of falling back and letting the Allies follow into a pocket in which they could be easily dealt with.

³ See "1914" Vol. II. p. 127.

Mar.- tating the employment of the new forces in the northern area
June. and not on the Somme.¹ On the formation of the Fourth Army on the 1st March General Rawlinson was not further concerned in the northern offensives.

On the 10th April, after examination of the various schemes laid before him by General Plumer and the resources which would be required, Sir Douglas Haig decided that the preparations for the capture of the Messines—Wytschaete ridge should be proceeded with, and that the proposals for mining (20 large mines with nearly a million pounds of high explosive in them) should be included in it.²

Then, as the fighting at Verdun continued, and it became doubtful whether the French would be able to take any part in the Somme offensive, the British Commander-in-Chief, on the 28th May, warned General Plumer to push on his preparations with all possible speed, as his offensive might be launched first.

As late as the 5th June, as will be seen, he contemplated removing the G.H.Q. reserve from the Somme to the Second Army, and warned the commander of the Fourth Army that if his attack met with considerable opposition it might be decided to stop it and proceed with the Messines operation. It would appear that if the British Commander-in-Chief had had a free hand and had not been obliged to co-operate with the French, he would have made his offensive in the northern area and not on the Somme.

Sir Douglas Haig had, further, secretly in preparation at G.H.Q. by a special staff, a plan for an attack along the coast from Nieuport towards Ostend, in co-operation with a force of two divisions to be landed on the coast under arrangements being devised by Vice-Admiral R. H. S. Bacon of the Dover Patrol.³ This special staff accompanied the

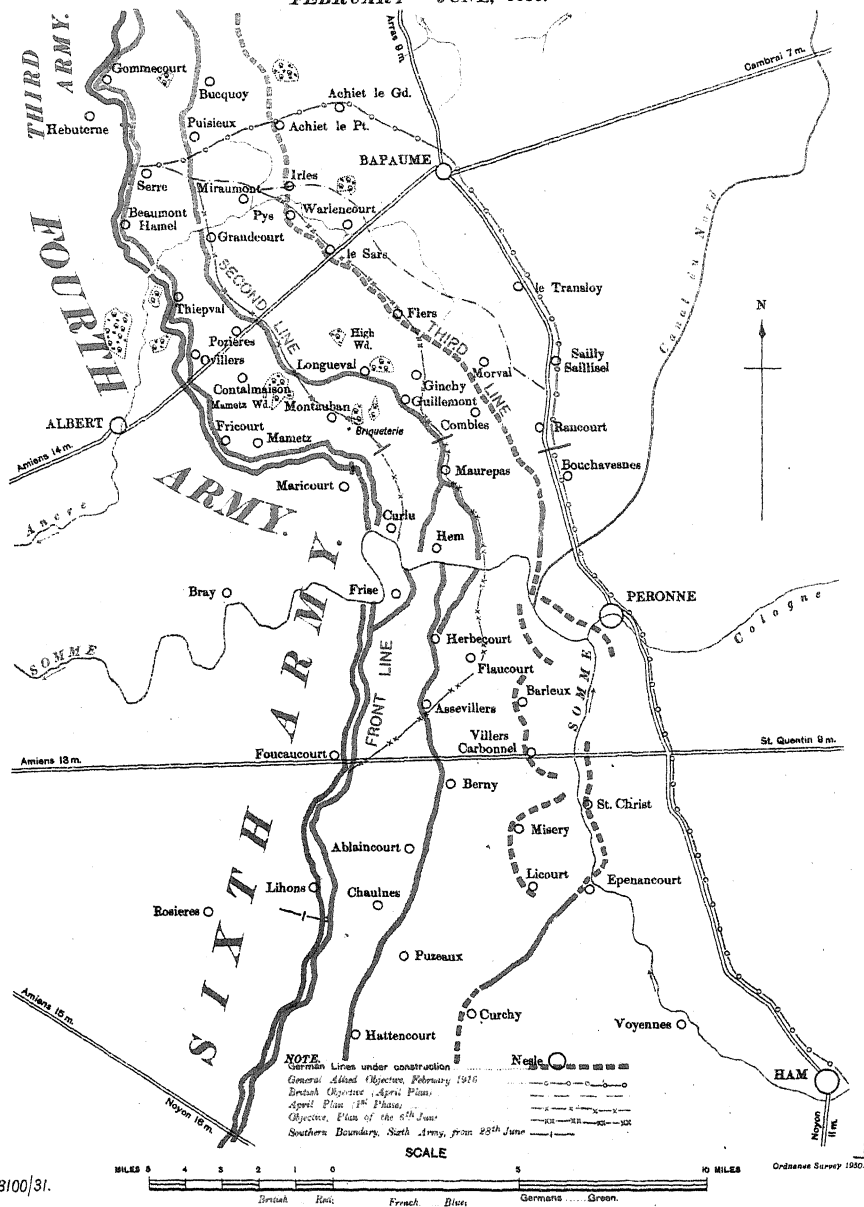
¹ See Chapter IX.

² The project resulted in the Messines battle of June 1917, and will be examined in a later volume.

The majority of the mines, the galleries of which were already well advanced, were completed by June 1916, but owing to the insufficiency of labour, most of which was absorbed by the preparation for the Somme, all the railways, roads, tramways, dumps, etc., were not ready until a much later date.

³ At the request of the Admiralty in November, 1915, a "Project for combined naval and military operations on the Belgian coast with a view of preventing the enemy from using Ostend as a naval base" had been examined in France. Sir John French thought such an operation was not advisable, on the grounds that it entailed an attack from Nieuport on a narrow front, that he could not supply the troops required, and that, in view of the inundations, the Belgians could not co-operate as suggested.

THE ALLIED PLAN FOR THE SOMME FEBRUARY - JUNE, 1916.



Commander-in-Chief to his advanced headquarters and it July. was not until the 7th July, when it became evident that all available resources were required for the continuation of the Somme offensive,¹ that he decided that the plan should not be put in force.

There now appears to be little doubt that the Messines attack, carried out so successfully in 1917, would have had in 1916 a far better chance of decisive result, especially if combined with a coastal attack, than had an offensive astride the Somme. The German defences in the north were not as strong as they were a year later, as very few concrete "pill boxes" had been built. The enemy seems to have had no suspicions of the preparations in progress in the north: the Supreme Command expected an offensive in Alsace-Lorraine at the other end of the front;² whilst the local commanders more correctly anticipated one against the Somme front, but not on the whole front that was attacked. Probably the best course would have been to have fired part of the Somme bombardment, even sketched an assault, and then to have attacked in earnest at Messines. After this, when the attention of the enemy had been drawn away to the south, the coast operation could have followed. The Belgian coast ports might thus have been secured, and the left flank would ultimately have rested on Holland instead of on the sea.

It is now definitely certain that General Joffre had in his mind, not a decisive victory, but merely "a war of attrition which must be chiefly carried on by our [France's] "Allies, England, Russia and even Italy".³ This view he did in a way communicate to Sir Douglas Haig, requiring of him "preparatory attacks in order to use up the German "reserves", but he asked for an "offensive". The British Commander-in-Chief, in accordance with his unvarying principle of meeting the French wishes whenever possible to do so without grave disadvantage to his own troops, raised objections to preparatory wearing-down attacks, but agreed to take part in a combined offensive. Whether an offensive which would bring decisive results was any more possible in 1916, with the means then available, than it had been in 1915 was a question which was all-important. The French had for the time lost faith in the "doctrine" of the infallible

¹ The preparations to carry out this plan in 1917 will be dealt with in a later volume.

² See Note at end of Chapter XII.

³ Poincaré, iv. (English edition) p. 309.

success of the offensive ;¹ but Verdun, strange to say, was to revive it in Joffre's successor, General Nivelle and his following. The British leaders, having fought both defensive and offensive battles in 1914 and 1915, were inclined to think that under certain conditions an offensive might succeed. It seemed to them, as it did to the Germans before the attack at Verdun, that the effect of a bombardment by hundreds of guns for several days, would crush all resistance ; the enemy infantry and machine gunners would either be slain or buried in their trenches and shelters, or cowed into surrender, so that it would be necessary only to march forward and take possession. The minor actions of the early part of 1916, which will be narrated in due course, appeared to show clearly that, with due preparation, any small part of the enemy's front could with certainty be captured : the difficulty of holding a position when captured would be lessened if the attack was made on a wide front, for the enemy would not be able to concentrate so much fire on a large target as he could on a small one. The failures of the past were put down to reasons other than the stout use of the machine gun by the enemy and his scientifically planned defences. They were ascribed to the break-down of intercommunication at Neuve Chapelle, to the confusion of trench fighting at Festubert, and to the ground being unfavourable and the reserves too far from the battlefield at Loos. When the French were struggling for their existence at Verdun, there could be no holding back ; although Sir Douglas Haig would have preferred to have attacked in Flanders, and, as will be seen, would gladly have waited a few weeks until more divisions had arrived and the promised tanks were available. Like Loos, the battle was inevitably fought on ground chosen and at a time fixed by our Ally ; and the enemy was not caught unawares except on one portion of the front of attack.

The British Commander-in-Chief, however, by no means had in his mind a simple head-on assault. The outline of his plan may be conveniently stated here.

Sketch 2. The British front near the Somme in the spring of 1916 faced north against Montauban—Fricourt and east against Fricourt—Thiepval. Success on the Montauban—Fricourt

¹ Poincaré, iv. "no single general, not excepting Foch, has any more "faith in an offensive proving successful" (p. 167). ". . . he [Foch] no longer talks about offensives, but now says that the war will be long, "indeed very long, and that we must exercise patience and dig ourselves "in solidly" (p. 157).

front, if it could be pushed on to the main ridge Longueval—Bazentin, would clearly turn the enemy defences north of Fricourt. Thus the attackers of the Montauban—Fricourt front by pushing forward, assisted of course by demonstrations or assaults against the Fricourt—Thiepval front, would gradually clear the defenders from the latter, and, reinforced by its attackers, sector by sector, press on northwards, making an ever-widening gap in the enemy's front. Positions within easy reach favoured the protection of the right flank of this movement; the one factor unfavourable to it was the cramped space between the British front and the Somme valley and the poor communications in this area. The left of a French attack south of the Somme could easily be secured on that river. The demand for room on the right bank to enable our Ally to guard his left during an attack eastward seemed unnecessary and unreasonable. Apart from the inconvenience of crowding a small area still further with the communications of two Armies, the presence of the French would make it impossible to find room there for special reserves ready to exploit to the full the British northward attack. Sir Douglas Haig, however, again following out his general principle of falling in with the French demands if possible, decided, as General Joffre was so urgent and considered the ground on the north bank so necessary to the success of his own attack, that it would be impolitic to refuse his request. He asked in return that the French should give some artillery support to the British attack against Montauban.

General Joffre's plans for the British to exhaust the German reserves by preparatory attacks before the main battle were not fated to come to fruition. It was the French, already hard hit by the offensives of 1915, on whom was to fall the fighting preliminary to the general offensive and the burden of exhausting the German reserves.

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CHAPTER III

THE EVOLUTION OF THE FRANCO-BRITISH PLAN AFTER THE BEGINNING OF THE VERDUN ATTACK

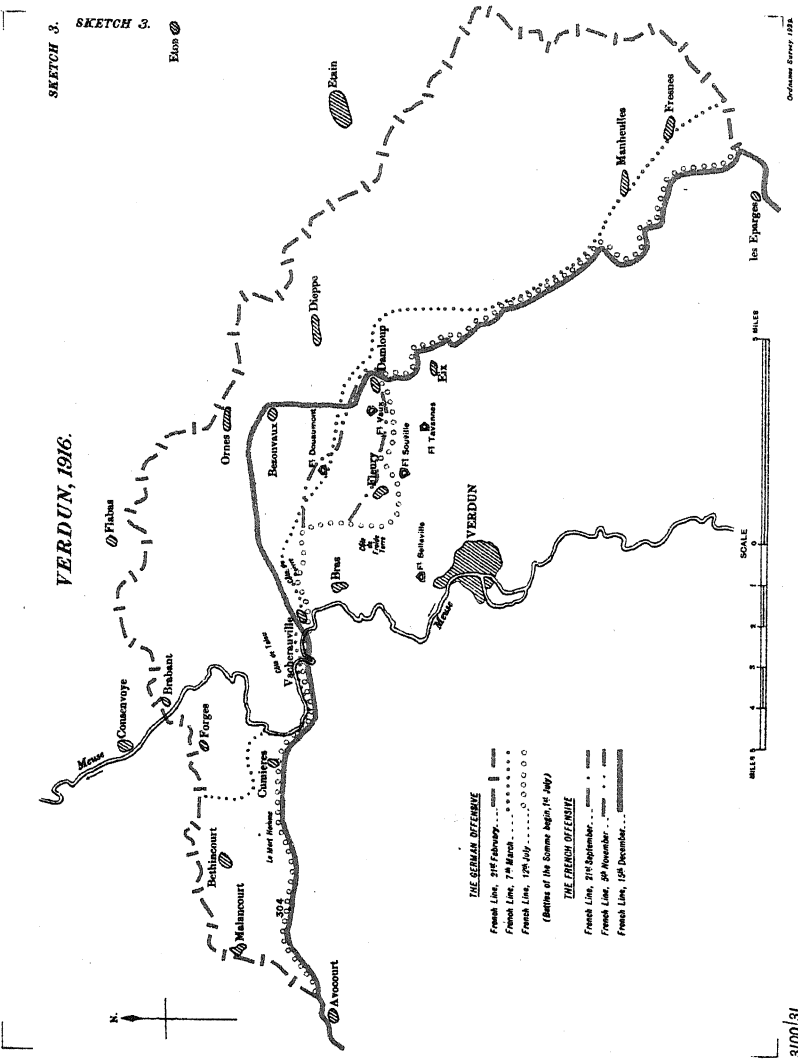
(Maps 1, 2, 3 ; Sketches A, B, 2, 3)

Feb. ON the 21st February the Germans opened their great offensive against Verdun,¹ accompanying it by a diversion made by a corps against the Bois de Givenchy, by which they regained possession from the French Tenth Army of the knoll at the northern end of Vimy ridge.² At 11 P.M. on the 22nd February G.H.Q. was informed by G.Q.G. that it was thought the blow against Verdun was serious, and the relief of the two flank corps of the four holding the Tenth Army front was requested. Sir Douglas Haig at once agreed to this. Subsequently the Commander-in-Chief received a letter from General Joffre from which it appeared that, in spite of the reasoned statements of the French and the British Intelligence, he thought that the Verdun attack was merely a preparatory one, designed to create uncertainty, and that the main attack—elsewhere, but against the French—was yet to come. It was therefore imperative, the French Commander-in-Chief said, that he should have sufficient forces immediately, in the form of a numerous reserve, to deal with the enemy before Verdun and then pass to a powerful counter-offensive: it was a "strategic necessity" that the Tenth Army should be at once relieved: if the Germans should turn against the British the corps of the Sixth Army would for some time be at hand available to intervene: if Champagne or some place further eastward turned out to be their objective, he would require every man possible from the north; the reserves of the British First and Second

¹ See Note II. at end of Chapter.

² Later known as "The Pimple".

SKETCH 3. SKETCH 3. Ebon ⊕



Armies should be sufficient to deal with incidents in that Feb. quarter: and the reserves of the British Third Army could in case of necessity assist his Sixth Army on its right. He therefore asked that the British should without delay proceed to the relief of the Tenth Army, or at least the greater part of it, and make preliminary studies for the eventual transport of five or six divisions to the sector of the Sixth Army. Sir Douglas Haig replied that he had given orders for the relief of the two flank corps of the Tenth Army and would have the studies made.

In view of the general uncertainty of the situation and of no sign of German weakening on his front, he could do no more. He had, however, determined to relieve the whole of the Tenth Army; for the Director of Military Intelligence at the War Office, Major-General G. M. W. Macdonogh, in whose judgment he placed the greatest reliance, had calculated that the Germans had now only eight or nine divisions available for attack, and as the information at G.H.Q. confirmed this, he was convinced that the Verdun offensive would turn out to be their main effort. In any case, there would be time to reconsider the decision; for in view of the state of his front it would take the enemy at least three weeks to mount an offensive against the sector at present held by the French Tenth Army.

On the 26th General Joffre himself came to the conclusion that the attack against Verdun was increasing in intensity and that the enemy was throwing in large reserves in an attempt to break through; he asked, therefore, for the complete relief of the Tenth Army and that the British should continue their preparations for an offensive when freedom of action should be regained. The relief had by this March. time been arranged for, and between the 2nd and 14th March it was completed, the 14th and 5th Divisions extending the left of the Third Army northwards, and the 23rd, 46th and 51st Divisions, the right of the First Army southwards, until they met and the entire front was taken over. After the dreary and depressing surroundings of Flanders, the new area, dry and bright, with No Man's Land a wide stretch of scarlet poppies, yellow mustard, red clover and blue cornflowers, was a pleasing contrast. The spirits of the troops rose accordingly, the ground seemed made for a successful battle.

Above ground the new front was found to be quiet, some of the French commanders having allowed very

March. little firing as they did not want their wire damaged; consequently from the Somme to Arras there had practically been no fighting except a small French attack in the Serre area, during the Second Battle of Artois, since the line had settled down in 1914. North of this in the Vimy sector, where the French had recently lost ground in the German attacks of the 8th and 21st February, the line was found to be in a bad condition: the trenches were poor, without wire and without dug-outs. Mining, however, was in progress and everywhere, notably near La Boisselle where the lines were very close together, the Germans were under the French, and began firing mines as soon as they discovered the British were in the line.¹ Sir Douglas Haig directed General Allenby not to fight for the ground recently lost, but to hold the better parts of the French lines by outposts, supported by strongpoints, and then select the best line which could be found. In view of his new commitments, he asked, in a letter to the War Office, that his troops, now 79,000 short, should be brought up to establishment, and railway material and labour supplied. The first request was complied with gradually, but it was months before the authorities at home could be induced to part with any railway plant, and, although some labour units were raised and eventually labourers from various parts of the Empire, and China (1917), were brought to France, the numbers were never at any period sufficient for the demands of a great army operating in a friendly country.

In the midst of his activities, Sir Douglas Haig found time to pay a personal visit to the French Commander-in-Chief, as evidence of good comradeship and sympathy in the grave situation in which the French Army found itself.

On the 1st March² the Fourth Army came officially into existence,³ with General Sir Henry Rawlinson in command and Major-General A. A. Montgomery, who had been with him in a similar capacity in the IV. Corps, as his senior General Staff Officer. Headquarters were established at Querrieu (5 miles east of Amiens) and General

¹ Further details are given in Chapter VIII.

² In March the "Military Medal" inscribed "For bravery in the field" was instituted for bravery and devotion under fire. In the first instance its award was reserved to N.C.O.'s and private soldiers, but this was subsequently extended to warrant officers and women.

³ The Staff was formed on the 5th February at Tilques (4 miles north-west of St. Omer, then G.H.Q.).

Rawlinson took over the front held by the right of the Third Army, from the Somme to Fonquevillers, a twenty-mile sector, and the three corps in it.¹ The Third Army, now reduced to three corps,² continued to take over steadily from the French on its left, as related, until they had all disappeared and it had joined up with the First Army near Vimy.

March.
Map 3.
Sketch
B.

By the 3rd March, General Joffre, as he informed Sir Douglas Haig by letter, was certain that the German attack against Verdun was no preparatory measure, but an important phase of a general offensive. Twenty enemy divisions, he said, had been identified, and it was believed by the French Intelligence that by combing out the Western Front and using local reserves Falkenhayn could find ten to twelve more: at a pinch, by handing over more of the Eastern Front to the Austrians, he could bring a similar number from Russia: thus in five or six weeks the Germans might be in a position to engage some twenty-two new divisions against the French. The relief of the Tenth Army accomplished, General Joffre considered that he would have sufficient reserves to cope with the Verdun attacks, but, in view of the possibility of the Germans planning another offensive elsewhere, he said he had requested Russia and Italy to make efforts to detain on their fronts as many as possible of the enemy divisions, and he had issued orders to all the French Groups of Armies to do the same: he recognized that for the moment the British could not do much, their power of offence being reduced by their having taken over more front: he knew, however, that they would soon be reinforced from Egypt and England: he therefore begged Sir Douglas Haig to cooperate in holding the enemy by means of minor operations carried out by fairly large bodies of infantry and prepared by important concentrations of artillery, also to be ready to attack north of the Somme at an early date, if the situation demanded: should the Germans use their reserves

¹ The XIII. Corps (Lieut.-General W. N. Congreve, with the 7th, 30th and 18th Divisions) and the X. Corps (Lieut.-General Sir T. N. L. Morland, with the 32nd, 36th, 48th and 49th Divisions). The VIII. Corps (Lieut.-General Sir A. G. Hunter-Weston) was in reserve, with only the 31st Division in it.

² The VI. Corps (Lieut.-General Sir J. L. Keir, with the 5th, 14th and 56th Divisions), the VII. (Lieut.-General Sir T. D'O. Snow, with the 4th, 37th and 55th Divisions) and the XVII. Corps (Lieut.-General Hon. J. H. G. Byng, with the 25th, 46th and 51st Divisions). A cavalry division was allotted to each of the four Armies, the 3rd being retained in G.H.Q. reserve.

March. to attack the British, the French would of course render assistance.

The calculations of the British Intelligence tallied with the French that the enemy might collect ten divisions at once for an attack elsewhere than at Verdun, without using any of the troops at present engaged at Verdun and that 23 divisions was the maximum he could find in the course of the next two months for further offensives ; but it was unlikely that this would be done. Sir Douglas Haig therefore replied on the 6th that he would do all that was asked : indeed an operation south of Ypres (St. Eloi) was in preparation, and he had already carried out two successful minor operations, one south-east of Ypres (The Bluff), and the other at the Hohenzollern Redoubt :¹ his power of rendering assistance was unfortunately limited by the need to accumulate munitions for the general offensive : the British would be ready in six weeks to attack north of the Somme, either alone or in co-operation with the French.

Even in the great crisis which the German offensive against Verdun had produced the French Government refused to consider the British proposals for the withdrawal or reduction in numbers of the quarter of a million troops, 118,000 British and 104,000 French, locked up at Salonika, and they held to this decision throughout the year.

Sketch 3. When a new German operation at Verdun, on the western bank of the Meuse, was launched on the 5th March against Mort Homme, there was no weakening in the determination of the Allies to make a general simultaneous offensive in 1916. The German attack, it was considered, had so far done no more than reduce the strength of France's striking force and deprive the French and British of the power of making a grand attack in the spring. As neither Italy nor Russia could be ready until the summer, General Joffre on the 11th February, before Verdun had been attacked, had suggested a date in the summer, the 1st July. No great harm had therefore been done, although the Germans had obtained the initiative by an early start, provided the French were able to hold their own at Verdun without incurring excessive losses thereby. Germany's offensive might indeed turn to her own undoing, for with reserves exhausted, she would not be in a favourable position to resist a great combined offensive.

¹ See Chapter VII.

General Joffre therefore abandoned all idea of preliminary attacks preceding, or more or less simultaneous with, the Franco-British main offensive; he was concerned only with concentrating the greatest possible force for the attack astride the Somme, "in close liaison in time and space". On the 27th March, in view of the new situation created by the certainty that the attack at Verdun was the German main effort for the year—as after securing Mort Homme they had continued operations against Hill 304, near by, on the 20th March, and now were fighting strongly on both sides of Verdun—he addressed a letter to Sir Douglas Haig for the purpose of settling on a common plan of action. He suggested that the object of the main attack should be to break the enemy's front Lassigny (11 miles S.S.W. of Nesle)—Hébuterne, and exploit this success by pushing forward in a general easterly direction. Going into details, he thought that the common boundary should be Maricourt—Hardecourt—Maurepas—Bouchavesnes, that the general reserve should be behind the junction of the two forces, and that the attack north of the Somme should precede that south of it.¹

March.

Sketch 2.

The British Commander-in-Chief concurred in the general principles laid down by General Joffre, particularly as regards the abandonment of preparatory attacks and the closest possible combination; thus there remained to be arranged only the objectives, the dividing line and the date of the attacks. As regards the first, in a formal reply on the 10th April, he wrote that his front of attack would extend from the point of junction with the French left to a point just south of Hébuterne, and that thence northwards to about Gommecourt action would be taken to hold the Germans to their positions by keeping them in expectation of attack: his first objective would be to establish himself on the high ground east of the river Ancre about Pozières, in connection with the French on the right and with a strong flank on the left on the Miraumont—Serre spur: he would then push forward on the right to the Montauban ridge and the Ginchy—Bazentin le Grand ridge. What he would do next must depend on circumstances.²

April.

Map 1.
Sketch A.

As regards the boundary line of the two forces, Sir Douglas Haig pointed out that it must be fixed so that

¹ At this time, on the 31st March, General Headquarters were transferred from St. Omer, where they had been since October 1914, to Montreuil, an old walled town on a hill, in a central position behind the new British front. There they remained until the end of the war.

² The details of the British plan are given in Chapter IX.

April. there could be no chance of divided command in the attack on Montauban, and he suggested the settlement of it might be left to Generals Foch and Rawlinson.

To the proposal that the attack south of the Somme should be delivered "some days" after the other, he was most strongly opposed, as this would give the enemy an opportunity of using his reserves first against one ally and then the other, a possibility which it was essential to prevent. On this point, as previously in regard to preparatory attacks, correspondence and discussions ensued. The idea apparently came from General Foch; after long persistence in it by General Joffre it was eventually abandoned.

On the 14th April, before General Joffre had quite given up the idea of the French attacking south of the Somme later than the British north of the river, he put forward a new plan, in which the French were to play the principal part. He proposed that the Ham—Péronne—Bapaume road should be the objective, and that "the mission of the British forces should be to co-operate in the action of the French forces, notably in facilitating their passage of the river [Somme] south of Péronne, the principal objective of the British Armies being the region Rancourt—Morval".¹ The magnitude and length of the operation required that it should be divided into a series of phases:

"The first phase should include the capture by the British Armies of the front Pozières, Mametz Wood and Montauban, supported on the left, as you have indicated, by occupying Serre, and the division on the right having as objective the Briqueterie, east of Montauban, whilst the French forces north of the Somme will capture the rising ground north of Curlu and the Bois Favière.

"The following phases should include the continuation of your offensive towards Longueval and Warlencourt, and particularly the development of your attacks in the direction of Rancourt, in liaison with those of the French troops north of the Somme." Probably the second phase for the British would be towards Combles and Rancourt, and for the French towards Péronne—Bouchavesnes.

Sir Douglas Haig accepted the objectives proposed; for the only important difference from his own scheme was that Montauban ridge would be included in the first phase instead of in the second, as he himself, as will be seen, had suggested to the Fourth Army nine days earlier.² Again, as on the

¹ These villages lie east and north respectively of Combles.

² See Chapter IX.

14th February, he pointed out that the small amount of space there would be in the Maricourt salient after the French had come into it would preclude the concentration of large British forces there, and make the capture of Montauban as the first objective very difficult. He asked for four weeks' notice of the date finally fixed for the attack, because it was by no means certain that the Germans would remain inactive: and, as they had reserves on his front, they might attempt to interfere with his concentration by launching an attack, say, against the Ypres Salient: he must therefore keep reserves behind his defensive front until the last moment possible.

On the 27th April, General Joffre stated that he could not yet fix the date of the offensive, but asked that all preparations should be completed by the 1st June: he would give three weeks' warning; thus, if the attack was to take place on the 1st June, he would issue orders on the 10th May. To this arrangement Sir Douglas Haig agreed, pointing out that the longer the attack was postponed, the more men he would have: fifteen divisions for an offensive in May; after the 15th June, twenty, and possibly two to five more: but he added that only military necessity would justify an offensive in June. General Joffre replied on the 14th May that he fully realized the increase of strength to the British which would accrue by waiting, but meantime the French Army was losing heavily by "usure"; for the Germans on the 3rd May had renewed their attack on Hill 304, west of Verdun, and fighting was still in progress: he had not, as he might have done, called on his Allies for a relieving operation: Russia would not be able to take the offensive before the 15th June: in view of the Verdun situation the combined British-French offensive should not be later than "the first days of July".

On the 14th May the Austrians launched their Trentino offensive, gaining considerable initial successes, and the Italians called upon their Allies, particularly the Russians, for help.¹ General Alexeiev in response promised that his offensive should be launched on the 15th June without fail. He was, in fact, most anxious to attack during the absence of so many German and Austrian divisions from the Eastern Front. On the 26th May, Generals Joffre and de Castelnau came to Montreuil for a conference with Sir Douglas Haig and Sir William Robertson. In view of the Italian situation and of the statements that by the end of the month the

¹ See Note III. at end of Chapter.

May. French would have had at Verdun 200,000 casualties,¹ that fifty of their divisions had passed through the battle,² and two-thirds of France's available reserves were engaged there, Sir Douglas Haig promised that the Fourth Army should be ready to attack on the 20th June. But he made it clear that the 15th August would, as far as numbers went, be the best date for the British. It is not known whether his hope that tanks would be available on that day was mentioned. General Joffre replied that the British would not be called on for their effort until "about the 1st July". The British Commander-in-Chief made no objection to this date: he asked, however, that once it was fixed no postponement should be made at the last moment, "as General Foch had requested three times in 1915".³

It had become apparent to the Commander-in-Chief and the C.I.G.S. during the discussions that the French Government, even before the Verdun offensive, expected the British to make the great effort of the year—General Joffre indeed said so quite clearly to Sir Douglas Haig—and that our Allies would not co-operate with any really large force, except to exploit a decisive success. The Verdun battle was gradually depriving them of the power of making any important contribution, indeed it was becoming doubtful whether they would make any at all. In view of a conference which was to take place on the 31st May, a copy of a memorandum prepared for the French President was sent to G.H.Q., and in this there actually occurred the phrase, "on peut et on doit même envisager le cas "où l'Armée anglaise devrait entreprendre seule l'offensive "préparée". On the 29th May Sir Douglas Haig went so far as to warn the commander of the Fourth Army that he might have to attack without French assistance. It was on this day that Sir William Robertson warned the War Committee not to expect far-reaching results from the offensive.

At the conference in question, which took place in the

¹ The total from 21st February to 31st May is 190,000 (Wendt, p. 243).

² The list given in Gillet's "La Bataille de Verdun", pp. 292-3, shows 51½ divisions engaged up to the end of May. In the same period the Germans put in 35½ divisions, 5 of them a second time; their policy was to leave a division in for a considerable time, sending it reinforcements to keep it up to establishment (Wendt, p. 111), whilst the French relieved a formation before its fighting value was too much reduced by losses. Wendt, p. 137, mentions that from 6th March to 1st April the 5 German divisions attacking had never been opposed by more than 3 French, but actually 10½ had taken a turn.

³ See "1915" Vol. I. pp. 12, 79 and 154.

President's railway saloon, at Saleux station south of May. Amiens, besides M. Poincaré, there were present, M. Briand, General Roques (Minister of War) and Generals Joffre, de Castelnau, Foch and Haig. It was important, said the President, to make sure that the generals were united in their views, as it appeared that General Foch had stated to several politicians that he was against any offensive that year, whilst Generals Pétain and Nivelle, whom he had just seen at Verdun, had declared "Verdun sera prise". He thought that measures should be taken at once to ease the pressure there, and asked Sir Douglas Haig's opinion. The latter said that he was prepared for such a situation, and had obtained the approval of his Government to carry out an attack: the only question was the most favourable date, and General Joffre, who knew the whole Allied situation fully, had asked him to be ready by the beginning of July. General Haig suggested that troops might be withdrawn from Salonika for France; but to this there was no response. General Joffre reported that the Italians had asked General Alexeiev to advance the date of his offensive, but that both the Russian Chief of the Staff and he himself were against a premature and ill-prepared operation, which might wreck the plans for 1916: he hoped that the French and British Armies would be ready to attack a fortnight after the launching of the Russian offensive on the 15th June: the French Army would be ready to assist the British as effectively as possible, but the importance of its co-operation would depend on the development of the battle of Verdun: the attack of the British Army, even if reduced to its own infantry supported by French as well as British guns, was an absolute necessity. It was accepted, therefore, that the British should attack on a date to be fixed by General Joffre, supported by all the assistance that he was able to provide.

In the course of the conference, the belligerent forces were stated to be:

Western Front: 95 French, 49 British and 6 Belgian divisions, total 150 against 125 German.

Eastern Front: 141 Russian divisions¹ against 90 (48 German and 42 Austrian).

Italian Front: 53 Italian against 35 Austrian.

¹ The Russian divisions mostly contained 16 battalions; the French, 12; the British, 13 (including the Pioneer battalion); many of the German already had only 9.

June. Salonika Front: 4 French, 5 British, 6 Serb and 3 Italian, total 18 against 16 (12 Bulgarian, 2 Austrian and 2 German).

On the 3rd June, in order that there should be no misunderstanding, General Joffre, through Colonel des Vallières, the head of the French Mission with the B.E.F., gave formal notice in writing that the combined offensive of the British and French armies—the infantry attack, not the artillery bombardment—was to begin on the 1st July. He asked the question, however, in case any change should become necessary, how much notice was required to ensure the completion of assembly trenches, registration by the artillery, and other last-moment operations. To this Sir Douglas Haig replied that, in order to enable him to complete his preparations for a simultaneous attack, he would like twelve days' notice of the date, "1st July or later", on which the French infantry would be prepared to advance north and south of the Somme. He took the opportunity to enquire how many French divisions would be employed in direct co-operation with him, in view of the considerable reduction there must be in the force originally suggested. There was, he wrote, no reason to make any modification in the first stage of the British plan as already arranged, provided General Foch's infantry north of the Somme assaulted simultaneously with the Fourth Army: but, as the French Armies would not now be able to undertake the forcing of the passage of the Somme at and above Péronne in face of any serious opposition, it was too early to assume that the line Rancourt—Morval—Warlencourt would now necessarily be the second British objective, although it might prove to be the best one to aim at in a later stage of the British advance. In conclusion, he wrote that he could not arrive at a just appreciation of his task without full information of the French plans, probable strength and objectives of attack, and the measures which would be taken to hold the enemy on the fronts outside the actual line engaged by the joint offensive.

Map 2.
Sketch A.

To this General Joffre replied on the 6th June that they must expect a battle of "durée prolongée"; but the first objective must be the enemy's First Position, and it was premature to fix any objective beyond the enemy's Third Position as it actually existed: owing to the reduction of the French forces in the four months' Verdun battle, the French offensive on the south would be limited by the

Amiens—St. Quentin road, which passes five miles south of Frise: there was now no question of General Foch reaching the front Ham—Péronne—Bouchavesnes, the objective previously allotted to him, or of the French trying to cross the Somme at and above Péronne: the reason for the British making their principal effort to reach the area Rancourt—Morval had therefore disappeared, but he asked that in their attacks from Maricourt to Hébuterne and Gommecourt, they should capture the successive positions organized by the enemy on that front, and, advancing slightly beyond the last position, reach the line Guilleumont—Ginchy—Flers—Le Sars—Miraumont. This was a great arc between the Somme and the Ancre, which on the left was just beyond the German Third Position, but on the right crossed over from the Third to the Second.

The principal task of the French Sixth Army attacking astride the Somme, he said, would be to support the British: its objective on the north bank would be Hem—Maurepas, that is no more than the German Second Position on the left and an intermediate position between the First and Second on the right: south of the Somme, the objective would be the Flaucourt plateau in the angle of the Somme, opposite Péronne, that is just beyond the German Second Position. General Joffre forwarded to G.H.Q. the orders issued to the Sixth Army by General Foch; but he failed to state the number of divisions which would be employed. It was, however, known that the Sixth Army contained only twelve divisions, and its front of attack was under nine miles, over half a mile of which ran across the marshy bottom of the Somme valley. The French effort was therefore definitely to be a minor one, although, when added to the British, important.¹ Sketch A.

Everything now appeared to be settled, except such matters as required detailed adjustment between the commanders of the French Sixth and the British Fourth Armies. On the 13th June, however, Colonel des Vallières reported that the situation at Verdun was serious,² that a political crisis was taking place in Paris, and that General Joffre was anxious the combined attack should be begun on the 25th, which meant the bombardment must be opened on

¹ On the 1st July the French attacked with 4 divisions north of the Somme, 7 south of it, and 2 in general reserve. See Chapter XIII., Note I.

² On the 1st June the Germans, having repulsed a French counter-attack begun on the 22nd May, renewed their offensive on the eastern bank of the Meuse, and captured Fort Vaux. (See Sketch 3.)

June. the 20th. Sir Douglas Haig at once agreed to do all in his power to assist the French ; but pointed out that British attacks on the 25th would be too late to have any effect on the action of new enemy troops at Verdun already in progress, and that it would be of great advantage to him to be allowed to have the few remaining days counted on to complete the British preparations. Nevertheless, he ordered all arrangements to be made to carry out the assault on the 25th. Then the situation at Verdun improved ; the secret session of the French Chamber was entirely favourable to the Government ; and the offensive begun by General Brusilov on the 4th June continued to make excellent progress. Late on the 16th June a telephone message was received from French G.Q.G., requesting that the assault should be postponed until the 29th June, or even the 1st July. Sir Douglas Haig agreed to the 29th, but was decidedly against the date being a single day later. On the 17th General Joffre appeared in person at G.H.Q. with the request that the offensive should commence on the 1st July. Sir Douglas Haig did not hesitate to tell him that in order to please him all preparations had been hurried on so as to begin on the 25th, and that the 29th should now be the latest date : it was unwise to increase the risk of the enemy discovering the area of the British concentration and attacking at some other part of the front where the line had been necessarily thinned by the withdrawal of troops, including artillery, required to strengthen the forces on the offensive front. Finally, the 29th was agreed on, but Generals Foch and Rawlinson were given powers to postpone the assault by agreement from day to day, if on the 29th the weather proved unsuitable. General Joffre for the first time expressed a wish that, after the Pozières ridge had been taken the British should push on eastwards from Bapaume ; it was pointed out to him that the B.E.F. did not possess sufficient numbers to advance much beyond that town. Sir Douglas Haig's plan at this time, as will be narrated in detail later, was to hold a strong position including Bapaume and the Transloy ridge, if these were reached, and go no further east until he had sent a force northwards which should widen the gap in the direction of Arras and secure the left flank of his attacking forces. General Joffre then said he would be satisfied if the eastern side of Bapaume were held whilst French reserves, some four divisions or more, moved on Rancourt and Saily Saillisel (6 miles to the south of Bapaume) and

the other villages north of Péronne, where the British and French cavalry should pass through them and go eastwards. To holding Bapaume Sir Douglas Haig had of course no objection, but he insisted that the first thing was to beat the enemy and that if a break-through were accomplished he would require his cavalry to co-operate with the other arms in driving off the Germans between Bapaume and Arras, a sufficient objective for the moment. In this view General Joffre concurred. June.

The dangers of delay were becoming evident; for on the 17th and 18th June German aeroplanes appeared over the northern area of the Fourth Army, working northwards to St. Pol (22 miles N.N.W. of Arras). It was hoped that this indicated fear of attack from the Third and First Armies rather than the Fourth, which indeed seems to have been the case.¹

On the 21st French G.Q.G. forwarded to the Commander-in-Chief of the British Forces an "Instruction" framed in the philosophy of war style of the professors of the École Supérieure de Guerre. In the first paragraph of this it was stated:

"The essential object of the operations which are about Map 3.
 "to be undertaken on the Somme is to place a mass of Sketch
 "manceuvre on the junctions of the enemy's lines of B.
 "communication marked by Cambrai—Le Cateau—Mau-
 "beuge, etc. . . . the road Bapaume—Cambrai will be
 "the axis of our initial progress." In terms of high
 strategy, it discussed two hypotheses: (a) should the
 enemy front yield to pressure in a few days on the whole
 front of attack; and (b) should there be an immediate
 rupture of the front by surprise. It ended by declaring
 that a number of fresh divisions would be required to
 relieve the tired ones in order to reach the distant objectives
 selected. The paper said nothing about the course to be
 pursued in case of complete or partial failure.

Sir Douglas Haig acknowledged the receipt of the Instruction, made it clear that he had arranged for the relief of tired divisions, and restated very briefly his immediate plans, of which he had informed General Joffre on the 17th. He concluded by saying that if all went well, he would continue to attack, "the direction of further operations depending on whether he (the enemy) clung to his fortified positions to the north, or succeeded in concentrating a force to oppose our advance eastward". He, also, did not allude to

¹ See Note at end of Chapter XII.

June. the possibility of failure ; he had, however, a plan in mind to meet such a contingency and had communicated it to Generals Rawlinson and Gough, as will be mentioned in due course.

On the 24th, Colonel des Vallières reported that the French XX. Corps (General Balfourier), on the British right, north of the Somme, would not be ready on the 29th, as two more days were required to complete the jumping-off trenches, railway lines, and so on. Sir Douglas Haig was averse to any further postponement ; he had already changed the date of the attack from the 25th to the 29th, and every day gave the enemy time to prepare counter-measures. Already gas cylinders in position for the offensive had been exploded by German shells. The troops, too, were expecting to go forward, and further delays might have an adverse effect on their spirits. He therefore instructed General Rawlinson to get into direct communication with General Balfourier and make a protest. As a result General Rawlinson was able to report by telephone that the XX. Corps would be ready to attack on the 29th, but that a certain narrow gauge railway, for which the staff of General Foch's Group of Armies was responsible, would not be completed. So the 29th continued to stand as the date of the assault, and on the 25th when General Rawlinson saw General Foch, the latter seemed quite satisfied with it.

On the 28th, Lieut.-Colonel E. FitzG. Dillon, of the British Mission with the French Army, brought to G.H.Q. from General Foch a criticism of Sir Douglas Haig's plan for enlarging the gap by a movement from Bapaume northwards towards Arras, should the British assault prove successful. He desired that the British on reaching Bapaume should first extend six miles southward to Sailly Saillisel to enable the French to get forward, after which a combined movement upon Arras might be made. No reply was sent to General Foch, as the paper neglected consideration of any action which the Germans might take against the exposed British left flank during the excursion proposed. At 5 P.M. on the same day, Generals Joffre and Haig met by arrangement at Fourth Army Headquarters, and the French Commander-in-Chief raised the same questions as were contained in General Foch's criticism, but he at once saw the force of Sir Douglas Haig's argument, and said no more.

The weather, after all, proved the determining factor in fixing the final date of the assault. There was so much rain

on the 28th June that even next day the trenches and gun emplacements were in places full of water, and there was further rain on the night of the 29th/30th. The glass, however, was rising, and, in full hope of success, the 1st July was, as will be seen, fixed by common accord as zero day.

It is easy to argue, in view of the short training in modern warfare of many of the new divisions and the prospect of receiving a number of tanks in a few weeks' time, that it would have been wiser if the British Commander-in-Chief had declined to send the flower of the nation into battle on the 1st July, and had suggested that the British Expeditionary Force should take over more of the line, thus freeing the fully trained French divisions, with their more numerous heavy artillery, for the offensive which was to relieve Verdun. The French Government and General Joffre, however, intended that the British should attack, urging the heavy losses which the French had suffered, with hints that they might not be able to go on. There were plenty of signs of France tiring of the war, as Falkenhayn knew. The spirit of comradeship, as well as the knowledge that from early 1915 onwards French officers were openly saying that the British Empire was not pulling its weight in the war and leaving the fighting to them, definitely urged the necessity of giving active assistance.

This decision to attack at the Somme, therefore, was as much a political one as had been that which sent the First Army to Loos, and there were in July 1916 fewer purely military objections, and better prospects of success, than there had been in September 1915.

NOTE I

THE BELGIAN ARMY¹

In compliance with General Joffre's request that the Belgian Army should participate in the Somme offensive, the Belgian General Staff prepared two schemes, one for an attack in the Boesinghe—Steenstraat sector with a limited objective, and the other for a general advance in case the Germans should retire. As a result of the general situation on the Somme, the operations of the Belgian Army, as it turned out, were limited to destructive shoots by the artillery, and raids and reconnaissances into the enemy lines. The Germans replied by similar action.

¹ See "Bulletin Belge des Sciences Militaires", "Les opérations de l'Armée belge", pp. 482-5.

NOTE II

THE GERMAN PLANS FOR 1916 AND VERDUN ¹

Dec. 1915. In the middle of December 1915,² Field-Marshal Conrad von Hötendorf, the Chief of the Austro-Hungarian General Staff, proposed that in 1916 the main campaign should be against Italy, and carried out from Tirol, so as to break through there and thus cut off the main Italian forces in north-eastern Italy and on the Isonzo. That accomplished and Italy rendered helpless, 400,000 Austro-Hungarian troops could be transported to France for a decisive blow on the Western front. Conrad asked for the loan of nine German divisions, in addition to the four already in Galicia, to relieve the Austro-Hungarian divisions on the Russian front required for his main operation. Falkenhayn demurred on the ground that the force available for the blow, even if nine divisions were lent, would be insufficient, and that even if the operation were successful, it would not be fatal to Italy, would not affect Italy's Allies or bring about a definite decision; moreover, it would leave the Germans weak and exposed to attack whilst it was in progress. He asked Conrad to hand over to him all the troops that he could make available, not to be used for offensive purposes, but to release German formations on the Eastern Front for operations elsewhere. Fortunately for the Allies, the Chiefs of the two enemy General Staffs could not come to an agreement or a compromise, and each went his own way, the one to Verdun, the other to the Trentino.

At Christmas time 1915, Falkenhayn drew up what he calls "a document to serve as a basis for the report to H.M. the Kaiser".³ In it he indicated that the British Empire was Germany's "arch-enemy in this war"; it was useless to strike at her in the East: victories at Salonika, the Suez Canal or in Mesopotamia would not help except for propaganda purposes in the Mahommedan world: a decision could only be obtained on the Western Front. As he had planned in 1915, before the landing at Gallipoli had forced him to open a way through Serbia to the help of Turkey, and before the state of Austria attacked by both Russia and Italy compelled him to go to her aid and drive back Russia by the Gorlice offensive, the object on the Western Front should be to drive the British into the sea and force the French behind the Somme. Unfortunately the state of the ground north of the Lorette ridge was, until the middle of spring, unfavourable: thirty divisions would be required for such an offensive, and, without leaving other parts of the front dangerously weak, they could not be found. France was "England's best sword . . . the strain on her has almost reached breaking point": if her people could have their eyes opened to the fact that, in a military sense, they had nothing to hope for, this breaking point might be reached. He could find sufficient divisions for an

¹ See particularly Falkenhayn, Maréchal Pétain's "La Bataille de Verdun", the four German official monographs entitled "Die Tragödie von Verdun", and Wendt.

² Falkenhayn, pp. 193-200 and 209-222.

³ That is, for an "Auftrag", the formal verbal report made by German chiefs of the staff to their commanders.

operation on a narrow front, "to bleed the forces of France to death".¹ Dec. 1915.

There remained, he said, only to choose the place of attack: it must be Belfort or Verdun. Why the choice was restricted to the neighbourhood of two strong fortresses without any alternative, Falkenhayn does not explain; it can only have been on account of the great moral effect which the fall of one of them would occasion; it could not be expected that either of them would collapse like Liège or Namur. Falkenhayn selected Verdun, he says, because of its proximity to the German railway communications, "barely twelve miles distant". Its position was weak and its communications were bad, as a result of the loss of the St. Mihiel salient. No doubt the fact that the attack would take place in the area of the German Crown Prince's Army carried weight with the Kaiser. Map 3.

To cripple Great Britain, Falkenhayn demanded unrestricted submarine warfare. It was settled that it should be begun in February; but by the influence of the German Chancellor and through fear of the United States, its initiation was postponed.

The attack against Verdun was to be made on a front of six divisions on the eastern bank only of the Meuse on the 12th February; but bad weather made necessary a postponement until the 21st. Sketch 3.

As early as the end of December 1915 Allied intelligence agents reported rumours, mostly vague and contradictory, of an impending German offensive on the Western Front. Towards the end of January 1916 certain movements of German troops and great activity on the Meuse railways seemed to indicate that Verdun might be the objective; but railway transport towards Flanders was also reported. Indications soon began to be more definite: letters found on prisoners spoke of an imminent attack by the Crown Prince and of a review which the Kaiser would hold towards the end of February on the "Grande Place" of Verdun. General Herr, commanding the Verdun fortified area, supported by General de Langle de Cary, commanding the Group of Armies of the Centre, drew attention to the information, and demanded reinforcements. Verdun having been a quiet front since September 1914 was garrisoned by the XXX. Corps (2 Jan. 1916.

¹ It is suggested for consideration that what he really had in his mind was not a slow process of exhaustion but a spectacular success, which would put the finishing touch to the supposed demoralization of France. Millions of German marks had been spent in subsidizing newspapers, "Le Bonnet Rouge", and others, in suborning agents to preach "défaitisme" as well as on other propaganda. It seemed that the time had arrived to reap the harvest which had been thus sown, and it was no doubt hoped by a startling reverse to bring about a revolution which would place the Government of France in the hands of men favourable to an immediate peace with Germany.

There is the curious fact, made public in the German Official Account (vii) that, in making plans for an offensive on the Western Front in 1915 (rendered abortive because it became necessary to use the newly formed divisions on the Eastern Front to drive the Russians out of East Prussia, assist the Austrians at Gorlice-Tarnow, and then cut a way through Serbia to the assistance of Turkey), Falkenhayn had prepared for operations on the Aisne, near Roye, and between the Somme and Arras. Verdun and Belfort were not mentioned.

Feb.- divisions and 2 Territorial regiments) only,¹ and was very short of
July. men. The field defences, which should have completed the fortress, had been allowed to fall into a state of decay. On the 11th February General Joffre sent to Verdun two extra divisions and moved two good corps close to it, the VII. Corps on the 11th, and the XX. Corps, with an extra division, on the 16th. The latter corps, however, did not entrain until the 20th. When the German attack took place on the 21st there were three divisions only on the eastern bank in position to meet it. The fine defence of two of these saved the situation. The first two days produced "results far below what " was expected " by the Germans ; but by the third they had got complete possession of the French first position, and on the fourth and fifth days they gained some easy successes. Then the French reserves began to arrive, and further progress became slow. On the 5th March the Germans enlarged their front of attack and began operations on the western bank against the ridges which culminate in Mort Homme and Hill 304, as French guns on this side of the river were enfilading the attackers on the eastern bank. In fighting which lasted until the 14th, they captured Mort Homme. Hill 304 and the western flank proved more difficult. Nineteen days' fighting, 20th March-7th April, only brought the Germans a little nearer to them, and a further nineteen days' battle, beginning on the 3rd May, resulted in their just reaching the summit of the hill. The struggle on the western bank then declined into trench warfare.

It would seem that by the 1st May General Joffre had come to the conclusion that the German offensive had failed. On that date he transferred General Pétain, who had been conducting the defence in command of the Second Army, to the Command of the Group of Armies of the Centre (G.A.C.), General Nivelle succeeding him in the Second Army. He allotted to Pétain 52 divisions, of which 24 were in the Verdun area, with instructions " to ensure the ir-" " violability of the position on the whole front of the G.A.C.", and to recover Fort Douaumont.

Operations on the eastern bank therefore continued, with alternate attack and counter-attack, but little ground changed hands. It was not until the 20th June that the Germans introduced a new factor, overwhelming the French batteries with shells containing an improved type of diphosgene gas, against which the masks provided insufficient protection. Without support from the artillery, the French infantry gave way, the Germans advanced some twelve hundred yards up to the foot of Fort Souville, and for the first time there was real danger that Verdun might be lost. On the 25th June Pétain telegraphed to G.Q.G. that he could not hold Verdun with the second-class divisions which he had, and asked that the British offensive might be advanced. Joffre sent him messages of encouragement and four divisions from his reserve for the Somme.

The effect of the opening of the Somme battle on the German operations at Verdun is dealt with elsewhere.² The final German attack took place on the 11th July, and a small advance, which

¹ In February 1916, the II. Corps, reinforced by two extra divisions, held the front opposite the lower western face of the St. Mihiel salient and was under the commander of the Fortified Region of Verdun, but did not face the great German offensive.

² See Note at end of Chapter XII.

looks more imposing on the map than it was in reality, was made July. north of Souville towards Fort Belleville. The salient gained proved untenable. Hereafter, as a result of the Somme, the Germans remained on the strict defensive at Verdun.

NOTE III

THE AUSTRO-HUNGARIAN SOUTH TIROL (TRENTINO) OFFENSIVE
14TH MAY 1916¹

The Austrian offensive was made by two Armies, under Generals May. Dankl and Kövess, numbering some 194 battalions, with 276 heavy guns, on a front of forty miles, south-east of Trent, and penetrated to an average depth of eight miles, extending beyond Asiago. The Italian forces, part of the First Army under General Brusati, at the beginning of the battle, numbered 118 battalions, organized in three divisions and the Alpine Group E, with 226 heavy guns. The offensive practically came to an end between the 24th and the 27th May. The Brusilov offensive of the 4th June in Galicia then caused the Austrians to withdraw part of their forces, and take up a defensive position. On the 16th June the Italians counter-attacked, and recovered a zone, about three miles in depth, of the ground lost.

NOTE IV

THE BRUSILOV OFFENSIVE²

On the 8th April 1916, General Brusilov, who had from the April-beginning of the war commanded an Army, was appointed to May. supersede General Ivanov as commander of the Group of Armies of the South-West. There was a general discussion at the Tzar's headquarters on the 14th April of the plan of campaign drawn up by General Alexeiev, the Chief of the Staff, in pursuance of the agreement for the carrying out of simultaneous attacks made at the Chantilly Conference. It was settled that General Evert's Group of Armies of the Centre should make the main offensive, supported by the general reserve and the entire reserve of heavy artillery; that General Kuropatkin's Group of Armies of the North-West should assist by wheeling inwards; but that the Brusilov Group of the South-West should remain on the defensive and not pass to the attack until the two other Groups in the north had made definite progress. Brusilov protested that he could and ought to take the offensive, as his Group by attacking would at least hold some of the enemy reserves, and he received permission to make preparations. This he proceeded to do on the whole of his front with every measure of secrecy. On the 24th May, the Italians having

¹ For the Italian account see Tosti's "La Guerra Italo-Austriaca" (founded on official documents), pp. 143-160, and General P. Schiarimi's "L' Armata del Trentino", pp. 75-194; and for the Austrian, General Krauss's chapter in Schwarte iv. ("Der Österreichisch-Ungarische Krieg"), pp. 199-224.

² For the German and Austrian accounts, see Schwarte ii. and iv., also Ludendorff and Falkenhayn; for the Russian, "Mémoires du Général Broussilov, Guerre 1914-18".

June. urgently requested help, Brusilov was asked by General Alexeiev when he could attack; he replied that he could do so on the 1st June, provided Evert's Group did likewise. It was finally settled that Brusilov should move on the 4th June, and Evert on the 14th. Bombardment and wire-cutting were begun by Brusilov at dawn on the 3rd. On the night of the 3rd/4th his troops, from north to south the Armies of Kaledine, Sakarov, Cherbachev and Lechitski, were deployed for assault on a 200-mile front from the Rumanian frontier to near Pinsk. Opposite them lay the Army Group of General von Linsingen (two German corps¹ and two Austrian Armies), and the Army Group of the Archduke Joseph (one German and two Austrian Armies). The principal effort was made by the two northern Russian Armies against Linsingen's Group, which, consisting mainly of Austrians, made a very poor stand. To use Ludendorff's words: "the Russian offensive at Lutsk [the centre of the northern sector attacked] made rapid progress. . . . The first German reinforcements became involved in the retreat. A new front was gradually created. . . . The Russians had not followed up very rapidly. . . . They had too few reserves at hand to make full use of their opportunity. . . . Brusilov was not strong enough for an energetic pursuit." Brusilov, however, extended his success southward, so that an advance all along the 200-mile line to a depth of twenty to thirty miles was made, and "the German counter-attacks obtained "only local successes".

Brusilov's captures amounted to 450,000 men and over four hundred guns.

Evert, opposed to the German troops of Hindenburg, first postponed his attack from the 14th to the 18th June on account of weather, and then, instead of carrying out a general offensive with all his Armies, he waited until the 2nd July and made a perfunctory and limited one at Baranovichi against Woyrsch's Army Group, on the left of Linsingen's. Some success was gained and the Germans had to throw in "all their carefully hoarded reserves", but by the 9th the fighting had died down.

¹ One consisting of three Reserve, 1 Landwehr and 2 cavalry divisions; and the other of 4 divisions and a cavalry division.

CHAPTER IV

EXPANSION AND REORGANIZATION OF THE BRITISH EXPEDITIONARY FORCE BETWEEN AUGUST 1914 AND JULY 1916

(Sketch 4)

BETWEEN the landing in August 1914 and the beginning of the battle of the Somme the British Expeditionary Force had expanded from two corps (four divisions) to 18 corps (58 divisions), and was now organized in four Armies. There had been corresponding augmentation and expansion of the Staff and special arms and services, departments, bases and lines of communication, and some reorganization of existing establishments, besides the introduction of new branches and new services. It seems suitable at this point to give in this and the following chapters some account of these changes as a background to the operations of the year 1916.¹

The number of officers holding appointments at G.H.Q. (1st and 2nd Echelons) had risen from 53 to 101, of which increase the General Staff accounted for the smallest proportionate rise, from 22 to 30, and the Engineer-in-Chief's staff the largest, from one to nine. G.H.Q. 3rd Echelon, at the base, had increased from 28 to 36, whilst the number of officers at headquarters of administrative services and departments (Signals, Supplies, Transport, Ordnance, Railways, Works, Medical, Veterinary, Army Postal, etc.) had been nearly trebled, the original 45 having become 129. The clerical establishments had expanded in even greater proportion.

Among the new units and services were the "Special Brigade (Gas)", the "Special Works Park (Camouflage)", Anti-Aircraft Searchlight Companies and sections, Land Drainage Companies, Field Survey Companies, Electrical

¹ In some cases, when a subject can conveniently be concluded, the account is carried beyond 1916.

and Mechanical Companies, the Meteorological Section, the Printing Company, Labour battalions—all R.E. units; Kite Balloon Sections, Motor Ambulance Convoys (there was not one motor ambulance vehicle with the original B.E.F.) and Medical Laboratories. A large number of schools of all kinds had also been organized to give instruction in every kind of subject.¹

Army Troops had come into existence consisting of R.A. units:—heavy and anti-aircraft artillery; R.E. units:—Army Troops Companies, Tunnelling Companies, Field Survey Companies and Pontoon Parks; Royal Flying Corps units:—aeroplane squadrons and balloon sections; Signal units:—Army Company and Airline and Cable Sections; A.S.C. units:—Supply Column, Anti-Aircraft Gun Workshops, Auxiliary (Horse) Company, Auxiliary (Petrol) Company, Mechanical Transport Mobile Repair Unit, Auxiliary (Omnibus) Company and Reserve Parks; Medical units:—Motor Ambulance Convoys, Casualty Clearing Stations, Advanced Medical Store Depot, Mobile Laboratories, Mobile X-Ray Unit and Sanitary Section; and an Ordnance unit, the Army Heavy Workshop.

A Corps Headquarters had increased from 19 to 24 officers by the addition of a headquarters of the artillery of the corps (in place of a brigadier-general R.A.), the headquarters of the corps heavy artillery, a second medical officer and an ordnance officer.

Corps Troops, originally only a cable section, now comprised:

- Corps cavalry regiment;
- Cyclist battalion;
- Motor machine-gun battery;
- Corps signal company, air-line and several cable sections;
- Corps ammunition park;
- 3 supply columns;
- A.S.C. company (attached heavy artillery);
- 2 mobile ordnance workshops;
- 2 (or more) heavy artillery groups;
- 2 (or more) Army Troops companies, R.E.
- Tunnelling companies, R.E. (according to the front);
- Detachment Royal Flying Corps.

The staff of a division remained unchanged, but divisional troops had undergone alteration:

¹ A list of these schools is given in "1915" Vol. I, p. 12, f.n.

ARTILLERY

59

	1914.	1916.
Mounted troops . . .	1 cavalry squadron 1 cyclist company	....
Artillery . . .	13 batteries (12 field, 1 heavy) ..	16 batteries (field) 3 trench-mortar batteries
Engineers . . .	2 field companies 1 signal company ..	3 field companies 1 signal company 1 pioneer battalion
A.S.C. . . .	4 companies	4 companies
R.A.M.C. . . .	3 field ambulances ..	3 field ambulances 1 sanitary section
Veterinary . . .	..	1 mobile veterinary section

The cavalry squadron and cyclist company had been transferred to Corps Troops. The divisional artillery was actually weaker, 64 guns as against 76; for it had lost the 60-pdr. battery, transferred to the heavy artillery, and the field batteries although increased in number had been reduced from 6 to 4 guns each.

Each of the three infantry brigades, in addition to four battalions, had now a brigade machine-gun company and a trench-mortar battery.

The changes in the various arms and services will be dealt with in succession.

ARTILLERY

At the beginning of the war the field artillery of a Regular division had consisted of three 18-pdr. and one 4.5-inch howitzer brigades, each brigade of three 6-gun batteries. The first Territorial Force divisions had brought out three 15-pdr. brigades (each of three 4-gun batteries), and one 5-inch howitzer brigade of two 4-gun batteries. The New Army divisions had three 18-pdr. and one 4.5-inch howitzer brigades, each of four 4-gun batteries. The Indian divisions, and the 7th, 8th, 27th and 28th Divisions also had different establishments. By the end of 1915, the 15-pdrs. of the Territorial divisions had been replaced by 18-pdrs., and, after considerable discussion, it was decided to adopt an universal establishment, on the basis of 4-gun batteries, of four mixed brigades, each of three 18-pdr. batteries and one 4.5-inch howitzer battery. This re-organization, which only required two or three weeks to carry out, took place in April and May 1916.¹

¹ In the closing months of 1916, owing to dearth of good brigade and battery commanders, the 6-gun 18-pdr. battery was reintroduced, the number of brigades per division being reduced to three.

Owing to the rapid growth of the heavy artillery—which had increased from 36 batteries (60-pdr., 6-inch gun, old 6-inch howitzer and 4·7-inch gun) on the 1st January 1915, to 77 batteries (including four 12-inch howitzer batteries) on the 1st January 1916, and 191 (including four 15-inch howitzer batteries) on the 1st July 1916, the first day of the battle of the Somme¹—it was decided early in 1916 to reorganize. The five groups of “Heavy Artillery Reserve”, under brigadier-generals, among which the batteries were then divided, were broken up; a heavy artillery commander for every corps was appointed; and instead of brigades of two batteries, “Lieutenant-Colonel Groups”, eventually called “Heavy Artillery Groups”, of four or five batteries were formed.² Two such groups were allotted to each Army, and two to each corps. Under this arrangement, carried out in March, the battles of 1916 were fought. It was a step towards the final organization of the heavy artillery as proposed by Major-General J. F. N. Birch, who became Artillery Adviser G.H.Q. in June, according to which corps artillery was to consist of medium artillery (60-pdr. and 6-inch guns, 6-inch, 8-inch and 9·2-inch howitzers), and Army artillery of the heaviest artillery, including all guns on railway mountings.

The change of status of the artillery general attached to the headquarters staff of a corps from that of a mere adviser to an executive officer with the title of “G.O.C. Royal Artillery of the Corps” on the 23rd October 1915, after the experience of the battle of Loos, has already been mentioned.³ It abolished the dual control over the guns formerly shared by the General Staff and the artillery general of a corps. The latter was now “charged with the co-ordination of the action of the artillery of the corps and the executive command of such portion of it as the corps commander may direct from time to time”. When, on the 9th March 1916, the Corps Heavy Artillery commanders first came into existence, in the letter of appointment the “G.O.C. Royal Artillery of the Corps” was referred to as the “Brigadier R.A. of the corps”, and some doubt then arose as to his precise position. On the 7th May this was defined as being “available to take executive command of any concentration of the

¹ By the 1st July 1917, the total was 400 heavy batteries.

² Brigades were reintroduced in January 1918.

³ “1915” Vol. II, p. 74, f.n.

“corps and divisional artillery”, thus limiting his occasion of command to cases of concentration only, so that the Corps Heavy Artillery commander could claim that orders must come to him from the General Staff and not from the Brigadier-General R.A. It was not until December 1916 that the position of the G.O.C. Royal Artillery of the Corps was made definite, and at the same time a similar title was given to the Major-General Royal Artillery attached to Army Headquarters.

TRENCH MORTARS

In October 1914 the British Army did not possess a single trench mortar or a round of mortar ammunition. The gradual evolution of trench mortars by improvisation¹ and the commencement of manufacture at home had by the time of the battle of Loos brought the number of batteries to 61, each of four guns. These consisted of the 4-inch, 3·7-inch, and the Stokes (light), and the 2-inch and 1·57-inch (medium, firing a stick bomb),² large quantities of which were under order. The establishment suggested by G.H.Q. in November 1915 was six batteries of light, two of medium, and one of heavy trench mortars per division; but by the 1st July 1916 this had not been attained, each division then having only three light and three medium batteries. In May 1916 it had been decided to reduce the types to three, the Stokes (light), the 2-inch (medium) superseded in June 1917 by the 6-inch Newton, and the 9·45-inch (heavy). Fifty of these last, of French design, were obtained for trial in February 1916, but proved unsatisfactory. The first issue of 30 experimental heavy mortars of the British pattern, firing a steel bomb weighing some 150 lbs., commonly called the “Flying Pig”, was made at the end of June 1916, but no distribution to the army was made before the end of the year, when 200 became available.

The organization and manning of the trench-mortar batteries, like the original improvisation of the mortar, had been haphazard. Artillery, engineers and infantry had all taken a hand. A separate trench-mortar corps was never formed. In August 1915 a divisional basis was adopted, but it was not until December of that year

¹ See “1915” Vol. I, pp. 8, 9.

² That is, the bomb had attached to it a steel rod which alone went into the bore of the mortar, the bomb itself projecting outside.

that it was definitely laid down that the light batteries should be manned entirely by infantry, and the medium, and subsequently the heavy, by the artillery. In March 1916 the medium trench-mortar batteries became an integral part of the divisional artillery, and the light batteries (Stokes) of the infantry brigades. At the same time the appointment of a divisional trench-mortar officer was sanctioned, the batteries were numbered and a special badge for the personnel was introduced.

ANTI-AIRCRAFT DEFENCE

No provision was made in the original B.E.F. for anti-aircraft defence, although 1-pdr. "Pom-Poms" had been issued to divisions in September 1914. The 7th and 8th Divisions, which arrived in France in October and November 1914, each brought one 2-pdr. "Pom-Pom", on a mobile mounting, firing a solid 1-inch shell, and a few more of these weapons were sent to France. They were practically useless. By December 1914 there were three sections (2 guns) of R.H.A. 18-pdr. A.A. and one single 18-pdr. A.A. with the British forces in France. The number was gradually augmented; but, although Sir John French had asked for one section per division in the front line and 15 sections for the lines of communication, by the beginning of August 1915 there were 28 divisions in France, with only 13 anti-aircraft sections, firing shrapnel. The high-explosive shell, far more effective against aeroplanes, as it broke into splinters which could wreck a machine or kill its occupants, had proved defective, and after several guns had burst, its use was forbidden. A safe pattern of shell was not available until April 1916.

Two anti-aircraft Searchlight Sections R.E., each with three 60-cm. projectors, were sent out in April-July 1915 and employed for the protection of G.H.Q. at St. Omer, which, however, was bombed twice by aeroplanes at night in the summer of 1915—on the first occasion the day after a section of A.A. guns stationed there had been moved elsewhere. At this period night bombing by aeroplanes was practically unknown, and only the incursions of airships were anticipated.

Between March and May 1916, the 50th Field Searchlight Company R.E. (3 sections with partly 90-cm. and partly 60-cm. projectors), and five more anti-aircraft

sections arrived in France, and were distributed to G.H.Q. and the lines of communication.

The deficiency in A.A. guns still remained serious, Sir Douglas Haig reporting in February that he had only 67, whilst according to the scale of two per division, he would soon require 112, besides others for headquarters and for the lines of communication. An improved pattern of gun, a new 13-pdr. (9 cwt.)—actually the 18-pdr. bored out and re-lined to a calibre of 3 inches, capable of sending shells to a height of 19,000 feet—was supplied, and gradually superseded the earlier type. On the 1st July 1916, the total number of anti-aircraft guns with the Expeditionary Force, excluding "Pom-Poms", was 113, of which 70 were of the new pattern. As bombing was on the increase, a demand was made for anti-aircraft guns to provide a total of five sections per corps and 30 sections for the lines of communication. The organization of the guns had first been in batteries of two sections; but this required a large number of battery commanders, and it was changed in June to one of batteries of normally four sections, with a group headquarters under a lieutenant-colonel, one with each Army and one on the lines of communication.

The necessity for still further increase of the A.A. service was made evident when on the night of the 20th/21st July 1916 several enemy aeroplanes bombed the great ammunition depot at Audruicq (12 miles north-west of St. Omer), and destroyed much of its contents.¹ The defences of the depot at the time consisted of only two searchlights and two anti-aircraft guns. It was not until September 1916 that night bombing by enemy aeroplanes began to develop in the forward areas, particularly over the Maricourt plateau in the Somme battle line. Two sections of searchlights were then sent up, and these by forcing the enemy aircraft to fly at considerable heights, greatly reduced their chances of doing damage.

By the end of 1916, there were 91 Anti-Aircraft Sections R.A. in France (including two Canadian, formed in September), ten of them armed with a new 3-inch 20-cwt. gun, but otherwise practically all 13-pdr.; and 22 (including one company of three sections) Anti-Aircraft Searchlight Sections, R.E.

¹ See Chapter V.

MACHINE GUNS

In February 1915 the number of machine guns per infantry battalion and cavalry regiment had been raised from two to four ;¹ in June four Lewis guns had been issued to battalions in addition, and a project for forming machine-gun companies and squadrons was under discussion. There was general agreement that the handling of machine guns required special tactics, involving a training and organization different from that required by the units to which they had hitherto belonged. On the 2nd September 1915 a definite proposal was made to the War Office for the formation of a machine-gun company (squadron) per brigade by withdrawing the Vickers (or Maxim) guns² from the battalions (cavalry regiments), and thus obtaining four sections per infantry brigade (three per cavalry brigade) of four guns each. They were to be replaced by Lewis or Hotchkiss guns, thus giving each battalion and cavalry regiment a total of eight Lewis and Hotchkiss guns respectively. This proposal was approved on the 22nd October, when an Army Order was issued bringing into existence the Machine Gun Corps. It was to consist of infantry machine-gun companies, cavalry machine-gun squadrons and motor machine-gun batteries.³ The Lewis and Hotchkiss guns were to remain with the infantry and cavalry units.

The reorganization depended upon the output of Lewis guns, and was ordered to take place in brigades by rotation. It was completed before the Somme. As soon as all the battalions in a brigade had received their complement of Lewis guns and had adequately trained crews for them, the Vickers and Maxim guns, together with the necessary personnel, were withdrawn to form the machine-gun company of the brigade. In the case of the twelve New Army divisions which originally had Lewis guns instead of the heavier type, the brigade companies were formed at home, where a Machine-Gun Training Centre had been established at Grantham.

Further proposals were made by G.H.Q. to give each division a fourth or divisional machine-gun company (or

¹ " 1915 " Vol. I. p. 11. German infantry regiments received a second machine-gun company about the same time.

² The Maxim gun was obsolescent in August 1914. Only some six hundred were manufactured subsequently.

³ There were already 18 of these allotted to corps and a few divisions. (See " 1915 " Vol. II. p. 299.)

each battalion a heavy machine-gun section), and to increase the number of Lewis guns per battalion from 8 to 16. This latter proposal was sanctioned and carried out before the 1st July 1916, but the divisional machine-gun company did not come into existence until April 1917.

Thus for the Somme, each infantry and cavalry brigade had a machine-gun company or squadron, and each battalion 16 Lewis guns (cavalry regiment, 16 Hotchkiss).

ENGINEERS

An additional field company for every division, to make a total of three, had been provided during 1915.¹

There had been only two fortress companies with the Expeditionary Force. These had been gradually increased and re-named "Army Troops" companies, and early in 1916 the scale of one company per division was authorized, the company to be available for engineer work in Army and corps areas. By December 1916 there were 51 Army Troops companies and six siege companies (Special Reserve), each of the latter counting as two Army Troops companies.

Units called "Advanced Park" and "Base Park" companies were formed in the winter of 1914-15 for the lines of communication and the Armies, to take charge of the dumps of engineer stores and workshops.²

In September 1915 an "Electrical and Mechanical" company, to take charge of machinery, was formed in France. In December 1916 additional companies were authorized so as to furnish one per Army, one of the two "Land Drainage" companies (which had been raised on 1st January 1916, from men from the Fens, to deal with the low ground near and north of the La Bassée canal) being broken up.

In March 1916 four "Field Survey" companies were organized, each comprising a headquarters, a topographical section, a map section, an observation (flash-spotting) section and a sound-ranging section, and absorbing such of those sections as already existed.³

In April 1916 four "Artisan Work" companies were formed for road-making, hutting, timber cutting, quarrying, etc., on the lines of communication.

¹ This reform, required because there were 3 infantry brigades in a division, had been begun in December 1914. (See "1915" Vol. I. p. 10.)

² See "1915" Vol. I. p. 6, f.n.

³ See "1915" Vol. II. p. 19, f.n. 2.

Early in 1915 each Chief Engineer of an Army or a corps was given three or four "field engineers" as assistants, one of whom acted as a staff officer whilst the others were put in charge of roads, bridges, water supply, and hutting behind the divisional areas. The extensive preparations for the Somme necessitated special staffs being formed for water supply and roads.

LABOUR UNITS

In August 1914, the French authorities at Havre were not in a position to supply labour for the disembarkation of stores and formation of depots, and the War Office despatched 300 labourers for the purpose. As the work increased, more were demanded and, for the purposes of discipline, companies consisting of six officers and 530 other ranks were formed. By early December 1914 there were five such Labour Companies A.S.C. in France. The need of hands was felt by other departments, particularly by the Ordnance and Engineer Works Services. The small available amount of French and Belgian labour was rapidly decreasing, and the only other sources were the reinforcements waiting in the base depots until required at the front, soldiers unfit for duty at the front, military prisoners, and labourers imported by contractors who were carrying out building work on hospitals and huts in the base areas. For the construction of back lines of defence the Engineer-in-Chief was dependent on casual assistance from new divisions requiring a little training in field works and, for a time, on French Territorial battalions lent for the purpose. Eleven labour battalions R.E. were therefore raised, consisting of elderly navvies and tradesmen, officered by civil engineers, with a lieutenant-colonel and an adjutant of Regular or Special Reserve R.E. This exhausted the semi-skilled men who could be spared from munition works. The battalions were employed on defences, roads, water supply, etc. The first two arrived in August 1915.

Infantry labour battalions, composed of the personnel of Reserve infantry units, not fit for service at the front and without special trade or professional qualifications, with only two officers per company, were raised in 1916, the first three in February.

In March 1916 after the passing of the Military Service Act¹ authority was given to form a "Non-Combatant"

¹ See Chapter VI.

corps of "conscientious objectors", men liable for service who held a certificate of exemption from combatant duties. They were to be employed on roads, hutting, timber cutting, quarrying, sanitary work, in the loading and unloading of ships and vehicles, and in digging, provided that it was not in the firing line. The officers and N.C.O.'s were selected from Regular infantry not fit for general service, but fit for service abroad on the lines of communication.

By June 1916 there were in France :

- 11 Labour battalions R.E. ;
- 12 Infantry labour battalions ;
- 30 Labour companies A.S.C. ;
- 3 " " " Naval ;
- 8 Non-combatant companies.¹

THE SIGNAL SERVICE ²

The Signal Service had increased in strength as a consequence of the growth of the army as a whole, each new division, corps and Army, as it was formed, being provided with a signal company ; but during 1915-16, except for the appointment of a Deputy-Director of Army Signals for each Army and an Assistant Deputy-Director of Army Signals for each corps, with the provision of staff officers for intercommunication, there was no important reorganization. This did not come until the winter of 1916-17,³ and the preceding period was one of expansion only.⁴ The Wireless Section, in January 1915, became the G.H.Q. Wireless Company ; a wireless depot and school was organized in April 1916 ; Army wireless companies (with sections and sub-sections for each corps and division) were authorized in July 1916, and in May of the same year, Army signal schools.⁵ Otherwise the

¹ The Women's Army Auxiliary Corps was not brought into existence until March 1917.

² Further details will be found in "Work of the R.E. in the European War 1914-19. The Signal Service. France."

³ The first edition of the pamphlet, "Forward Intercommunication in Battle" was not issued until March 1917.

⁴ The principal signal units with the original B.E.F. were : the G.H.Q. Signal Company and the Wireless Section ; the corps signal companies, with air-line and cable sections attached ; the divisional signal companies, and the cavalry signal squadrons and troops ; and one signal company for the L. of C. When Armies were organized in December 1914, Army signal companies were formed.

⁵ They had been organized in January 1915. Corps and divisional signal schools had also come into existence in 1915 ; the former were

progressive expansion had taken the form of increases in the establishments of existing units. Thus the Army and corps signal companies were reinforced, so that by May 1916, each Army had four air-line and three cable sections, and each corps, one air-line and four cable sections; for artillery purposes a fourth cable detachment and two motor despatch riders had been added to each divisional signal company; and a sliding scale was adopted to provide additional signal personnel for brigades and battalions in which at any time there were more than the normal number of battalions or companies.

It was in signal practice in the field that great changes took place. The original B.E.F. had been trained to rely for all intercommunication on the telegraph (air-line and cable), "visual", liaison officers, despatch riders and orderlies. The conditions of stationary warfare brought about the almost complete disappearance of "visual" and the general introduction of the telephone. The vulnerability of cables and air lines under ever increasing intensity of shelling brought about in 1915 the burying of cables in trenches, at first shallow, but gaining in depth until comparative safety was found. Further to reinforce this system, which at first proved untrustworthy as the "bury" was too shallow, came experiments with various means to supplement line communication in the heavily shelled areas, that is with "forward" signal work near the front line. Thus 1915 was the period of the evolution of alternative means of signalling, and the early part of 1916 the period of experimenting with the combination of these means. The Somme afforded the opportunity to test them, and it demonstrated the success of the deep "bury".

Cables laid on the ground exposed both to fire and traffic were first superseded by lines slung lightly on poles. The next step was to place them in existing trenches; then special trenches were dug, at first 18 inches and then 30 inches deep. These were traffic-, splinter- and shrapnel-proof; and in 1915, there being still much shrapnel fire, 30-inch trenches, with alternative routes—which was

officially recognized in 1917. The divisional schools, where artillery and infantry signallers were trained in "visual," in laying and repairing trench cables, and in new types of signalling apparatus for use at the front, never had any official establishment. Until a school was given an "establishment" by the War Office it was staffed by officers and men borne on the strength of units.

one of the methods introduced of securing reliable communication—were at first found sufficient. The increase in the number of German 5.9-inch howitzers forced the digging of trenches three feet and $4\frac{1}{2}$ feet, and finally five feet deep. The protection afforded by five feet was found not much more secure than that of three, whilst the additional depth made cable repair more difficult. The first six-foot "bury" was made by the Canadian Corps,¹ and during April orders were issued that "buries" in future must be not less than six feet.² This provided reasonable security: a six-foot "bury" was not effective against the direct hit of an 8-inch shell, but cases were recorded again and again of cable routes receiving 30, 40 and 50 direct hits by shells from guns of less than 8-inch calibre, without interruption of signal communications. Immense expenditure of time and labour was involved in the construction of cable trenches and test boxes. A large amount of cable, too, was required, so that by the 1st July 1916, a number of divisions had been unable to find the labour or obtain the cable required and their otherwise good shallow systems failed in the battle. Other divisions managed to carry buried cables right up to the front trenches, as jumping-off points for new routes as the attack progressed. The buried cable system was originally used from advanced brigade headquarters to the entrances of the communication trenches; but later, as shelling increased, it had to be extended back to divisional headquarters. The system made it impossible for "signals" to follow staffs about if the latter chose to shift their headquarters. Staffs had, therefore, to keep close to main signal routes or take the risk of overground lines, almost certain to fail in the first intense bombardment. The original buried system did well until the frequent changes of divisional and corps boundaries in the Somme battle dislocated it. A "chess-board" layout, with a dug-out at every point where a forward and a lateral cable met, was then devised to give greater elasticity.

Forward of the buried cable, light cables were placed in

¹ Between 1st April and 30th June 1916, this corps laid 420 miles of metallic circuit, mainly for artillery observation purposes, 6 feet deep in its area near Kemmel.

² A German report on the Somme, 1916, states that "telephone communication cannot be maintained unless routes are systematically buried "not less than ten feet in the open, and six feet below the sole of a trench". This is, at any rate, a tribute to the power of British shells.

the communication trenches, either pegged to the side or buried a few inches in the side near the bottom. In spite of duplicating routes, and the trenches being literally festooned with wires, this method, even in 1915, proved a failure; but no improvement was attempted in 1916 except in the direction of greater orderliness and slightly increased protection. During battle, even when the lines were not cut, only short messages could be sent on telephones near the front, as hardly a word could be heard. To save their "runners" as much as possible, brigade signal officers and battalion commanders¹ were therefore driven to have recourse to visual signalling, which had fallen into disrepute soon after the war began. Flag and semaphore signalling, however, still remained unpopular, as they generally involved exposure to the enemy. Discs (dark on the enemy side and white on the other) with short or long handles, shutters (worked like Venetian blinds), and fans (which opened and shut), came into use. The service signal lamp, burning oil, which betrayed its working both to eye and ear, and, as some said, to the nose, was replaced by a silent electric signalling lamp, the first pattern generally adopted being one used by the French. The exposure of the receiving station in rear was minimized by the use of the trench periscope. After a time, no attempt was made to acknowledge messages sent from front to rear, from fear of giving away the position of receiving stations, and, to ensure receipt, messages were sent three times over. In fog and bad weather, and in the dust and smoke of bombardment, visual signalling was impossible, and other means had to be sought. As already related, a pigeon service had been organized in April 1915,² and it continued to expand. But "wireless" seemed to be the solution, and in the fighting at Hooge in August 1915,³ short range wireless sets were tried, without much success, to establish communication between brigade and divisional headquarters. A further trial at Loos of a wireless section with two lorry sets, two pack sets, and six short range sets, was made in the First Army to provide emergency communication between each of its four divisions and one brigade in the line, and on three occasions important messages were got through when other means failed. But wireless, like other means, had its

¹ The battalion signal officer had been abolished shortly before the war, but was definitely reinstated in December 1917.

² See "1915" Vol. II. p. 99.

³ See "1915" Vol. II. pp. 108-9.

limitations : the masts and antennae were often destroyed by shell fire, and the apparatus, although very useful during the ordinary movements of brigades and battalions, could not well be employed in the assault, as a station required a carrying party of several men and necessitated arrangements for the exchange of discharged accumulators. During the Somme the use of wireless was the exception rather than the rule. Its development came later.

Experiments were made in throwing messages to the rear by means of rockets, Stokes mortar shell, and special rifle grenades, but all these methods proved too uncertain. Coloured rockets to indicate S.O.S. and other definite signals, however, became part of the routine of co-operation between artillery and the front line. A runner service remained the last resource ; but it was slow and expensive in men, requiring the best and bravest of a battalion. When the distance to be covered was more than five hundred yards, relays every 200 or 250 yards were sometimes employed, but through runs were generally preferred.

One further most important matter with regard to telephony requires mention. The question of the enemy overhearing telephone conversations in the forward area arose in June 1915. Intelligence reports, deductions and experiment all combined to show that the leakage of information to the enemy, which was known to have taken place, was connected with the extension of the telephone system to the front. It was learnt in August 1915 that the French, who were troubled with the same problem, had established a listening station, well forward in their own lines, and were overhearing scraps of German conversation. Various precautions and restrictions in the use of the telephone were instituted, but were difficult to enforce, and, as the enemy could undoubtedly overhear messages sent through a badly insulated line laid on or in the earth, the menace of his obtaining information in this manner created a most dangerous situation, although code names and position calls for units had been introduced.

That the alarm was not unfounded was proved on 2nd July 1916, when British troops, on entering Oivillers la Boisselle, found pasted up in a dug-out the copy of a portion of a British order which had been overheard and gave clear warning of imminent attack. Investigation showed that this order had been repeated by a brigade-major over the telephone to a battalion. Policing by use of listening sets was introduced, the organization being known as

“I.T.” It was regarded by the troops with considerable disfavour, and, as the younger generation had a confirmed telephone habit, improvement in caution was very slow. In the month of September 1916, one single police set overheard within a radius of 3,000 yards, between thirty and forty units spoken of by name, including an Army and several divisions; movements of troops were referred to, infantry operations discussed, whole operation orders quoted, positions behind the line mentioned. One unit even reported fifty casualties from our own Stokes mortars, information likely to cheer the whole German army. On the other hand, at least one corps preserved a badly insulated earth-circuit, usually known as the “Wolff circuit”,¹ in order to keep the enemy supplied with suitable news.

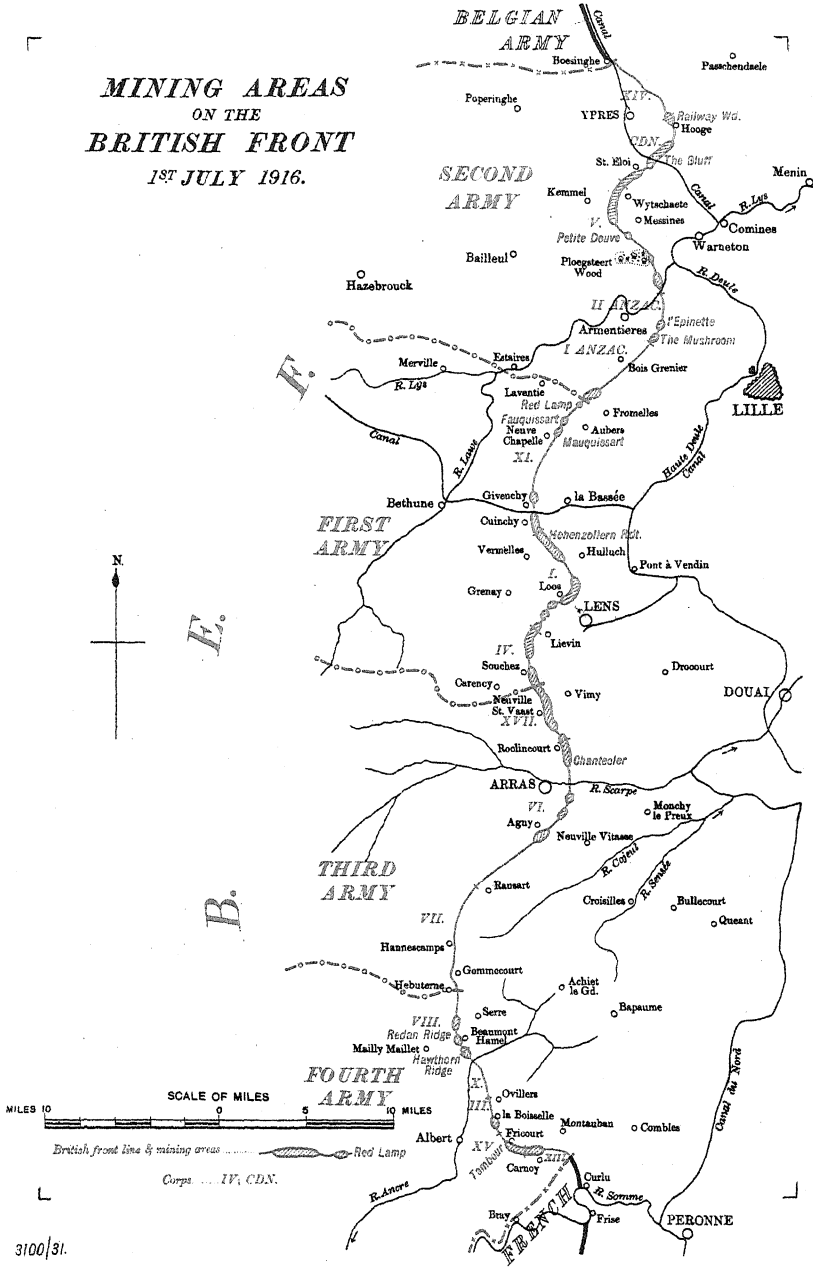
The problem of preventing overhearing was also tackled by scientific means. The “earths” of the circuits were carried back, eventually as much as fifteen hundred yards; metallic circuits with two cables side by side, later twisted together, and then twisted cables were employed. In August 1916, “screening buzzers”—vibrating sounders intended to jam speech—were introduced. Protection against the interception of telegraphed messages also became necessary. The vibrator and the buzzer, the telegraph instruments chiefly used in forward areas, produce an alternating current in the line and the induction set up renders messages particularly liable to be overheard. The “fullerphone” was devised to take their place. This instrument produces a small direct current in the line, which makes it practically impossible to overhear telegraphed messages under service conditions. By the end of 1916 the fullerphone was firmly established.

Both in providing personnel and stores, and in designing instruments—particularly exchanges, switchboards, test panels and frames, telephone sets and lineman’s instruments—to meet the various requirements of trench warfare, the General Post Office rendered great and unstinted assistance. There joined the Royal Engineers for the Signal Service, 581 officers and 17,355 other ranks, and the Royal Flying Corps (Royal Air Force), for communication purposes, 66 officers and 1,054 other ranks. Of these the great bulk were engineers, linemen and operating telegraphists. Early in 1915 Colonel T. F. Purves,² the head of the Design Section of the Post Office,

¹ In allusion to the Berlin wireless agency of that name.

² Later, Sir Thomas Purves, Engineer-in-Chief, General Post Office.

**MINING AREAS
ON THE
BRITISH FRONT
1ST JULY 1916.**



3100/31.

visited France at the suggestion of Br.-General J. Fowler, the Director of Signals, to make a systematic study of war conditions, with a view to replacing the many instruments developed by local ingenuity by standard and improved designs; and henceforward he acted as technical adviser and as liaison officer between the British Expeditionary Force and the General Post Office.

MINING

In a previous volume ¹ the initiation of mining on the Western Front and the formation in 1915 of brigade mining sections and tunnelling companies from men of the mining trades have been described. By the end of that year the number of these companies (which absorbed the mining sections) amounted to 21, including the 3rd Canadian Tunnelling Company. They were allotted to Armies and carried on their work under the chief engineers of corps or the C.R.E.'s of divisions on the fronts to which they had been assigned. Sketch 4.

The work done in 1915 might be described as the first phase of British mining. It was one of local interests, depending to a great extent on the demands of the infantry in the front trenches. The proximity of the opposing forces invested with great importance small local objectives, such as salients which flanked No Man's Land, or ruins and natural features which gave cover to machine guns and snipers; on the other hand it can readily be understood that any sounds thought to come from underground were regarded as proof of enemy mining.² Thus there often arose conflict of views, some troops demanding the destruction of enemy strongholds, whilst others were equally insistent in their demands for immediate protection from enemy mining. The general result was the development of numerous small workings, started in haste from shallow shafts in the front system of trenches: some only for "listening" purposes, others, for offensive mining, which as often as not were "blown"

¹ "1915" Vol. I. pp. 32-3.

² The following entry appears in a battalion diary of October 1915:—
 "In the evening one company reported that they heard the Germans mining under them. At first it seemed most impossible, but then we thought that a shaft from the colliery about 400 yards away might lead down under our part of the hill. A mining expert was sent for. He arrived about midnight and naturally finding that he had been summoned on a fool's errand went to sleep immediately and disappeared before morning. We never heard what his opinion was."

in even greater haste than they had been begun. This unorganized or local method of mining received encouragement from the prevalence of the mistaken idea that mining operations scattered all along the front would tend to bewilder the enemy and conceal the larger underground offensives which it was hoped to initiate. Although Br.-General G. H. Fowke, the Engineer-in-Chief at G.H.Q., pointed out the need for carefully thought-out schemes in connection with infantry operations above ground, the demands on the tunnelling companies to protect everything and deal with petty objectives soon became so heavy that it was impossible to comply with them all, especially as whole sections of the front line at Givenchy, Cambrin, Hill 60, St. Eloi and the Bluff had become the scene of continuous mining and counter-mining. Both officers and tunnellers were sorely overworked, because, in spite of its demands, the infantry was always loth to assist them with labour.

On the portions of the front taken over from the French a similar condition of mining was found to prevail, and the defects of our own system were aggravated by the cramped form of galleries in use by the French at that time, as well as by the innumerable small charges which had been fired by them. Worse than this the Germans were nearly everywhere under the front trenches, so that to restore the situation the tunnellers had to sink new shafts some way back to a great depth and then run galleries forward under the enemy. The lack of co-operation between the infantry and the tunnellers was particularly evident when new fronts were taken over. New trenches would be dug to meet the surface conditions, without any reference to the tactical situation underground as ascertained by the tunnellers, and were immediately blown up by enemy mines over which they were constructed. New methods of holding parts of the line by posts instead of continuous trenches were also introduced without regard to the fact that important shafts were situated in the trenches thus abandoned.

After the battle of Loos in September 1915, the active mining front was considerably extended ; for all along the new line the enemy at once began offensive operations underground, especially at the Hohenzollern Redoubt and the Quarries ; whilst on the southern part of the front taken over from the French by the Third Army in August,¹ he had already been at work for some months, and reports

¹ See " 1915 " Vol. II. p. 87.

received from the French indicated that his workings were deeper and better organized than any yet met with. When the time should come, as seemed inevitable, for taking over the front between the Third and First Armies held by the French Tenth Army, the responsibilities of the tunnelling companies would be further increased.

During 1915 too the tunnellers had been brought face to face with a new danger from mine gas poisoning, hitherto only met with and understood by the mining trades. The casualties suffered by the troops generally from this cause were so severe as to call for the organization of mine rescue work on lines similar to those in use in collieries at home.

A special branch had also grown into existence owing to the development of listening instruments, the necessity for the instruction of the personnel in their use, and the careful record and co-ordination of all underground work.

It became clear that mine warfare was an important factor in the general scheme of operations: moreover it demanded special direction by reason of the assistance required from various branches of science for its development, and on account of the number of men and the vast amount of stores and material involved. So far, the Armies had controlled the activities of the tunnelling companies, and the Engineer-in-Chief had endeavoured to keep G.H.Q. informed of them by means of his liaison officer, Lieut.-Colonel Norton-Griffiths,¹ and by reports from the Armies, although the latter were usually out of date long before they filtered through to the Engineer-in-Chief. In December 1915, therefore, anticipating that further demands for tunnelling companies would be made on account of new fronts taken over or about to be taken over, General Fowke advised the formation of a special mining staff to ensure the proper use and control of the companies. His proposal was carried into effect in the same month. Br.-General R. N. Harvey, R.E., was selected to be Inspector of Mines at G.H.Q., with a staff of two assistant inspectors, one mechanical engineer, one geologist and a medical officer in charge of mine rescue work; in each of the three Armies a controller of mines, with an adjutant, was appointed.²

The Inspector of Mines was charged with the preparation, under the instructions of the General Staff, of mining

¹ The late Sir John Norton-Griffiths, Bt., K.C.B., D.S.O.

² The original Controllers of Mines of the Armies were:—Lieut.-Colonels G. C. Williams, A. G. Stevenson, B. W. Y. Danford (later sent to the Fifth Army and succeeded by Lieut.-Colonel F. G. Hyland), and F. Preedy (when the Fourth Army was formed).

schemes in connection with the principal operations of the campaign, the examination of mining schemes prepared by Armies, the inspection of the progress of all mining work, and the allotment of companies to Armies. The controllers of mines at Army headquarters were the principal executive officers for mining operations, and responsible for the direction of the work and the distribution of the mining personnel allotted to the Armies.

With the introduction of a mining staff in the Armies came the formation of mining schools, at which special instruction in mining tactics, listening, and mine rescue work was given, so that officers and men were enabled to learn the principles of their particular work, based on the past year's experience, instead of being forced to buy their own experience dearly in the trenches. The first of these schools was formed in the First Army in June 1916, and the other Armies soon followed suit. Thus not only was continuity of experience and principles ensured, but two practices novel in the field, listening underground and mine rescue work, were developed and brought to a very high standard.

The extraordinary results obtained by trained listeners were only gradually acquired: it was the invention of the geophone which revolutionized all existing ideas relating to the penetration of sound in the various soils in which the tunnellers were working. At the end of 1917 each company had officers and men who could locate with such accuracy the sounds of enemy working that the actual position of the worker could be marked off on a chart by a system of intersections.

Rescue work was organized under the direction of Lieut.-Colonel Dale-Logan, the specialist attached to the staff of the Inspector of Mines, very much on the same lines as in the home collieries, with this important exception: that mine rescue work at the front had to be carried out in the front line trenches under barrages of every description of shell, which were the instant reply to any underground "blow".

The superiority which the tunnellers gradually established over the German miners culminated at the Battle of Messines, 7th June 1917, as will be told later, after which the enemy was reduced to passive defence underground.

The number of tunnelling companies was gradually increased, so that by June 1916 there were 25 British companies and 7 overseas companies engaged in active mining

operations, the total number of men employed in this work being approximately 25,000.¹ Of the overseas companies Canada found three, the 3rd raised in France in December 1915, and the 1st and 2nd, which arrived there three months later. The Australian Mining Corps, with three companies, reached France in May 1916; three other companies which came in July were used to increase their establishment. The New Zealand Tunnelling Company disembarked in March 1916.

The major mining operations undertaken will be referred to in relating the various actions and battles of 1916. In these the tunnellers always played some part, either by exploding mines, or making Russian saps across No Man's Land. But on the first day of the Somme, though many mines were fired, they were too much scattered up and down the front to produce a noticeable effect on the enemy; and the firing of one mine ten minutes before zero, by higher order, gave the enemy warning of the coming assault.²

GAS

The results obtained by the use of simple chlorine gas discharged from cylinders and of smoke bombs at the Battle of Loos had been sufficiently successful to warrant further development of this new weapon, although the wind on that occasion had been none too favourable and both the apparatus used and the special companies formed to take charge of it had been hastily improvised. One of the first acts (5th January 1916) of Sir Douglas Haig on becoming Commander-in-Chief was to address a letter to the War Office requesting that the four special companies R.E. might be increased to a brigade consisting of:—

- 4 special battalions of 4 companies each, to deal with the discharge of gas and smoke from cylinders and with smoke candles;
- 4 special companies for the discharge of gas projectiles from 4-inch Stokes mortars;³
- 4 special sections for flame projectors;⁴ with a headquarters and central depot, a total of 208 officers and 5,306 other ranks.

¹ There were two establishments for companies: the higher, 19 officers and 550 other ranks; and the lower, 19 officers and 325 other ranks, the unskilled labour being provided by attaching 216 infantrymen.

² See Chapter XVII.

³ First used at the battle of Loos. See "1915" Vol. II. p. 160.

⁴ First used by the Germans against the British on 30th July 1915 at Hooge. See "1915" Vol. II. pp. 104-5.

This proposal was approved by the Secretary of State for War on the 25th January, with the instruction that the new units should be formed by expanding the original four companies, the remainder of the personnel to complete establishment being obtained by calling for volunteers in France, who would be supplemented by drafts of suitable men from home as soon as they could be collected. Br.-General H. F. Thuillier, R.E., was appointed Director of Gas Services, with Colonel C. H. Foulkes, R.E., who had been in charge of the original four companies, as Assistant Director and commander of the "Special Brigade", as the unit was called, and Lieut.-Colonel S. L. Cummins, R.A.M.C., Assistant Director for anti-gas measures. Thus the offensive and defensive branches were co-ordinated under one head.

By the end of May the officers and men required had been obtained, and the battalions and companies had been distributed to the Armies:—

No. 1	Special Battalion	} to the Fourth Army ;
" 2	" " (less 1 company)	
" 3	" " " "	to the Second Army ;
" 4	" " " "	to the Third Army ;
" 4A	" " (a composite battalion composed of a company each from Nos. 2, 3 and 4)	to the First Army ;
" 5	" " (mortars):	3 companies to the Fourth Army ;
		1 company to the Third Army.

Each mortar company was equipped with forty-eight 4-inch Stokes mortars.

The special sections for flame projectors, with 4 large and 16 portable sets, only reached France on the 26th June, but they were in position by midday on the 28th in the Fourth Army area, and were used on the 1st July to assist the infantry assault at the Somme.

One of the reasons which led Sir Douglas Haig to ask for this substantial increase of the gas units was that after the Battle of Loos great advances had been made by the Chemical Department of the Ministry of Munitions in the production of gas. Phosgene (carbonyl chloride) had been selected for future use by G.H.Q. before the Battle of Loos, and it was mentioned as a suitable cloud gas at the Chemical

Warfare Conference at Boulogne in June 1915. The effect of this gas is somewhat similar to chlorine, but it is far more dangerous, since it causes less irritation to the organs of sense, so that low concentrations of it, which can be inhaled for a considerable time without any great discomfort, may yet be followed after a period of delay by serious and perhaps fatal inflammation of the lungs.

The British Government did not desire to accentuate the horrors of war, but, in view of the possible employment of phosgene by the enemy, investigations were taken in hand both by the French and the British. It was found that a French firm already possessed a secret method of preparing the gas. On the 19th December 1915 the Germans did release phosgene in an attack at Ypres,¹ and in January 1916 it was decided by the Allied Governments to adopt phosgene mixed with chlorine. To get over the difficulty of the trade secret, arrangements were made with the French Government whereby phosgene was exchanged for British chlorine, and a mixture of fifty per cent. of each gas was charged into cylinders at a factory installed at Calais. Undiluted phosgene would have been preferred, but a proportion of chlorine was necessary to provide the pressure required to force the gas out of the cylinder. This mixture, known as "White Star", (simple chlorine being "Red Star"), was the cloud gas mainly used during the Somme and for the remainder of the war.²

During the Somme, 24th June to 22nd November 1916, 98 separate gas attacks were made, all White Star except two in which Red Star was employed, and 1,120 tons of gas were released.

The P (phenate) gas helmet, with glass eyepieces (instead of the cellulose acetate window) had been introduced in November 1915.³ It had two layers of flannelette, whereas the original H (hypo) helmet had only one thickness of flannel (later flannelette). This proved insufficient protection against phosgene, so when, in January 1916, that gas was introduced, the P.H. (phenate-hexamine) helmet was issued, with hexamine added to the solution of thio-sulphate, sodium carbonate and glycerine in which the flannelette was soaked. The P.H. helmet had ordinary glass eyepieces ;

¹ See Chapter VII.

² Small quantities of three other mixtures were experimented with, but abandoned as unsuitable. These were:—"Two Red Star" (sulphuretted hydrogen and carbon bisulphide); "Green Star" (sulphuretted hydrogen and chlorpicrin); and "Yellow Star" (chlorine and chlorpicrin).

³ See "1915" Vol. I. p. 217 f.n. for the original anti-gas precautions.

later a small issue of P.H.G. helmets, with the eyepieces set in rubber sponge, was made to special units in order to give better protection against lacrymators. The P.H. helmet was not proof against all gases, and was displaced from August 1916 onwards by the small box respirator, with mask, mouthpiece, nose clip and goggles, the mask being connected by a breathing tube to a filter box containing a mixture of active charcoal and granules, which afforded complete protection against the concentrations of different gases likely to be met with in the field. At the beginning of the Somme the P.H. helmet was in general use.

In June 1915, the Germans having used lacrymatory shell for some time, Sir John French had asked that cylinder gas should be supplemented as soon as possible by gas contained in aerial bombs and in shell (for the 4.5-inch howitzer, 60-pdr. and 12-inch howitzer) up to 10 per cent of the total supply of shell. In September 1915 a thousand rounds of 4.5-inch howitzer lacrymatory shell (S.K.)¹ were sent over for trial, and fired by the First Army without the effect being observable. Sir Douglas Haig therefore from January 1916 onwards continually asked to be supplied with lethal gas shell. No further supply, however, even of lacrymatory shell was received until the end of April 1916, when 10,000 rounds were sent over to France for trial. The success of a field-gun shell containing phosgene, with a small bursting charge just sufficient to open it, used by the French in the defence of Verdun gave a fresh impetus to the development of gas projectiles. Actually this use of phosgene on a small scale was regretted by G.H.Q. in view of the vast quantities of the gas which were in course of manufacture for employment in our cloud discharges, as it gave the enemy warning. At the moment the German respirators gave poor protection against phosgene, and it was hoped that no alteration in them would be made before our preparations were complete. In March the British Government authorized the charging of shell with two prussic acid mixtures Jellite (J. L.) or Vincennite (V.N.). V.N. was eventually adopted, but was little used, as it proved to be comparatively ineffective. Even by the end of 1916 only 160,000 rounds had been filled either wholly or in part with lethal mixtures, and it was not until 1917 that supplies were large enough to make phosgene gas shell a serious factor in the situation. During

¹ "South Kensington", a powerful lacrymator, ethyl idoacetate.

the Somme, practically the only gas shell used on the British front was fired by French batteries lent for the purpose.

CAMOUFLAGE

The British camouflage service was first definitely organized in January 1916, when, themselves camouflaged under the name of the "Special Works Park R.E.", a few men of certain trades connected with the theatre—scene painters, carpenters, and cardboard makers—obtained by calling for volunteers from the troops in France, were assembled at St. Omer. Six officers, five of them artists, and a stage carpenter, were sent out from England. The organization received War Office sanction on the 22nd March.

To the British Army camouflage,¹ under the text book name of "Concealment", was no new art. Its own khaki uniform, originally adopted in India to blend with the colour of the ground, and made universal for training and war in 1898—more than twelve years before any other army took up the idea—had been designed for this very purpose. Even earlier, in 1888, deceptive colouring had been adopted in fortification, and the Spithead and other forts were painted in chequers.² In British possessions overseas measures were taken to hide the coast defences by natural or specially planted vegetation. In the "Manual of Military Engineering", 1905,³ not only "Concealment" but artifices to mislead the enemy, such as dummy trenches—dummy or "Quaker" guns are of much older date—were referred to. In Germany, at engineer manoeuvres in 1908, men sent out at night to cut wire were dressed in special earth-coloured suits: the "field-grey" uniform for service was introduced in February 1910. The French "horizon blue" was adopted after the outbreak of war, although the subject of a suitable colour had been discussed from 1910 onwards, when "mignonette green" was suggested.

¹ The word camouflage, taken from French theatrical slang, soon lost its original meaning of making up a thing to appear something which it is not.

² The compiler was at Sheerness in 1889, when orders were received to disguise by suitable colouring Garrison Point Fort, a very conspicuous two-storied landmark. The C.R.E. suggested painting it with "frescoes of shepherds piping and nymphs dancing, so as to give the idea of profound peace".

³ Pp. 6 and 32.

Shortly before the war, when aeroplanes first made their appearance at manoeuvres, concealment from the air began to receive attention in the army. Branches of trees, straw, and waterproof sheets were used to cover guns, signal service stations, etc. ; the troops moved and bivouacked close to hedges, walls, houses and woods ; tents were stained brown, and bivouac tents of conspicuous colour were forbidden. At the army manoeuvres of 1912, one division (under Major-General T. D'O. Snow) was so successful in hiding itself that it got a notice in the newspapers as "The Lost Division".¹ The methods of concealment thus introduced were of the greatest importance in the days of the advance to Mons and the retreat to the Seine in August-September 1914. The German accounts admit that the *First Army*, under General von Kluck, was completely ignorant of the whereabouts of the British until three or four hours before it came into contact with them in front of the Mons canal, and when it fought three divisions at Le Cateau thought that it was opposed to the whole B.E.F. The German aviators never correctly located the position of the British nor the direction of their march until the battle of the Marne had begun.

In the trench warfare which followed, the British made regular use of screening, and, in May 1915, a naval heavy armoured-car operating near Laventie with the 7th Division used a canvas screen painted to represent a brick wall on the "action" side. About the same time, moreover, the French initiated a new form of concealment, appropriate to trench warfare. Dummy tree trunks, bodies of men and horses, accurately modelled and provided with steel linings, were erected during the night in the place of real objects, which were removed, in order to serve as cover for the whole person or head and shoulders of an observer. The first French camouflage detachment for the construction of such objects was formed in February 1915. It was gradually expanded, being placed under M. Guirand de Scevola, a French artist then serving in the ranks of the French artillery. The experience gained by this unit was communicated to British G.H.Q., and in December 1915 the late Mr. Solomon J. Solomon, R.A., who was specially interested in the subject of camouflage,

¹ The late Lieut.-General Sir James Grierson, who commanded the victorious force, when asked by His Majesty at the final conference how it was done, replied : "The men put their waterproof sheets over their heads, and made noises like mushrooms".

was invited to visit France and investigate it on the spot. It was on his initiative, under direction of the Engineer-in-Chief, that the first British detachment of officers and men was assembled. A small party from it was sent to obtain instruction from the French, and a factory, on French lines, was organized at Wimereux, where work was started with the assistance of seven French "camoufleurs", experts in the different phases of the art: reconnaissance, execution and erection *in situ*. Captain F. J. C. Wyatt, R.E., was placed in command of the "Special Works Park", and remained at this duty and in executive charge of camouflage for the remainder of the war.

The original establishment of the Special Works Park R.E. as a G.H.Q. unit, directly under the supervision of the Engineer-in-Chief, was 10 officers (3 artists) and 208 other ranks. In April a branch of the park was opened at Amiens, and in June the establishment was increased by 5 officers and 73 other ranks.

The work of the park in 1916 was mainly confined to the construction and erection of observation loopholes in the form of dummy sandbags; of trees to accommodate either an observer or a periscope; and the hiding of mine spoil, individual guns, and command or observation posts from aeroplane observation and photography. The deceptive colouring of buildings and roofs was developed, green, brown and white (or cream) with black divisions usually being employed. The manufacture was begun of "snipers' heads", that is dummy heads of papier mâché, which when exposed and hit by an enemy sniper, gave the line, through the bullet hole, to his hiding place. The screening of roads on which the enemy had ground observation, by means of broad strips of canvas and other material hung on stout wires, carried along the side of the road, was continued on a systematic plan. Concealment from the air was first attempted by the use of canvas sheets painted to represent the ground as seen from an aeroplane. Experience proved these to be heavy to erect and difficult to maintain in position. On the suggestion of Mr. Solomon, they were replaced by a lighter and more manageable article, in the form of old fish nets or wire netting, garnished with tufts of painted or dyed raffia (gardener's bast). For the Somme thousands of rolls of wire netting were supplied to the divisional engineers who, when raffia was lacking, wove grass into it. In the course of time all batteries were equipped with these over-

head covers. As the demand increased and the supply of raffia became inadequate, canvas strips were substituted for it, and were found to be less inflammable. Danger from fire led, also, to the employment of wire rather than fish netting. For the concealment of 24 guns near Arras in June 1916, in connexion with the battle of the Somme, painted canvas sheets were still employed, and the provision of the amount required severely taxed the strength of the camouflage establishment. Paint too was supplied to the troops to colour both canvas and sandbags.¹

Manufacture in bulk rather than artistic effect became the object of the park and of its subsidiary factories. Camouflaged observation loopholes, adapted to parapets and walls in order to give cover from direct view, continued to be turned out, but the principal demand was for material for the concealment of guns, dumps, buildings, and, later, tanks, from the air. For this purpose, "umbrella camouflage", as it was called, netting erected on posts with canvas strips tied on, thickly at the centre and gradually thinning out, became the settled form. To cover large objects like ammunition dumps and spoil from mines, where there was no human movement underneath, height above the ground was a consideration, and the weight of the camouflage of less importance; so scrim, a loosely woven canvas, appropriately coloured, was employed. Buildings were disguised by the alteration of outline, the concealment of shadows and suitable colouring. For instance, a farm house used as a corps headquarters was made to look a ruin from the air.

Other articles manufactured by the park included dummy figures of painted millboard, the employment of which in so-called "Chinese attacks" was designed to deceive the enemy when the light was poor in the early morning and divert his fire from a real attack, or make him disclose his defence organisation. There were also machine-

¹ Henceforward the story of camouflage is one of increase and development. By July 1918 the service consisted of a headquarters at G.H.Q., an establishment of 1 officer and 10 other ranks at each Army headquarters; 2 officers and 2 other ranks at each corps headquarters; a base camouflage factory at Wimereux, with two subsidiary factories at Pont d'Ardres and Rouen; and four Army camouflage factories. It had then a total of 54 officers, 2 women administrators (to supervise women workers) and 535 N.C.O.'s and sappers, labour being provided by 96 Frenchmen, 1,887 Frenchwomen and 100 Chinese. It was the business of the camouflage officers with the corps to advise on measures of concealment and arrange that the stores required, suitable to the locality, should be obtained from the factories.

gun covers, green one side and brown the other, and sniper's suits, painted to blend with the ground. The erection of giant periscopes was also taken up by the Camouflage Park.

ROYAL FLYING CORPS¹

At the end of the battle of Loos in October 1915, the strength of the Royal Flying Corps in France was twelve squadrons. By the 1st July 1916, it had grown to 27 squadrons. But this increase by no means represented the whole progress. The squadrons were better equipped, better armed and better trained. Further, in March 1916, the official establishment of a squadron had been raised from twelve to eighteen aeroplanes and by the opening of the Somme more than half of the squadrons had received this increase.

Coincident with this expansion, and following the re-distribution of the heavy artillery,² a further decentralization of command became necessary, and on the 30th January 1916, the corps was reorganized into a number of brigades, one for each Army, each brigade consisting of a brigade headquarters and two wings,³ with an aircraft park and a kite balloon squadron (two or more balloons). One wing, called the "Corps Wing", the establishment of which was calculated on the basis of one squadron per corps, was charged with the task of close reconnaissance and photography, and of artillery observation for corps and divisions. The other wing, designated the "Army Wing", comprising two or more squadrons, was at the disposal of the Army commander and available for special operations, such as aerial fighting, distant reconnaissance and photography. Since the air work for Army headquarters called for aeroplanes of extended radius of action, those of the greatest performance and best able to protect themselves were attached to the squadrons of the Army wings.

¹ Full details of the development of the R.F.C. are given in the official history, "The War in the Air" Vol. II. The period between the Battle of Loos and the Battles of the Somme 1916 will be found in pp. 146-202 of that volume.

² See p. 60.

³ I. Brigade (Br.-General E. B. Ashmore): 1st and 10th Wings.

II. " (" " J. M. Salmond): 2nd and 11th Wings.

III. " (" " J. F. A. Higgins): 3rd and 12th Wings.

The IV. Brigade was formed 1st April, 1916, of the 3rd and 14th Wings (the 13th taking the place of the 3rd in the III. Brigade) under Br.-General Ashmore, Br.-General D. le G. Pitcher succeeding him in command of the I. Brigade.

A special wing (called the 9th Wing) was allotted to G.H.Q. for strategical work. The R.F.C. headquarters staff was also strengthened and reorganized on the basis of a corps staff.

Following the formation of Army aircraft parks, the original parks at St. Omer and Candas were converted into standing supply and repair depots, as Nos. 1 and 2 Aircraft Depots.

During the closing months of 1915, the enemy air service, as a result of the introduction of the fighting "Fokker" monoplane, made the first bid for supremacy in the air. With this machine the Germans fought their way to a dominant position which they held until about May 1916. The outstanding feature of the Fokker, which gave it its fighting superiority, was the "interruptor gear" by means of which its machine-gun was synchronized with the engine in such a manner that the stream of bullets passed clear of the blades of the revolving propeller. Thus with the machine gun fixed in the direct line of flight and aimed by the training of his aeroplane, a Fokker pilot could with the greatest ease bring fire to bear on his adversary.

By January 1916, such was the effect of this new fighting monoplane that long reconnaissances by single aeroplanes became impossible. A drastic change was therefore made in air tactics, and formation flying introduced. On the 14th January 1916, an order from R.F.C. headquarters laid it down as a hard and fast rule that a machine proceeding on either short or distant reconnaissance must be escorted by at least three fighting machines in close formation.

Shortly afterwards formation flying was extended to bombing. During the winter of 1915/1916, a definite change of bombing tactics had taken place, whereby attacks by small detachments (except on trains in motion) had given place to mass bombing. In January 1916, the groups of bombing planes thus employed were organized into definite formations.

Air fighting was now becoming specialized, and profiting by the experiences of the French at Verdun, it became an established policy that in order to win freedom of action for reconnaissance, artillery observation and bombing, while denying such freedom to the enemy, a relentless and incessant offensive must be waged in the air. In pursuance of this policy it was decided, in April 1916, to take all fighting machines from the corps squadrons and concentrate them in the Army squadrons. Thereafter throughout the

remainder of the war air fighting was the duty of specific squadrons of the Army wings.

The predominance of the Fokker monoplane continued until in May it was outfought by the French "Nieuport" and two types of British "pusher"¹ fighting machines—the "de Havilland Scout (D.H.2)" and the "F.E.2b". In this month also, the first batch of "tractor" aeroplanes (Sopwith two-seaters) fitted with the "interruptor" gear, was received by the R.F.C. in France. Up to this time, the standard machine gun for use in aircraft had been the Lewis, which was lighter and handier than the Vickers, but suffered from the disadvantage that in comparison with the Vickers it could only fire a few rounds (at this date 47) before it needed recharging. The synchronizing mechanism, on the other hand, could be more readily adapted to the Vickers, and since fire through the propeller called for a fixed gun the objection of unwieldiness which militated against the Vickers disappeared. This gun therefore was used for the synchronized "tractor", while the Lewis was retained in "pushers" and for the movable gun of the observer in two-seater "tractors". Only a few British aeroplanes were equipped with synchronized guns before and during the battle of the Somme 1916, and the bulk of the air fighting still fell to the "pusher" type aeroplanes.

The main developments in the first half of 1916 took place in the help given to the artillery and in the co-operation with infantry in battle. The progress which was achieved in combination with the artillery was the result of training and improvements in organization and in wireless equipment. It was greatly advanced by close co-operation and practice; programmes were prepared in common, and air observers talked over every aspect of the day's work with battery commanders.

The technical improvements made in aircraft wireless apparatus included the introduction of a device known as the "clapper break" by which the pitch or tone of the note sent out by the aeroplane transmitter could be varied. A ground operator could thus more readily distinguish one aeroplane's signals from another's, and it became possible to increase the number of aeroplanes which could work along a given stretch of front without interference with each other's transmission.

Another innovation was the "zone (or area) call".

¹ That is, with the propeller in rear as distinguished from the "tractor" with the propeller in front.

This call was designed mainly for use in open warfare when prearranged signals and direct communication between the air squadrons and the battery commanders might become difficult and at times impossible. The whole battle area was divided into zones based on the 1:40,000 map, each of the large lettered squares of the map being subdivided into four lettered zones. Each zone, which covered an area 3,000 yards square, thus had a two-letter call made up of the map square letter and the zone letter.¹

Associated with the progress of artillery co-operation was that of air photography. The study of air photographs was in the process of becoming an art on which special officers were employed. By the spring of 1916 the demand for photographs, especially from the artillery, had become so great that in the middle of April, in order to speed up the delivery of prints, a small photographic section (one N.C.O. and two men) was added to each corps squadron.

Co-operation by means of "contact patrols" between aircraft and infantry, with the object of keeping headquarters of formations informed of the progress of their forward troops during an attack, was actively developed. Experiments had been made in 1915, when the position of the infantry was indicated to the air observer by strips of cloth exhibited on reaching certain objectives and by smoke signals, flares and lamps.² These early trials, however, did not meet with great success. The French had made similar experiments, and after further experience at Verdun, General Joffre issued a memorandum on the subject, which formed the basis of the British provisional instruction of 26th May 1916, for contact patrol organization. This laid down that certain aeroplanes, distinguished by a special marking, should have the sole duty of the tactical observation of the battlefield, reporting direct to the headquarters for which they were working, usually a corps. The infantry was to indicate its position by lighting flares—in a trench, so as not to draw enemy fire—at certain fixed times, or on reaching certain positions, or on the initiative of the company or section commander.

¹ By the use of such maps the aeroplane observer was enabled to call on the artillery for which he was working to engage (or get others to engage) targets by signalling their nature, prefacing his message with the code letters of the zone in which the targets were located. Defining figures as employed in ordinary map references could be added, so that a message might read "V D 97 column on road". The artillery commanders, having previously made arrangements for covering every zone, could cause fire to be opened at once, and the results were signalled in the usual way.

² See "1915" Vol. II. pp. 57, 60, 94, 142, 187, 265 f.n., 338.

Flares were to be lighted in reply to a signal (a white Very light) from the aeroplane. A percentage of the attacking troops were to carry metal mirrors on their backs, the flashes from which would, it was hoped, enable the air observers to follow the main features of the advance.¹

Brigade and battalion headquarters were to communicate with the aeroplanes either by lamp or ground signals. A simple code, e.g. "XX", signifying "Held up by machine-gun fire", "ZZ", "Held up by wire", was devised for communication between the ground and the aeroplanes. The letters, in Morse, were sent by means of a signalling panel—a shutter of laths like a Venetian blind, exhibiting white on one side and dark green on the other. By pulling these backwards and forwards the whole sheet became either green or white and messages could be spelt out. The air observers were supplied with special lithographed maps on which to mark the positions of the British and enemy troops, and these, supplemented by messages, were to be dropped in bags from time to time at report centres. The aeroplanes, when necessary, were to signal to the advanced troops either by lamp or Very light ;² to the artillery by wireless ; and to brigade and divisional headquarters by lamps or message bags.

As a result of this expansion and reorganization, and of the numerous arrangements made and practised to ensure co-operation with the other arms, above described, the R.F.C. entered on the Somme well prepared to take its share in the operations. It was so successful in the early days of the fighting that, as will be seen, the enemy was compelled to make a special concentration of his air forces in order to cope with it.

ARMY SERVICE CORPS³

No material change had been made in the original organization introduced in 1912⁴ of the Supply and Transport Service as regards the system of transport of baggage, rations and stores. It had on the whole proved satis-

¹ The mirrors also indicated the position to the enemy and were soon abandoned.

² After the opening days of the Somme battle, a Klaxon horn of distinctive note was carried on the contact aeroplanes for the purpose of calling on the infantry to indicate the advanced positions.

³ See Chapter V. for the Army Service Corps organization on the Lines of Communication, Supply and Transport, and the Supply Service.

⁴ See "1914" Vol. I. p. 6.

factory, and it was only found desirable to transfer the control of certain units. The divisional supply columns, which were at first L. of C. units under the Inspector-General of Communications, were taken from him and placed under the corps. The divisional ammunition parks, also originally L. of C. units, were broken up and reserve units called "G.H.Q. ammunition parks" formed in their stead, a G.H.Q. corps ammunition park being allotted to each corps and a sub-park to each division. These units were administered by the corps, which were made responsible for ammunition.

There was of course expansion. For the new non-divisional artillery, an additional A.S.C. company was provided and attached to each Army and corps heavy artillery headquarters. This company was made responsible for the transport of the ammunition supply of the tractor-driven siege batteries, the necessary personnel, tractors and lorries being provided by the A.S.C. and attached to the batteries.

The new Army Service Corps units formed by the 1st July 1916 were the Army and corps heavy artillery companies; mobile repair companies and movable workshops (one each per Army); omnibus companies (G.H.Q. units);¹ workshops for anti-aircraft batteries (1 per Army, for the repair of mechanical transport of A.A. batteries); water tank companies (G.H.Q. unit for the supply of sterilized water).²

The total personnel of the Army Service Corps rose from 498 officers and 5,858 other ranks, with 13,320 reservists on the 1st August 1914 to 5,828 officers and 198,753 other ranks on 1st January 1916 and 8,205 officers and 295,467 other ranks on the 1st January 1917.

MEDICAL SERVICES

The work of the medical services in France and Belgium, under Surgeon-General (later Lieut.-General) Sir Arthur Sloggett as Director-General, with Surgeon-General (later Major-General Sir) W. G. Macpherson as his Deputy

¹ The first buses, provided by the London General Omnibus Company, 300 in number, with 330 L.G.O.C. volunteer drivers, left London for Dover in the middle of October 1914, and their transport across the Channel occupied a week. Besides buses provided for the Admiralty and for work at home, some 1,500 in all, the L.G.O.C. supplied a total of 773 to the British Expeditionary Force.

² See Chapter X.

Director-General, was marked during 1916 by three outstanding features. These were the hitherto unparalleled number of casualties with which they were called upon to deal; the satisfactory results of the preventive measures taken to ensure the health of the troops; and the beginning of a wider conception of the possibilities of saving man-power for the Army by returning more and more men to duty in the theatre of operations. The casualty figures for the year give some idea of the magnitude of the task. The percentage of strength lost to the B.E.F. during 1916 in killed, missing (including prisoners of war) and wounded was 48·7, of which 38·64 per cent. were wounded and treated in medical units.

Owing to the steadily increasing number of casualties it had been foreseen that reconstruction of the method of dealing with them would be necessary. The regulation system had stood the test of war in 1915, but unfortunately it seemed unlikely to suffice for operations on the scale projected for the struggle on the Somme. It had been found from experience that unless casualties were quickly collected, then smoothly and methodically evacuated to medical units in which operative treatment was possible, medical science had little or no chance to save life, diminish suffering or promote early convalescence. To this end, therefore, several improvements were introduced and used at the Somme: regimental stretcher bearers were increased from 16 to 32 per battalion; relay bearer posts were established every thousand yards; special communication trenches were reserved for the removal of wounded; regimental aid posts and advanced dressing stations were made more elaborate, given greater accommodation and protected in dug-outs or cellars. The wounded were evacuated from regimental aid posts to the dressing stations in the usual manner by hand carriage, wheeled stretchers, trolley lines, or whenever possible—only as a rule during the night—by horsed or motor ambulance wagons. The idea of reserving for the medical service personnel and transport solely for the evacuation of casualties from dressing stations to the casualty clearing stations (C.C.S.) was discarded as impracticable in view of the numbers to be dealt with, and as uneconomical, since during quiet periods such personnel and transport would be lying idle. Consequently, the method of using supply and transport vehicles and improvised trains, which had fallen into disfavour through the lack of organization and

the difficulties of a co-operation of supply and medical services in the earlier days of the war, came once more into use. Buses, charabancs, light railways and broad gauge railways were extensively used in addition to horsed and motor ambulance convoys. Cases requiring immediate surgical treatment were sent direct from the dressing stations to advanced operating centres, which at the Somme were established about seven miles behind the front line.

The C.C.S. were formed in groups of two or three, and were expanded to accommodate on an average a thousand cases each. Various arrangements were made to facilitate the reception, treatment and evacuation of casualties: loading parties were sent from any available units to expedite the unloading and loading of vehicles; each C.C.S. admitted cases in rotation, the number varying from 150 to 300 at one time, thereby facilitating the surgical work of the unit, the clerical records of cases and the subsequent evacuation of patients. The C.C.S. were better equipped than hitherto both in material and personnel, as extensive operative surgery was now the practice in these units, and for this purpose additional surgical teams and equipment were supplied by the C.C.S. of the Armies not actively engaged. Two consulting surgeons and one consulting physician were attached to each C.C.S. group to advise on the best methods of treatment, and an attempt was made to reserve certain units for special cases, such as nervous disorders, skin troubles, infectious diseases or specific varieties of wounds. Sites for C.C.S. were selected, if possible, in the vicinity of broad-gauge railways to enable ambulance trains to clear the wounded direct, to the increased comfort of the patients and greater speed in evacuation. Motor ambulance convoys and ambulance barges provided additional means of evacuating casualties to the base. Some idea of the transport required can be gathered from the following figures showing the number of sick and wounded carried from the front areas to the base by ambulance trains or ambulance barges during 1916:—

	Nos. carried.	No. of journeys.	Average No. carried.
Ambulance trains	713,957	1,552	459·4
Temporary ambulance trains	30,659	29	1057·4
Ambulance barges	16,918	565	29

The satisfactory state of the health of the troops in France during 1916 is proved by the ratio 481·59 per 1,000

of ration strength (1·3 per day) admitted to hospital for sickness or injury. This rate, although it seems high, stands out as one of the finest achievements accomplished during the war, and compares favourably with the figures for the British Army in both pre-war and post-war years. It was due to the great care taken in reporting infectious or other diseases likely to cause wastage; to the subsequent clinical and laboratory investigation of these diseases; and to the general preventive measures instituted in the Army. Among the diseases which caused the greatest wastage, with the incidence per 1,000 of ration strength, were: venereal, 18·15; trench foot, 12·68; nephritis, 7·34; and dysentery, 4·33. The total admissions to hospital and their disposal in 1916, together with corresponding percentages, are shown in the following table:—

	Wounded.		Sick or Injured.		Total.	
	No.	Per cent.	No.	Per cent.	No.	Per cent.
Admitted to hospital	500,576	..	643,921	..	1,144,497	..
Deaths	36,879	7·29	5,841	0·83	42,720	3·66
Returned to duty in theatre of war	169,842	33·61	364,360	55·10	534,202	45·80
Evacuated to the United Kingdom	290,461	57·50	231,218	34·96	521,679	44·72

The interesting feature of these figures is the high percentage of casualties returned to duty in the theatre of operations. Only slight attention had been paid to this matter when the front first became stabilized in trench warfare during the latter part of 1914, and no extensive scheme for the treatment of casualties in France was entertained because the policy to be followed was rapid evacuation, and the retention of men in the theatre of operations meant an increase of hospital and convalescent depot accommodation, as well as of medical personnel. With the marked increase of casualties during 1915, however, and the growing realization that the war might drag on for years, attention was turned to the possibility of reducing net losses in battle by early return to duty of men suffering from slight wounds or minor disabilities. This only became possible by the establishment of more hospitals or by the increase of the number of beds in the hospitals grouped in different ports and at different bases.¹ No additional "general hospitals" were sent to France during the year; but by increasing the number of beds in the wards of existing hospitals, and by appropriating huts allotted for

¹ See Chapter V.

personnel, dining-rooms and other accessory buildings, and placing trestle cots and mattresses in them, extra accommodation was provided for 20,000 cases in July and 30,000 in August. This was designated "crisis expansion", but it did not carry with it any increase in medical personnel or nursing staffs, and was therefore unsuitable for the permanent treatment of patients. The maximum number of hospital beds, including such as were set up for purposes of crisis expansion, totalled during 1916, 71,651 or 5·3 per cent. of ration strength, whilst that of convalescent depot beds was 20,786 or 1·5 per cent. of ration strength. This accommodation was not sufficient to permit the medical authorities on the L. of C. retaining all the cases likely to be fit for duty in a short time; for it was essential that a reserve of beds should be maintained for men too ill to be moved, and for a sudden rush of fresh cases; so the evacuation of men with slight wounds and sickness went on. The first intimation the L. of C. usually received of approaching active operations was an influx of cases which had been held up in field ambulances or C.C.S. during the quieter periods of trench warfare, followed by a rush of crowded ambulance trains; this happened during the Somme, when 18,901 cases were brought in by ambulance trains on 3rd July and 10,125 on 4th July. The eventual saving of man-power for the force effected by the retention in France of as many as possible of the slighter cases who would be fit for duty after a short period in hospital or convalescent depot proved to be one of the most important administrative lessons of the year.

The strength of the medical personnel rose from 200 medical officers, 56 quartermasters and 9000 other ranks in France in August 1914 to 10,669 officers and 114,939 other ranks in all theatres in July 1916.¹

In August 1914 there were 516 nurses with the British Expeditionary Force, under Principal Matron (afterwards Matron-in-Chief) Miss McCarthy. The number steadily rose until at the time of the armistice 5,440 were employed on the L. of C. and 954 in C.C.S. This total included trained nurses not only from the United Kingdom but from Canada, Australia, New Zealand, South Africa, and the United States, together with just over two thousand V.A.D.²

¹ Separate figures for the B.E.F. are not available.

² For details of the Nursing Services, see the official history, "Medical Services. General History", by Major-General Sir W. G. Macpherson, Vol. II. pp. 160-170.

CHAPTER V

EXPANSION AND REORGANIZATION OF THE BRITISH EXPEDITIONARY FORCE BETWEEN AUGUST 1914 AND JULY 1916 (*continued*)

BASES

WHILST the Expeditionary Force had been growing, so also had the bases and the lines of communication, under the direction of the Inspector-General of Communications (Lieut.-General Sir F. T. Clayton) and the Director of Works (Major-General A. M. Stuart, R.E.). The number of persons to be provided for behind the front had risen from a few hundreds in 1914 to nearly a quarter of a million in 1916.¹ In October 1914, the original bases, Havre, Boulogne and Rouen, abandoned in the retreat to the Seine, had been reoccupied, and Abbeville had become the advanced base and the headquarters of the I.G.C. Marseilles was selected as the base for the Indian divisions, with a concentration camp at Orleans. Great establishments, amounting almost to small towns, began to develop: buildings were taken over, and there arose military settlements of huts erected by contract with British and French firms, supplemented by marquees and tents. Thus, at Rouen there were organized two general hospitals in buildings, three in huts, four in tents, besides two convalescent camps for a thousand men each. In general, Havre was the base for supplies, reinforcements and remounts; Rouen also dealt with these, and, in addition, ordnance, mechanical transport, and sick and wounded; Boulogne handled supplies, ordnance, and sick and wounded, and was the principal base for the evacuation of wounded. At Boulogne and Forges les Eaux veterinary hospitals were

¹ At the beginning of July 1916, the grand total of the forces in France and Belgium was 1,489,215, including 3,441 nurses and 2,570 civilians officially accompanying the army; of this total, 211,500 (65,600 being reinforcements) were on the L. of C.

established. In the winter of 1914-15 additional hospitals were opened in buildings at Montreuil, Hardelot Plage, Le Tréport and Wimereux. In December, Dieppe became a base for remounts, with a veterinary hospital.

The year 1915 saw extensions everywhere, mainly accommodation for wounded and reinforcements, also improvements in facilities for landing and handling stores and supplies at the docks. Calais was opened as a base for ordnance, remounts, and sick and wounded. Hospitals were formed in huts and tents at Etaples and Camiers, and in buildings at Abbeville; and veterinary hospitals organized at Boulogne (Neufchâteau) and St. Omer; whilst reinforcement camps for 40,000 each were provided at Rouen, Havre and Etaples. Bakeries were established at Havre, Boulogne and Calais; and St. Valérie sur Somme, a small port, was taken into use for landing engineer stores.

The quarrying of local stone for road metal, and the purchase and cutting of local timber were taken in hand; engineer and mechanical transport workshops were organized at Havre, Rouen and Boulogne.

It was not until October 1915 that the question of the reception and accommodation of ammunition became of importance, as the supply had hitherto been comparatively small, and what there was went almost immediately to the front. The first ammunition depots were formed at Grand Quévilly (near Rouen) and Audruicq (12 miles north-west of St. Omer).¹

The work in 1916 involved principally the construction of large ammunition and store depots, the formation of a number of new reinforcement camps, the improvement of port facilities, and the extension of forestry and quarrying operations. The new ammunition depots were laid out at Blargies (midway between Amiens and Rouen), Zeneghem (near Calais), and Rouxmesnil (near Dieppe); and in the early autumn at Saigneville (near where Edward III. crossed the Somme before the Battle of Crécy) and Dannes (near Etaples). For obtaining stone the Marquise quarries between Boulogne and Calais were taken over, and worked with military and prisoner-of-war labour.

At the end of June 1916 there were six general base depots for reinforcements, viz.:

No. 1	General Base Depot,	R.G.A.,	Havre;
„ 2	„ „ „ „	R.H. and R.F.A.,	„

¹ Further details are given under "Ordnance Services", Chapter V.

No. 3	General Base Depot,	Canadian,	Havre; ¹
„ 4	„	„ R.E.,	Rouen;
„ 5	„	„ Cavalry and R.A.M.C. (Regulars),	„
Indian	„	„	Marseilles.

The majority of the infantry division base depots were at Etaples, with the remainder divided between Havre and Rouen, as follow :

Territorial Force Base Depot,	.	.	Rouen ;
Australian Base Depot,	.	.	Etaples ; ¹
New Zealand Base Depot,	.	.	„ ¹
Indian (advanced)	„	.	Rouen ;
Machine-Gun Corps	„	.	Etaples ;
A.S.C.	„	.	Havre ;
A.O.C.	„	.	Havre, Boulogne and Rouen ;
A.V.C.	„	.	Havre and Calais.

LINES OF COMMUNICATION

In 1915 there had been two lines of communication, the southern and the northern,² the former based on Havre, Rouen and Dieppe, with regulating station at Abbeville for the First Army, and the latter based on Boulogne and Calais, with regulating station at Rivière Neuve (just outside Calais) for the Second Army. Experience showed that no regulating station—whence trains coming from the bases were directed to the different railheads—could deal satisfactorily with the traffic of more than 20-24 divisions, and with a view to the expected increase of the B.E.F. the French authorities urged the adoption of their system of “one Army one regulating station, one railway route between the regulating station and the Army”. When therefore the Third Army was formed Abbeville was allotted to it, Boulogne becoming the regulating station for the First Army. In February 1916 the establishment of a regulating station for the Fourth Army at Romescamps (half-way between Havre and Amiens) was decided on ; and by April 1916 separate regulating stations and routes were organized

¹ In October 1916, the Canadian Base Depot at Havre and the Australian and the New Zealand Base Depots at Etaples changed places in order to fit in better with sea transport from their Base Depots in England, at Shorncliffe and Salisbury Plain respectively.

² See “1915” Vol. I. pp. 34-6.

and working for each Army. They were, omitting the railheads, which were variable :

Fourth Army : based on Havre and Rouen, up and down route, via Serqueux and Romescamps (regulating station) to St. Roch (just west of Amiens).¹

Third Army : based on Havre and Dieppe, up line, via Serqueux, Romescamps, Abbeville (regulating station), Etaples and St. Pol ; down line, St. Pol, Abbeville, Dieppe.

This line was a figure of eight, crossing at Abbeville, and was chosen so that all traffic over certain single lines should always flow in the same direction.

First Army : based on Boulogne (regulating station) up and down route, via Arques, Berguette, where it divided to Béthune and to Hazebrouck.

Second Army : based on Calais (regulating station), up and down route, via Hazebrouck to Bailleul and Poperinghe.

The organization was never absolutely rigid, and until the end of the war there was a considerable amount of cross traffic between bases and regulating stations.

The number of trains per day run during operations depended not only on the number of divisions in the line, but on the strength of the Army troops and corps troops (particularly corps artillery), the arrival of reinforcements, the reliefs of divisions in progress, the number of casualties, and the amount of railway and road construction in hand. From an estimate made in April 1916, when the Somme battle was being planned, it appeared that the number of trains required per division per day would be a minimum between $1\frac{1}{4}$ and $1\frac{1}{2}$, and a maximum of about 4 if heavy troop movements coincided with heavy casualties and great expenditure of ammunition. The figures for the trains actually run were, in the first week of preparations, $1\frac{3}{4}$; then, up to the opening of the battle, 2; and later, during the battle, $2\frac{1}{4}$. The number of purely divisional trains, however, hardly varied, and was about half a train per division per day throughout the war; but such trains were only a fraction of the total number run.²

¹ For the continuation to the railheads, see Chapter X.

² See also page 273.

SUPPLY AND TRANSPORT

The principal establishments of the Army Service Corps under Br.-General E. E. Carter, Director of Supplies, and Br.-General W. G. B. Boyce, Director of Transport, at the bases and on the L. of C. were :—

Base supply depots at Havre, Rouen, Boulogne, Calais, St. Valery and Marseilles; base mechanical transport depots at Rouen and Calais; advanced supply depots at Abbeville; and heavy mechanical transport repair shops at Paris, Rouen and St. Omer. There were field butcheries and bakeries at Havre, Rouen (British and Australian), Boulogne, Calais (British and Australian), Dieppe (bakeries only), Etaples (Canadian bakeries only). Besides supply depots at all the principal places on the L. of C., and the field butchery and bakery units, there were A.S.C. supply and transport (horse, steam and petrol) companies, and A.S.C. labour companies. The total number of A.S.C. units employed for supply on the L. of C. and at the bases in 1918 was 184 British and 32 Canadian, Australian and New Zealand depot units of supply; 9 bakery sections, and 42 British and 6 overseas field bakeries; 40 British and 5 overseas field butcheries; 32 labour companies; 2 railway companies. For mechanical transport there were 5 petrol and 2 steam companies, 2 base depots, 3 repair units and a school of instruction; for horse transport, 10 (including one Canadian) reserve parks, 4 companies and 3 depots, besides 9 base and advanced remount depots.

THE SUPPLY SERVICE

At the outbreak of the war the ration strength of the Expeditionary Force was approximately 120,000 men and 53,000 animals. At the time of the Armistice, the numbers to be supplied daily were some 3,000,000 persons and 500,000 animals. Translated into terms of the principal commodities involved, these figures represented approximate monthly issues as follows :—

In 1914,	meatstuffs,	.	.	.	3,600,000 lbs.
	breadstuffs,	.	.	.	4,500,000 „
	forage,	.	.	.	5,900,000 „
	petrol,	.	.	.	842,000 galls.
In 1918,	meatstuffs,	.	.	.	67,500,000 lbs.
	breadstuffs,	.	.	.	90,000,000 „

In 1918, forage,	.	.	.	32,250,000 lbs.
petrol,	.	.	.	18,000,000 galls.

At the beginning of the war the Director of Supplies¹ and his staff were located at the headquarters of the Inspector-General of Communications, and this arrangement continued in force until September 1915, by which time it had become apparent that the magnitude of the operations rendered it desirable that the Director of Supplies should be in close touch with the Quartermaster-General. Accordingly in September 1915 the Supply Directorate was moved to G.H.Q.²

The Investigation Department formed an important branch of the Supply Directorate, since it exercised economic control over supplies generally, and ensured a great saving of public money. More than £80,000,000 worth of supplies was accounted for yearly, and by the institution of certain forms and returns it was possible to keep a complete check upon supplies sent from the bases to the front. With the exception of the deputy director in charge, who was a Regular officer, the staff of the department were in civil life actuaries, chartered accountants, or business men of experience, whose previous training enabled them to render valuable service.

The system of supply from the base to the front was in 1916 worked along the four lines of communication in pairs, the "northern lines" and the "southern lines". A deputy director, aided by an assistant and a deputy assistant director, controlled the operations of each pair and was responsible for the supervision of all details.

The base supply depots were grouped as follows :—

Boulogne and Calais—northern lines ;

Dieppe, Rouen and Havre—southern lines.

The links in the chain of daily supply from the base to the front were advanced supply depots, regulating stations, and railheads. On the northern lines, however, owing to

¹ The Director of Supplies in 1916 (and throughout the war) was Br.-General E. E. Carter. His Deputy Directors were Colonels C. M. Ryan, A. K. Seccombe, F. G. E. Cannot, F. F. Duffus and H. F. Brooke, with eight Assistant Directors.

² It remained there until the autumn of 1917, when, owing to increasing demands on the somewhat limited accommodation at Montreuil, the Director of Supplies and his staff were transferred to the 2nd Echelon of G.H.Q., with headquarters at Paris Plage.

the relative proximity of the bases to the front, no advanced supply depot was established until January 1917 when the depot at Outreau (a short distance from Boulogne) was opened. Prior to this, supplies on the northern lines were sent direct from the bases to railheads. For the southern lines the advanced supply depots at Abbeville (later Mautort) and Abancourt were situated in close proximity to the regulating stations of Abbeville and Romescamps.

The method of supply for a division was briefly as follows :—

Each division was allotted a section number and this number always denoted the same division wherever it was located. A given number of sections was allotted to each base, this allocation and the fixing of railheads being controlled from G.H.Q. The advanced supply depots received grocery trains in bulk from the bases and established reserves from which the daily "section pack grocery trains"¹ were made up. Other classes of supplies were sent from the bases or other sources of supply direct to the regulating station in trucks each marked with the section number of the division to be fed.

These, with the grocery trucks brought to the regulating stations from the advanced supply depot, were formed into a complete "section pack train" and sent up to the railhead of the divisions concerned. At the railhead the section pack train was handed over to the railhead supply officer, who in turn issued the supplies to the supply officer of the divisional supply column concerned, on the lorries of which they were conveyed to the "refilling point". At the refilling point the supplies were transferred to the horse-drawn vehicles of the divisional train for conveyance to each brigade, and then carried on regimental transport wagons to selected spots convenient to the communication trenches. From these points they were conveyed by ration parties to the troops.

The same principles were applied to the supply of all other formations directly dependent on the base for their maintenance. The requirements of troops located on the L. of C. were met from local supply depots situated in their immediate vicinity.

To safeguard the troops at the front from any possible interruption of the railway service, or from shortage in the supplies sent up on the section pack trains, field service

¹ That is, trucks packed with one day's groceries for one division.

depots were established in each Army area, where certain reserves were held to meet any sudden emergency. These depots also acted as clearing houses for any accumulation of supplies which occurred at railheads; they were mobile, and their location depended on and conformed to the movement of the Armies.

For small parties entraining or detraining at railhead without rations, provision was made at the railhead itself, each railhead supply officer maintaining a reserve of from 2,000 to 5,000 complete rations for this purpose.

At each base supply depot a reserve of 22 days' supplies for the troops fed from that base was maintained, and these reserves were replenished in several ways: by shipment from home, by direct bulk shipments from overseas, by local purchase, or through the agency of the Supplies Special Purchase Department.

This department, which proved a most valuable adjunct to the Supply Service, was brought into existence at the end of 1915, with headquarters in Paris, where it was in close and constant touch with the French War Office and other Government departments. At the outset, its activities were mainly confined to the provision of hay and straw, but by agreement with the French Government, branches were established in the Departments of Bouches du Rhône and Orne, as well as in Algeria. In each branch, hay-pressing machinery was installed at convenient centres, and large quantities of forage were secured. Later, as enemy submarine activity increased and economy of ocean-going tonnage became a vital necessity, the department's sphere of operations was considerably enlarged, and extended to Spain, Portugal and Italy. This extension enabled the department to undertake the purchase of many other articles of supply besides forage. The purchases were primarily intended to meet the requirements of the army in France, but purchases of certain items were also made on behalf of other theatres of war, Egypt, Salonika and Italy, as well as for the American Expeditionary Force on its first arrival in France.

Another important supply development, due to the necessity of economizing both freight and labour, was effected in the summer of 1916 in relation to the provision of petrol for the British Expeditionary Force.

At the beginning of the war, the monthly consumption of petrol was relatively small, and all requirements were

satisfactorily met by canned shipments from England. With the ever-increasing use of mechanized vehicles of every sort, the consumption of petrol had risen, early in 1916, to over 2,000,000 gallons a month, and it then became evident that, if shipment from England in tins and cases was continued, a point would soon be reached at which the landing facilities at the petrol discharging stations would prove inadequate. It was decided, therefore, that petrol filling plants should be set up at Rouen and Calais, and that the supply of petrol should be shipped from the U.S.A. to these ports, the steamers discharging direct into storage tanks, whence the spirit was conveyed by pipe line to can-filling plants. These plants began to operate during the summer of 1916, and from the autumn of that year the shipment of petrol in cans from England for the use of mechanical transport practically ceased. The filling of aviation spirit, requiring, as it did, special supervision, continued to be done in England until the spring of 1918.¹

In process of time the principle of local supply was applied to fuel. By an arrangement made with the French Government in the summer of 1915, supplies of coal for the British forces were drawn, on a replacement basis, from the Bruay coal mines, the quantities thus obtained being returned by the British Government by means of shipments for the French from England to the ports of St. Malo, Brest and Cherbourg, the use of these relieving the traffic congestion at the British base ports.

Similarly, in the case of fuel wood, arrangements were made in 1916, through the Directorate of Forestry, whereby the French Government permitted the exploitation of their forests for the provision of timber for the use of the British forces.

The arrangements for the supply of two main components of the soldier's ration, viz., bread and meat, were as follows :

On the arrival of the British forces in France, field bakeries were established at each base port, and as long as the daily ration strength remained relatively small these bakeries were able to supply the requisite output of bread. With increasing demands, however, it became

¹ Then, owing to the heavy increase in consumption, the filling of aviation spirit was also transferred to the petrol establishments in France, where it was carried out under the supervision of a staff appointed by the Aeronautical Inspection Department of the Air Ministry.

necessary to install steam ovens, and at a later date, when the question of man-power became acute, various forms of automatic machinery were introduced into the base bakeries, whilst women bakers were employed in relief of A.S.C. bakers. It was also found necessary to reduce the bread ration to a small extent, substitutes, such as rice and oatmeal, being provided.

Frozen meat formed the standard meat ration, although issues of preserved meat in lieu of frozen were systematically made. At the outset, frozen meat was shipped in bulk from the United Kingdom to the base ports, to each of which a store ship was permanently allotted, its contents being replenished by shipments from home. Later, shipments were made direct from the country of origin to base ports in France, the vessels concerned discharging their cargoes into the store ships.

Eventually it was recognized that the detention of ocean-going vessels as store ships was an uneconomical proceeding, and arrangements were then made for the hire of cold storage accommodation at Boulogne and Havre to take their place.

In order that the Quartermaster-General at the War Office and the Q.M.G. in France might be kept fully informed of the supply situation, a "daily letter" was sent by the Director of Supplies in France to each of these officers, accompanied by a "daily state" showing in detail the number of days' supply of the various commodities remaining on hand at each base.

The scale of field rations issued in the various theatres of war and to the various categories of troops, labourers and followers, from British soldiers abroad down to Chinese, Fijians and Kaffirs, fills a small volume entitled "Field Service Scales of Rations" (40/WO/5582). Only the scale referring to the British troops in France requires notice here.

The scale of rations, except for some small reductions made on the 29th October 1915 and the 4th April 1916,¹ remained the same until 1917.²

¹ There were no food restrictions in the United Kingdom in 1916, but carefulness was advocated. On the formation of Mr. Lloyd George's Government, however, on the 11th December, Lord Devonport was appointed Food Controller. The story of food control will be found in three volumes issued by the Carnegie Endowment for International Peace:—"British Food Control" by Sir William Beveridge; "An Economic Chronicle of the Great War" by N. B. Dearle; and "Experiments in State Control" by E. M. H. Lloyd.

² When the ration for troops on the L. of C. was cut down, and various reductions in that of the fighting troops were introduced.

This ration consisted of:—

Meat (fresh or frozen): $1\frac{1}{4}$ lb., reduced on the 1st Oct. 1915 to 1 lb.; or, preserved, 1 lb., reduced on the 1st Oct. 1915 to $\frac{3}{4}$ lb.

Bread: $1\frac{1}{4}$ lb., reduced on the 20th January 1917 to 1 lb., or biscuit or flour, $\frac{3}{4}$ lb.

Bacon: 4 oz.

Cheese: 3 oz., reduced on the 20th January 1917 to 2 oz.

Vegetables: fresh, 8 oz., or dried, 2 oz.

Tea: $\frac{5}{8}$ oz.

Jam: 4 oz., reduced on the 4th April 1916 to 3 oz.

Sugar: 3 oz.

Salt: $\frac{1}{2}$ oz.

Mustard: $\frac{1}{50}$ oz., reduced on the 29th October 1915 to $\frac{1}{50}$ oz.

Pepper: $\frac{1}{36}$ oz.

Milk: condensed, $\frac{1}{8}$ tin, increased on the 4th April 1916 to $\frac{1}{12}$ tin.

Pickles: weekly, 1 oz.

Oatmeal: thrice weekly as an extra.

Butter: as an extra until the 1st July 1917.

NOTE

THE GERMAN RATION¹

The German army ration originally consisted of 500 grammes (say 1·1 lb.) of meat; 750 grammes (1·65 lb.) of bread, that is rather less meat and rather more bread than the British, and various extras. Special economy was not insisted on until the beginning of the winter of 1915–16, when the number of rations demanded by units was carefully scrutinized, and the meat ration cut down to 320 grammes (0·704 lb.), and at the close of the winter to 250 grammes (0·55 lb.). In April 1917 the bread ration was cut down from 750 to 500 grammes (1·1 lb.).

Food restrictions were begun in Germany as early as the 25th January 1915, when a bread card was introduced. On the 28th October 1915 two meatless and fatless days per week were instituted in public eating places, and in the spring of 1916 potatoes were rationed. On the 22nd May 1916 a "Kriegsernährungsamt" (War Food Office) came into existence, which in July rationed fat, shortly afterwards introducing a meat card. The bread ration varied from 225 to 160 grammes, and the meat from 250 to 100, going up and down in accordance with the harvest and available supplies.²

¹ Extracted from "Württemberg's Heer im Weltkriege", xix. pp. 61, 71, 77.

² See "Die Deutsche Kriegsernährungswirtschaft", by Professor Dr. A. Skalweit, issued by the Carnegie Foundation, and the section on the "Die Kriegswirtschaft" in "Der Grosse Krieg 1914–1918" by Major O. Volkmann (2nd and subsequent editions only).

MEDICAL SERVICES (BASE)¹

From June 1915 until 1917 no additional general or stationary hospitals² were sent to France, and there was only a small rise in the number organized. For the greater part of 1915 and 1916, there were hospitals on the L. of C., including Canadian, Australian and South African, at the following places, the number being given in brackets after each place:—Boulogne (5 general and 6 stationary hospitals), Etaples (10 and 0), Calais (2 and 0), Havre (3 and 1), Rouen (7 and 4), Dieppe ($\frac{1}{2}$ a stationary), Le Tréport (3 and 0), Abbeville (1 and $1\frac{1}{2}$), St. Omer (1 and 2), and Marseilles (1 stationary). One Indian general hospital was distributed between Rouen and Marseilles. There were 6 British Red Cross hospitals, a Scottish Red Cross hospital and a St. John's Ambulance Brigade hospital (four of these being at Etaples and others at Boulogne, Calais, Rouen and Le Tréport, equivalent in all to less than two general hospitals), and a labour contingent's hospital at Rouen. These came to a total of 58 hospitals; there were besides two isolation hospitals, a detention hospital and 7 convalescent depots. The number of beds during the early part of 1916, including four hospitals in Army areas, was just under 40,000; during June and July it rose to 50,000, and in August to 70,000. Other medical establishments included a mobile bacteriological laboratory, two nursing sisters' convalescent homes and an officers' convalescent home. The number of ambulance trains rose from 4, improvised in August 1914, to 28 by the beginning of July 1916.

VETERINARY SERVICES³

The organization of the Army Veterinary Services which accompanied the British Expeditionary Force included a Director, Br.-General J. Moore, and a deputy-director with the headquarters of the Inspector-General of Communications; an assistant director with each division and cavalry division; and officers with the various mounted units and each infantry brigade. The following units were mobilized:

¹ For a full description see the official history, "Medical Services. General History" Vol. II.

² In 1915 a general hospital was reorganized to provide 1,040 beds, and a stationary hospital, 400, but some of the latter category, especially those established at the principal bases, were expanded so that they differed in no respect from general hospitals.

³ For a full description see the official history, "Veterinary Services" by Major-General Sir L. J. Blenkinsop and Lieut.-Colonel J. W. Raines.

6 veterinary hospitals, each for 250 animals; 11 mobile veterinary sections and 2 base store depots. The total strength of the Army Veterinary Corps personnel was 122 officers and 797 other ranks, and the number of animals with the force, 53,000. The animal strength by 1916, with the accession of new divisions, had risen to over 400,000 and the veterinary staff had been correspondingly increased, so that there was a deputy director for each Army and its line of communications, and one for the Cavalry Corps. The total strength of the A.V.C. in France was then about 600 officers and 15,000 other ranks, with an additional 114 officers and 1,446 other ranks belonging to the Dominion forces.

The veterinary units amounted to :

- 20 hospitals (2 Dominion), each for 2,000 animals ;
- 4 convalescent depots, each for 200 animals ;
- 18 (2 Dominion) evacuating stations ;
- 60 (11 Dominion) mobile sections ;
- 2 base depots for stores ;
- 1 bacteriological laboratory ;
- 1 disposal of animals branch.

The collection, evacuation and treatment of sick and wounded animals followed the lines of the medical service. Dealt with first by the unit executive staff and mobile veterinary sections, they were passed to a veterinary evacuating station, whence they were sent by road, canal or railway to the lines of communication and base establishments.

The health of the animals was maintained throughout at a standard higher than in any former campaign. Glanders and mange, the principal scourges of animals in war, were kept well under control. The loss from glanders was negligible, and the percentage of animals affected or isolated under suspicion of mange, was only about 3 per cent. The average mortality from disease, exposure, overwork and injuries was for the five years 1914 to 1918, respectively, 29.16, 11.96, 11.47, 22.91 and 23.01 per cent; the number of horses and mules which died or were destroyed or killed in these years in France and Flanders being 13,025, 26,594, 43,543, 99,923 and 85,873: a total of 268,958 out of 484,143 deaths in all theatres.

ARMY PAY DEPARTMENT, THE FINANCIAL ADVISER,
AND THE CLAIMS COMMISSION

What may be called the banking business of the Army was carried out under the Paymaster-in-Chief, Major-

General C. A. Bray, by field and base cashiers. There had been field cashiers in the South African War, but their task had been a comparatively simple one, that of paying and receiving money on behalf of the Chief Paymaster at the base. In 1914-18 the work of the Army Pay Department was increased by many matters, notably the payment of officers, the sale and purchase of currency, and exchange questions, as all payments were made in francs and the moneys of many nationalities were exchangeable. And everything was on an unprecedented scale.

The department as first organized consisted of a command pay office, a clearing house, a command cash office at the base, with, as time went on, auxiliary base offices established at the ports of disembarkation as required, and a field cashier with each division and at G.H.Q. for the Intelligence services.

The Paymaster-in-Chief, besides his general responsibility for the work of the department in the field, was the adviser of the Commander-in-Chief and the heads of services on questions of pay and allowances, and acted in concert with the Financial Adviser (see below) in dealing with the many and complicated questions arising out of the supply of funds and exchange.

The command pay office was responsible for making payments in respect of all the multifarious local expenditure incurred by the Army. This included local purchase of supplies and stores, requisitions and hirings, claims for losses and damage, and customs duties.

The primary business of the clearing house was to record and account for moneys issued to units for payment to troops in the field, and to carry out the necessary adjustments with all the pay offices in the United Kingdom, the account of each soldier being kept at a pay office ("fixed centre") at home. The losses in the field of the acquittance rolls on which soldiers had been paid, and the transfer of soldiers from one regiment to another, apart from the mistakes in army numbers, initials, etc., made the task one involving considerable labour.

The command and base cashiers were responsible for the safe custody of cash received and deposited; for there being a sufficient supply of money to meet both general and sudden demands; and for the issue of cash to officers and others authorized to demand or receive it.

It was with the field cashiers that the Army had as a rule to deal. The British Expeditionary Force took the field

with a single field cashier in each division; after a few months it was found preferable to have a "cash office" managed by two field cashiers attached to the headquarters of each corps. To quote from the "Instructions to Field Cashiers" issued in 1915: "The expression Field Cashier "includes the officer himself, his clerk, his batman, his Treasure Chest and stationery box with a fortnight's supply of "stationery". These field cashiers, and the base cashiers, appointed as found necessary, paid out at sight to "imprest holders" (officers qualified by their appointments to draw money) and made advances to individual officers; but all other disbursements could be made only on orders signed by responsible paymasters at the base after examination of the claims, by the paymaster of the French Mission at G.H.Q., and later by the Q.M.G. Department of the American Army. The corps cashiers usually worked morning and afternoon in alternate shifts, one paying out in the cash office—usually a village billet—and the other visiting stations in divisional areas previously notified in orders; weekly they had to go long distances by car to fetch cash from the nearest base cashier. Although they had the responsibilities of bank tellers, these officers had none of their safeguards. They held often as much as £50,000 in French notes—by the Armistice the cash issued totalled £198,000,000 in francs—and few of them enjoyed the prestige of rank higher than subaltern. Treasure guards, however, were rarely called for, and the losses from all causes were insignificant. The last act of a field cashier at night was to post a report of his cash balance, so that there might be evidence of its amount in case his billet was bombed. His exercise is said to have consisted of hunting for small change, which was woefully short.

By War Office rules, the cheques of officers could not be cashed by the Army Pay Department, but this was got over by the use of an "officers' advance book" in the form of a cheque book. By this means an officer could obtain advances of pay three times a month from any field cashier. Arrangements were also made to provide similar facilities for naval officers, foreign liaison officers, military attachés, and pressmen, but not for members of voluntary societies, who were dependent on the Y.M.C.A., the Post Office, or the Expeditionary Force Canteen for obtaining cash.

Other ranks drew their pay through their units, or elsewhere on emergency, on the "Active Service Pay

“Book”, issued on mobilization.¹ Special divisional arrangements to issue pay were generally made at railway stations where leave trains were sent off.

The commissions of enquiry which reported upon the South African War² found that there had been an imperfect control of expenditure, much unnecessary waste, loss and misappropriation of cash and stores, with unsatisfactory accounts and audit arrangements. They recommended that in any future campaign the Commander-in-Chief should have the assistance of a Financial Adviser, who should also act as Local Auditor, assisted by a trained staff.

A Financial Adviser and Local Auditor was accordingly provided for in Field Service Regulations, but it was not until January 1915 that Mr. H. G. Goligher of the War Office was sent out to France to make a survey of the financial and accounting situation. As a result, he was appointed to the post of Financial Adviser to the Commander-in-Chief as from the 1st April 1915, with relative precedence as brigadier-general. He was also made the local representative in the field of the Accounting Officer of the War Office.

His staff on appointment consisted of only ten officials (drawn from the Finance Department of the War Office), who were given suitable precedence as officers. This staff gradually increased with the size and complexity of the work, but at no time up to the end of the war did it exceed seventy.

The duties of the Financial Adviser were set forth in a General Routine Order issued on his arrival, and it was made clear that his appointment in no way affected the responsibilities of directors as laid down in Field Service Regulations.

From the beginning the Financial Adviser was referred to freely by staff officers, directors and heads of departments on all questions of financial importance, with the result that much unnecessary expenditure was avoided. With the ever-growing size of the B.E.F. in 1915 and 1916,

¹ This book was adopted on the recommendation of a War Office committee, of which Major-General Bray was a member, after the S. African War. It merely recorded credits and cash issues, and contained a form of will.

² Royal Commission on South African War Report, paragraphs 239-43. Royal Commission on War Stores, paragraphs 17 to 28, and Vol. III. para. 113.

Public Accounts Committee Epitome, pp. 443-5 and 465.

Esher Committee Report, Part II. Section III. paragraphs 9, 21 and 26.

such questions, and his work generally, increased greatly in importance and extent and it became necessary to consult him on such matters as the financial arrangements with the French, Belgians and other Allies,¹ French railway adjustments, octroi, billeting, works, rents, roads, forestry, and labour.

On his own initiative also he brought to the notice of the services concerned numerous matters in which it was found possible to secure considerable economies.

Many questions arising out of contracts were referred to him, both before and after the contracts were entered into.

He audited all paymasters' accounts (including accounts of the large expenditure incurred in other countries by the Supplies Special Purchase Department), and the accounts of all store and supply depots and base workshops; he was the local authority on questions of accounting and audit. A high standard of accounting was secured, while unnecessary and unremunerative accounting processes were eliminated.

The experience of the South African War had proved it to be impracticable for units in the field to keep store and supply accounts of any value, and it was decided in 1907 that (with one or two exceptions) units should not in future wars be required to keep accounts; that accounts should cease to be kept at the store and supply depots; and that outside the depots there should be administrative control and records not subject to formal audit. The Financial Adviser gave special attention to this administrative control in France, assisting the directors concerned and securing material improvements in it, and the records were subjected to local test inspection by his staff.

Special extended powers for dealing with losses of cash, stores and supplies were delegated by the Army Council to the military authorities in France, the exercise of the powers being subject to the concurrence in each case of the Financial Adviser, in accordance with the usual procedure.

The vast field of cash and store expenditure presented a heavy problem for the Financial Adviser, and in the main it was covered by numerous inspections of units and depots of all kinds, with test stocktakings and audit on the spot. Wherever possible audit was current as well as local, in

¹ On the arrival of the American Army, he was constantly consulted by the American military authorities as to the relations and methods of dealing with the French Government and the French Army, particularly on questions such as railways, war timber and octroi.

order to secure that any unauthorized expenditure, waste or irregularity should be stopped at its commencement.¹

The Public Accounts Committee of the House of Commons, in its report for 1919, reported that the appointment of a Financial Adviser and Local Auditor had "worked well". The committee further stated that the reports of the Controller and Auditor-General of Army Expenditure in France and elsewhere during the years 1915 to 1918 "had been extraordinarily light" and reflected "the greatest credit on the War Office system of "accounting and financial administration of all this "enormous expenditure".²

In October 1914 the Quartermaster-General of the British Expeditionary Force formed a small committee, which included an officer of the French Mission at G.H.Q., to deal with the claims of French and Belgian inhabitants against the British Army. This committee was expanded two months later by War Office direction into a Claims Commission, with Colonel C. G. Morrison as President. In April 1915 a civil member (a Member of Parliament) was added, and the powers of the commission increased; in November district officers (finally five), each with two branch district officers, were appointed. In October 1915 the commission took over the duty of acquiring all land required for military purposes in the Army areas, rent officers being added to the establishment for the purpose. In June 1916 Major-General the Right Hon. L. B. Friend succeeded Br.-General Morrison as president, remaining in office until January 1921. In 1918 group officers to superintend the district officers, and officers for personal injury, collision and fire claims, were added.

The principal classes of claims with which the commission had to deal were those arising out of war damage; occupation of buildings, factories (including loss of user), etc.; use of roads, Government, communal and private; appropriation of timber from forests; fire and explosions; vehicle accidents; personal injuries to civilian inhabitants; disputes over contracts or undertakings entered into by

¹ At the end of the war the Financial Adviser was concerned with the clearance of outstanding accounts, the settlement of railway charges of the French and Belgian Governments, and, during the Armistice period in connection with the preparation of the Versailles Treaty and the Spa Agreement, he rendered advice on various questions, particularly on the charges to be made against Germany in respect of the Army of Occupation. He also fixed the official rate of exchange for the British Army of Occupation, until a separate Financial Adviser was appointed for that Army.

² Public Accounts Committee Report 1919, paragraph 110.

the British military authorities; pillage, thefts and irregular or erroneous requisitions. All except the first class were admitted and dealt with as far as possible in accordance with French practice, and paid promptly in cash. Claims for war damage were rejected. The general definition of acts involving war damage ("faits de guerre") was as follows: All damage caused by the enemy; all damage, no matter by whom caused, which resulted from encounters, occupations, demolitions, trench levellings and other works on the field of battle or its borders; and all incidents connected with the immediate necessities of conflict. Defensive works, however far behind the front line, were classed as "faits de guerre"; only such as were made for purely instructional purposes were excluded. That rent was demanded for front line trenches is, of course, a myth.

In December 1915 an agreement was made with the French Government that dissatisfied claimants might take action at law against that Government, as though the French Army and not the British was concerned; but to avoid as far as possible recourse to the courts, a further agreement was made in August 1916, providing for a preliminary appeal to the Claims Commission itself against its own decisions. This gave the commission the opportunity of reviewing findings by local officers, and enabled many cases to be settled amicably.

The task of dealing with appeals was a somewhat protracted one, by reason of the fact that in French law the time limit for taking action is, in most cases of damage, five years. There being a moratorium until the cessation of hostilities, this period did not commence to run until the 1st January 1919. After Major-General Friend ceased to be president in 1921, the work was carried on by the deputy and vice-presidents, and in April 1923 reduction in numbers permitted of the removal of the headquarters of the commission from Paris to London. The total claims paid up to the end of 1922, had been 29,724,573 francs, a little over a million sterling at the exchange of those days.

ORDNANCE SERVICES ¹

The Royal Flying Corps and the Tank Corps (when it was formed in 1916) provided their own technical equip-

¹ The Director of Ordnance Services in 1916 was Br.-General H. D. E. Parsons; the deputy directors were Colonels A. Slade-Baker, A. Forbes,

ment, although the Ordnance supplied aircraft bombs, kept tank guns in order and issued ordinary clothing and equipment to both corps. Engineer stores (sandbags, barbed wire, picks, shovels, timber, corrugated iron) were collected in two large depots, Abancourt on the southern lines and Les Attaques, just outside Calais, on the northern, whence they were sent in bulk to the advanced R.E. parks in each Army. Certain telegraph and telephone stores were supplied by the General Post Office; maps were provided by the Map Section of the General Staff; road metal was dealt with by a special mixed commission; ¹ stationery was supplied by the Army Printing and Stationery Services; ² the Director of Transport issued motor vehicles. Otherwise the Ordnance was responsible for providing and issuing every article of all the various stores required, rations, forage and petrol excepted.

No sooner did the front become stabilized at the end of 1914 than there was a vast increase in the scope of the Ordnance services. Besides the demands for ammunition and replacement of damaged and lost material (guns, wagons, equipment and clothing), there were incessant calls for stores of every kind required in trench warfare, particularly machine guns, hand-grenades, barbed wire, sandbags and periscopes. The strength of the Army Ordnance Corps rose from eight companies in August 1914 to 42 in July 1916.

The lines of communication being so short, no advanced depots were formed. The First and Second Armies were supplied from Calais, the Third and Fourth, when they were formed, from Havre (with, very soon, a branch at Abbeville, which was convenient for keeping a small reserve within lorry reach of the front). At each of these centres immense Ordnance depots were concentrated.

At first ammunition was dumped at the ports of disembarkation. This proceeding was dangerous, as an explosion would have done immense damage, but the stuff was sent to the front almost as soon as it was received and the quantity remaining on hand was comparatively small, mostly shrapnel shell of a high degree of safety.

During the spring of 1916, in view of the intended

T. Heron, and L. C. G. Tufnell. The work of the Ordnance will be found graphically described in "A History of the Ordnance Services" Vol. III., by the late Major-General A. Forbes.

¹ See Chapter X.

² See Chapter VI.

operations, ammunition began to arrive in such large quantities that great difficulty in accommodating it was experienced. The only ammunition depots were located at the two ports of entry, Boulogne, serving the northern area, and Rouen (the depot from March 1916 was Grand Quévilly, 4 miles below the town on the left bank of the Seine), the southern. New ammunition depots were therefore formed at Audruicq (fed from Boulogne) and Abancourt (fed from Rouen), and these were soon able to play their part in receiving the stock on which the Third and Fourth Armies would draw to form dumps prior to the opening of the offensive.¹ Some idea of the work thrown on the ammunition depots may be gathered from the fact that Rouen increased its issues from a normal 200 tons a day to 3,500 tons. In the course of the Somme battle, on the night of the 20th/21st July, the newly formed depot at Audruicq was totally destroyed as the result of a fire caused by a bomb dropped from an enemy aeroplane, and the whole 9,000 tons, to a value of £3,500,000, which it held, disappeared in a series of great explosions.² The loss was, however, comparatively trivial in comparison with the immense amount of ammunition being handled—in the month preceding the explosion the expenditure amounted to 148,000 tons—and the occurrence proved, ultimately, to be a blessing in disguise. It led to the far wider dispersal of ammunition in the newly constructed depots, so that, in spite of the far more extensive air raids carried out later, no serious damage was done in the years that followed, until the Saigneville and Blargies Nord dumps were hit during the German offensives of 1918 and approximately 10,000 tons destroyed at each place.

To give an idea of the variety of articles and the large quantities of the supplies issued by the Ordnance: a million steel helmets were received and issued in the first six months of 1916;³ there were issued from Calais alone

¹ The formation of these dumps is described under the preparations for the battle of the Somme.

² There had been a small explosion at Quévilly in March when unloading the second train which entered the depot, and 600 tons of ammunition were lost, owing, it was thought, to a faulty fuze.

³ A helmet made of four separate parts and weighing 22 ounces was issued to the French troops in the spring of 1915. This was brought to the notice of G.H.Q., who asked for some samples for trial, and 495 were received on 29th July 1915. The British authorities at home considered the protection afforded insufficient and, after experiments with heavier types, a sample steel helmet was sent to France in September. G.H.Q. asked for it to be supplied on a scale of 50 per battalion, and by the end of October 1915, 3,500 had been received. Further experiments were made, and it was decided to issue a helmet of hardened manganese steel weighing 2 lbs.

during the first ten months of 1916, 11,000 prismatic and magnetic compasses, 7,000 watches, 40,000 miles of electric cable, 40,000 electric torches, 3,500,000 yards of flannelette, 1,250,000 yards of rot-proof canvas, 26,000 tents, 1,500,000 waterproof sheets, 12,800 bicycles, 20,000 wheels, 5,000,000 anti-gas helmets, 4,000,000 pairs of horse and mule shoes, 447,000 Lewis-gun magazines, 2,250,000 bars of soap. To the officers' shop, which formed part of the depot, 12,900 visits were made to buy clothing and equipment.¹ How these articles were demanded by the troops is described below, but, whatever system was followed, they had to be booked and despatched by train to their destination properly packed.

Repairs and "Salvage" were first undertaken in the winter of 1914-15, when an attempt was made to deal with the greatcoats, blankets, horse-rugs, etc., sent back from the front. In March 1915 a contract, after a trial order, was entered into with a Paris firm for washing and mending at fixed rates. Eventually the Ordnance established workshops of their own in Paris, wherein, mainly with French woman labour, clothing and gum boots were cleaned, repaired and renovated. At Calais in September 1915 a boot repair factory was organized with a staff of 180 bootmakers, increased by 1917, with the aid of German prisoners, to 800. Gas helmets from June 1915 were repaired at Abbeville and Calais by French woman labour.

Repairs of a light nature to guns, rifles, instruments, vehicles and harness were done by the Ordnance mobile

and capable of resisting shrapnel at 750 feet per second. The manufacture of this pattern was commenced at the end of November 1915, and by March 1916, 140,000 had reached the Army in France, while smaller quantities had been issued to troops in other theatres of war. It was found that the average rate of head wounds among men already equipped with the new helmet had been reduced to less than one-quarter of the usual proportion, and an accelerated supply was requested by G.H.Q. in order to equip, as soon as possible, all troops then in France, and to fit out the new formations as they arrived there. Delivery of the first million helmets was completed by the first week in July 1916. About a million and a half British made helmets were supplied to the American troops. In September 1917 issue was also made to troops at home and to special constables as protection against shell splinters from anti-aircraft barrage. The total output by the end of the war reached about seven and a quarter millions.

The adoption of a steel helmet appears to have been advocated by a German professor serving as a captain on the lines of communication in the summer of 1915. The final official tests took place in November of that year, and by the end of January 1916 the first 30,000 had reached the front and were worn by shock troops at Verdun. Its weight was 2 lbs. 3 oz. ("Deutsche Allgemeine Zeitung" of 25th April 1926.)

¹ "History of the Ordnance Services" Vol. III. p. 99.

workshops and armourers' shops at the front. Other repairs were executed at the two bases. For retubing and other arsenal work guns were sent home. The abnormally heavy work thrown on the Ordnance workshops in 1916 by the defects and deficiencies of munitions is dealt with under the heading of "Munitions".

The manufacture of improvised trench stores was carried out in the Ordnance workshops as well as in the R.E. workshops.¹ In particular, trench mortars and bombs were turned out—1,400 a day of the latter—until the Service patterns came along in sufficient quantities in 1916.

Great as was the increase of Ordnance work on the lines of communication, the increase in the Army areas was even more pronounced. At the outbreak of war the Ordnance was represented at the front only by one officer per division, the D.A.D.O.S., with one clerk and a horse. With this assistance and transport the Ordnance officer was expected to deal with all Ordnance matters within his formation. Various echelons were arranged for bringing up ammunition, but as regards other stores it had been anticipated that divisions would refit about once a fortnight by establishing contact with some ordnance depot. This system was impracticable in trench warfare. Troops might, without danger to operations, be kept waiting for overcoats, boots and braziers until they left the line for rest, but not for machine guns, rifles and rifle oil. The first attempt to solve the problem was the despatch of a truck in charge of an N.C.O. to each division, loaded with a miscellaneous consignment, after the issue of which it returned empty. This method proved uneconomical as regards the stores, which were taken because they were there, and wasteful of trucks, as large numbers were constantly on the rails. The next plan was more successful: each D.A.D.O.S. collected all the indents received from the troops whom he served for articles in constant request, such as clothing, blankets, accoutrements, saddlery. On fixed days of the week he telegraphed to his base a consolidated demand for a certain specific item: uniform one day, boots another. On the day following the receipt of the indents the base sent up what was demanded. Thus in the course of a week the troops got their supply. Articles not on the list of "bulk issues" were despatched from day to day as demanded. Owing to moves and casualties, each D.A.D.O.S. in the course of time accumulated a small dump

¹ See "1915" Vol. I. pp. 7-8.

which served for emergency supply. The divisional ordnance officer was eventually provided with a staff of 14 men and four lorries wherewith to fetch and distribute what arrived for him daily at railhead in response to indents. In fact, the supply of equipment and clothing was placed on exactly the same lines as the supply of food and forage, an arrangement which the Ordnance had advocated before the war.

Two Ordnance officers were appointed to each Army and one to each corps, with a staff similar to that in a division, to deal with the requirements of corps and Army troops.

For small repairs all formations able to do so set up their own workshops for armourers, saddlers, and bootmakers which were managed by the D.A.D.O.S. Every battery, in particular, did for itself what inspection and repairs it could, especially to gun-sights which soon got out of order; men with no more experience of fitters' work than practice in mending bicycles were pressed into the service. Far more important than any other improvised establishment were the gun workshops. The lesson was soon learned that the modern gun could not be kept in the field without a well-equipped workshop close at hand, to which it should be sent periodically for repair and adjustment by experts. Each Army was allotted an Ordnance Heavy Repair Shop which executed jobs beyond the capacity of the lighter shops in front, and, like those at the bases, was largely employed on manufacturing work. Besides these, there were mobile gun workshops, on the basis of two light and one medium per corps, distributed along the front in proportion to gun strength. The outstanding feature of Ordnance work during the Somme battle was the service rendered by these shops, through which a constant stream of guns passed day and night without ceasing, and without which it would have been impossible to maintain prolonged and incessant bombardments.

For the rapid replacement of guns, carriages and machine guns an Ordnance Gun Park of reserve equipment was allotted to each Army. This reserve equipment was under the control of G.H.Q., who authorized issues by telephone or telegraph on demand from Army headquarters.

MUNITIONS

In his final Despatch of the 21st March 1919, summing up the features of the war, Field-Marshal Sir Douglas Haig

wrote: "It was not until mid-summer 1916 that the "artillery situation became even approximately adequate "to the conduct of major operations. Throughout the "Somme battle the expenditure of artillery ammunition "had to be watched with the greatest care. . . . Only in "1918 was it possible to conduct artillery operations "independently of any limiting consideration other than "that of transport."¹ In a previous volume² have been described the development of the manufacture of munitions under the War Office, the formation of the Ministry of Munitions on the 1st July 1915 with Mr. D. Lloyd George as Minister, and the transfer of responsibility for manufacture thereto.³ The new Ministry was backed up by a Munitions of War Act, known on the Clyde as the "Slavery "Act", as one of the restrictions imposed thereby rendered it difficult for a workman to leave the shop where he was employed and go to another at his own caprice. Such restriction of liberty may seem hard, but is not so hard as the case of the soldier, who could not, if ordered to remain, let us say, in the Ypres Salient, pick up his rifle and kit and remove himself to a quieter part of the front. The Act conferred special powers on "Controlled Establishments," that is factories employed on munition work under Government control. These powers included the prohibition of strikes and lock-outs, and gave legal sanction to the agreement by which trade union restrictions limiting production were suspended during the war, whilst, on the other hand, manufacturers' profits were limited. So satisfactorily did these provisions work that the original number of controlled establishments, 134 in July 1915, rose, through firms applying to be included among them, to 2,422 on the 1st July 1916, and ultimately to over 5,000.

The principal event in the history of the manufacture of munitions in 1916 was the passing of the Munitions of War (Amendment) Act. This was drafted to make the original Act work more smoothly, and it became law on the 27th January 1916. "The whole of this bill", said Mr. Lloyd George in introducing it, "consists of concessions."

¹ It might have been added that in 1916, the enemy guns, piece for piece, had longer range than the British; in particular, the 60-pdrs. and 6-inch howitzers had not sufficient range to touch the German counter-batteries.

² "1915" Vol. I. pp. 37-49.

³ The Ordnance Board, with its research department, experimental establishment, Shoeburyness ranges and inventions department, was transferred to the Ministry on 29th Nov. 1915.

The principal changes were the extension of the meaning of the expression "munition work" so as to include the construction of docks and munition factories and the supply of power and light; amendments in the workers' favour of the provisions relating to dismissal, discharge and suspension, and the issue of leaving certificates; the provision of an appeal tribunal; and the abolition of imprisonment for munition offences. It had been proposed to make provision in the Act for punishing incitement to strike, but as this was a contentious matter, the power was obtained by an amendment of the Defence of the Realm Regulations.

The introduction of the Military Service Act¹ considerably affected labour and munitions. It led to the investigation of the number of men whose work could efficiently be performed by women, and who could therefore be released for army service. The grant of certificates of exemption to munition workers remained, however, in the hands of the Ministry of Munitions. As the military authorities did not regard this as satisfactory, a Man-Power Distribution Board, with Mr. Austen Chamberlain as chairman, was set up in November 1916.

There were 707 trade disputes in the United Kingdom causing stoppage of work in progress in 1915, involving the loss of 3,040,000 working days, and 578 disputes in 1916, with the loss of 2,581,000 days. Four occurred in munition works in 1916, arising out of the dilution of skilled labour, the non-release of a certain engineer from the forces, the refusal to work with two female overlookers who would not join in the boycott of a certain canteen, and dissatisfaction with a wages award. Strikes of shipyard and dock workers and in the clothing and textile industries affected munitions only indirectly. Greater troubles were to come in 1917.

Turning to the manufacture of arms, the Birmingham and London Small Arms factories and the Government factory at Enfield continued to supply rifles, 952,928 being delivered in 1916.

The manufacture of guns practically remained in the hands of the Ordnance Factory and the four great firms of Armstrong, Vickers, Beardmore, and Coventry Ordnance. Four hundred 18-pdr. guns were ordered from the Bethlehem Works U.S.A., to be supplied by June 1916, but a year later had not all been delivered. Orders were also placed with the Midvale Steel Company U.S.A. for guns and

¹ See Chapter VI.

heavy howitzers, but the greater part of the output from this firm was transferred to Russia.¹ Large extensions of the works of the four armament firms were sanctioned. The output of guns, however, fell steadily below orders and estimates, and was not equal to filling the original demands, far less to keeping pace with the continually increasing requirements of the Army in France. Thus Sir John French in November 1915 asked for 560 6-inch howitzers by June 1916. It was hoped to provide 193 by the 31st March; but presently the estimate fell to 170; finally not more than 67 were delivered, and not all of these were available for France. The total of the programme of guns to be delivered in the first nine months of 1916 was 7,908; the actual delivery in the whole year was 4,314, and in consequence a very serious situation arose in 1917. The decline was mainly due to the failure to distribute the available labour.

The Ministry of Munitions was created mainly to supply ammunition, but although it was rapidly bringing new factories into existence the Army in France was all the while growing in size, the demands for ammunition (shell, explosives and fuzes) were increasing, and there were, besides, calls for new war material, such as mortars, grenades, flame-projectors, steel helmets, gas, smoke, and for improved patterns of existing material. Thus in July 1915 the minimum weekly requirements for 18-pdr. ammunition were 340,000 (shrapnel and H.E.) rounds; in September, 767,000; in June 1916, 700,000 (the dumps in France being nearly full); in October 1,200,000; in May 1917, 1,400,000; after which, as more "heavies" became available, it decreased. The 6-inch howitzer ammunition similarly rose from 56,000 to 126,000, 204,000, 275,000, and 330,000.

The quantities considered necessary for the opening of the Somme battle were more or less provided, the rounds per piece for field guns and field howitzers being slightly in excess of scale; but those for all the heavier natures fell from 13 to 2 rounds below the estimate, except as regards the old 4.7-inch gun, for which the figure was 67 per gun below, and the 6-inch howitzer (26 cwt.), 180. For the 6-inch howitzer (30 cwt.) the shortage was only 2 rounds per piece. Unfortunately ammunition could be fired quicker than it could be replaced. The expenditure at the Somme in one

¹ The U.S.A. provided in 1915, 189 18-pdrs.; in 1916, 246, and 150 smaller guns.

month from the 24th June, the beginning of the bombardment, to the 23rd July amounted to 148,000 tons, and during the same period the quantity landed in France was only 101,771 tons.

Had the quality of the ammunition been good, the quantity might have sufficed; but at some time or other during 1916 many types of munitions were under suspicion or examination for some flaw, or under repair or reconditioning for some ascertained defect;¹ indeed there is general agreement that the quality both of guns and ammunition was much below that of those used at the Battle of Loos. Thus throughout 1916 there was a steady increase in the number of prematures in proportion to the number of rounds fired.

The bursting of two 9·2-inch howitzers (one on the 1st July 1916) and other large guns owing to prematures was traced to defective shells. During manufacture in peace time the outer 30 per cent. of a steel ingot was rejected as a matter of course; it was suggested that this might be reduced to 20 per cent. under the stress of war in order to save material. The result was that in the steel used for shells there were sometimes minute hair cracks, through which, under the enormous pressure of the explosion of the cartridge, the flames of discharge penetrated to the explosive in the shell, and caused bursts in the bore or at the muzzle.

The fuze of the 8-inch howitzer so frequently failed to ignite the bursting charge that the Somme battlefield in parts was littered with blind shell, now better known as "duds". The defect had been discovered before the battle, but could not be remedied in time; the first cure, the insertion of a "gaine" (lining) in the nose of the shell so as to increase the detonating impulse led to the fuze unscrewing itself in flight. There were also many "blinds" from the deterioration of the explosive. Furthermore, prematures occurred in all natures of heavy guns from defective fuzes, and a large number of missfires as a result of the poor quality of the firing tubes.

The 60-pdrs. averaged two prematures per thousand rounds owing to the shrapnel heads becoming detached in the bore. The 4·5-inch howitzer ammunition developed both explosions in the bore and prematures 4 or 5 yards from the muzzle, and the batteries formed of them were for a time

¹ A list of the work of this kind done by the Army Ordnance Corps is given in "The History of the Ordnance Services" Vol. III. pp. 138 ff. Most of the defects mentioned in the text are not cited therein.

known as "suicide clubs". The fuze proved to be dangerous. Some of the accidents were also attributable to the cartridge not being entirely consumed, and orders were given to clean the bore after every round, which was not conducive to rapid fire.

The copper of the driving band of the 18-pdr. was, in the output of some factories, too hard, and led to damage and scoring of the bore and "erratic" and "short" shooting. At the end of 1915 "the situation was very serious when H.E. was fired," as there were for the first time prematures with this gun, with bursts and bulges, which were in the course of 1916 traced to the fuzes made at a certain factory, which were too sensitive.¹ A serious defect of the carriage was "weak springs": the buffer springs, which compress like a concertina when the gun is fired and bring it back to the firing position after each round, either broke or lost the necessary resilience, so that the gun had to be run up into the firing position by hand, causing delay in firing and unnecessary labour.² Artillerymen could frequently be seen "bumping" the springs in the hope of restoring their resiliency. Spare springs were a most precious possession; for, owing to mass manufacture, and the desire to report a high output, the provision of "spare parts", not only for the 18-pdr. but for every other kind of weapon, vehicle and store, had been neglected. The Ordnance shops in France had to work night and day to supply them and also essential parts which were often missing when munitions arrived in France.

In exchange for a gun whose bore was worn by firing, all that could be offered was a re-lined piece, and re-lined with such soft metal that the old piece was often retained as the more serviceable.

To give a few instances of other defects: the high explosive in heavy shell was liable to exude in summer, forming a dangerous film which required skill and care to remove; the contents of flares were liable to decomposition, phosphorus bombs were prone to spontaneous combustion. In one fuze, fittings had to be inserted as, owing to too much

¹ Sir John French's diary, under the date 15th Sept. 1915 records "Du Cane [Major-General Sir J., employed then at the Ministry of Munitions] reported to me this morning on the subject of the explosion of 18-pdr. guns with the new ammunition. The trials so far are not satisfactory. The results show that we must expect a gun to burst for every 1,000 rounds fired. There is no closer clue to be found as to the cause."

² Breaking of the springs was sometimes due to the piston of the buffer becoming so much worn that it allowed too much oil to pass and the recoil then fell mainly on the springs.

play, it gave prematures; in others the time pellet had to be removed and subsequently replaced. The firing mechanism of the heavy trench mortars went wrong on the 1st July after a few rounds had been fired. Stokes mortar ammunition gave much trouble, percussion primers without reinforcement and piston heads with unflanged levers having to be removed and replaced by stronger patterns. Large quantities of Mills grenades proved defective, and there were many accidents owing to the plugs fitting badly and the fuze being too short or frayed, so that the grenade burst in less than the calculated 5 seconds. Most of these grenades were eventually traced to the factory which had produced the faulty 18-pdr. fuzes. Rifle grenades had defects which caused either prematures or "duds". A certain make of rifle ammunition gave trouble in extraction, and supplies of it had to be searched for and returned. When, after the beginning of the Battles of the Somme, the wholesale and terrible defects of guns, ammunition and fuzes were reported, the Minister of Munitions said: "The Garrison Artillery in France is entirely untrained, it cannot shoot, and is quite unfitted to work the perfect weapons which I have provided". General Rawlinson, when asked to express his opinion on this charge, at once repudiated it,¹ for he, the Ordnance officers at the depots and the troops at the front were only too well aware where the fault lay. But against the defects of munitions in 1916, due to hurried design, improvisation of plant and of workers on a huge scale, and unskilled inspection, must be set the enormous output, greater in proportion to the pre-war demands than the size of the New to the Old Army. In 1916 there were completed: 33,507 machine guns; 5,192 trench mortars, with 6½ millions of rounds of ammunition; 127,000 tons of high explosive and 84,000 tons of propellants. The weekly supply of Mills grenades rose from 250,000 to a million, and then to 1,400,000; and the total output of filled shell for the year, quarter by quarter, was 4,336,800, 9,515,300, 16,855,500, 20,888,400, a total of over 50 millions.

¹ "Life of Lord Rawlinson", by Major-Gen. Sir F. Maurice, p. 174.

CHAPTER VI

EXPANSION AND REORGANIZATION OF THE BRITISH EXPEDITIONARY FORCE BETWEEN AUGUST 1914 AND JULY 1916 (*concluded*)

THE ARMY POSTAL SERVICE ¹

THE special section, composed of officers and subordinates of the Post Office, who had joined the Army Reserve of the Royal Engineers for the purpose of doing duty with troops in war, had taken part in the South African War 1899–1902 and in the army manœuvres in the years which followed it. As a consequence of this experience, the general organization of the Army Postal Service in war, and of its units which accompanied the B.E.F. under the Director of Postal Services, Colonel W. Price, was laid down in 1913. In principle, the distribution of inward postal matter to the troops followed the same system as the supply of rations. All correspondence for the forces in the field—addressed to units and formations, and not to any place—was collected at the G.P.O. London, where it was sorted as far as was possible into unit bundles. It was then despatched to Havre, where the Base Post Office was established. There such of the mail as had not been sorted into unit bundles in London was divided into categories: Royal Artillery, Royal Engineers, Infantry, etc., and their formations, and then into units; and there any re-addressing necessary was done. The whole of the mails, except the registered correspondence, was then placed in unit bags and despatched in accordance with lists furnished by G.H.Q. to the Advanced Base Post Office (originally at Amiens). From this post office the mails were sent, accompanied by a mail guard, to the supply regulating stations on the railway lines, and so to railheads. At these last points

¹ Compiled with the assistance of Colonel D. J. Lidbury, of the General Post Office.

they were transferred to the postal lorries of the supply columns, which conveyed them to the various supply refilling points. There the field post offices attached to the divisional and other trains took them over and handed them to unit post orderlies. In the case of divisional and infantry brigade headquarters they were given to a representative of the headquarters branch field post office, and he collected not only the special bags for his headquarters but also the registered mail for all units controlled by his formation, and his office delivered this mail to the post orderlies of units.

In the case of outward mails, letters and parcels were collected at the branch field post offices at divisional and brigade headquarters. These offices also carried out normal postal duties, such as registration of letters, sale of stamps and postal orders. Savings bank business was not transacted ; but from the summer of 1915 onwards, war savings certificates and war loan were put on sale. The branch offices did not sort or divide the mail, which was at first merely sent back by means of the supply column vehicles and rail to the Advanced Base Post Office. Stamps were not required except for parcels, letters from the Expeditionary Force being carried free. All mail matter, as mentioned in an earlier volume, was franked on the envelope by an officer of the unit who was responsible for censorship of the contents.¹ Telegrams, until March 1918, could only be sent from the French civil post offices, owing to censorship difficulties.

This system was maintained during the retreat to the Seine and the temporary change of base, when the Base Post Office was transferred for a time to Nantes. On the move of the B.E.F. to Flanders, when the troops were close to Calais and Boulogne, the route via Havre became a round-about one, and it was also judged that the partial sorting in London and final sorting overseas were uneconomical of labour. Beginning after Christmas 1914, therefore, the sorting work of the Base Post Office was gradually transferred to London. A little earlier the Advanced Base Post Office had been abolished and its work done at the railway regulating stations, or at the Army Post Office at Rouen for the southern bases, and at the Postal Regulating Depot at Boulogne for the northern. The destination of the mails was finally controlled at these

¹ For an account of the "green envelope" not liable to unit censorship, see "1915" Vol. I. p. 32.

stations and places in accordance with the latest advice received as to the movements of the troops. Eventually, as the Expeditionary Force grew in size and Boulogne and Calais became supply bases, the work previously done at the Advanced Base Post Office (except cross-post correspondence inside the B.E.F.) was performed at Havre, Boulogne and Calais, which in effect became the advanced bases of London.

After the front became stabilized and there was no objection to a few lorries travelling alone, permission was given for the postal lorries to proceed independently of the supply columns to railheads and convey the mails direct to refilling points. By this means a day was saved, as the supply lorries usually parked at railhead after loading up, and did not return to refilling points until next day. In the course of time the postal routes in advance of railheads became entirely independent of supply columns.

When Armies were created in December 1914, field Army post offices were established at each Army headquarters, mainly as concentration centres for correspondence circulating within and between Armies; and in course of time a number of stationary offices were organized to deal with units in corps and Army areas, such as tunnelling companies, labour battalions, which seldom moved, as well as with the depots, posts and establishments on the lines of communication. On the other hand, infantry brigade headquarters located in trench systems became unsuitable places for branch field post offices, so, as there were now several refilling points instead of a single central one for a division, a branch field post office was opened at every refilling point in a divisional area. In practice, then, the railhead post office became the principal post office of a division, all other offices in it having the character of branch offices.

From August 1915, the Army Postal Service, in addition to the normal cross-post correspondence already in operation, undertook the express delivery of letters to and from G.H.Q., Army, corps and divisional headquarters; the Despatch Rider Letter Service by motor bicycle, organized by the Director of Signals, with which there was some overlap, was thus relieved of all correspondence not primarily connected with operations in the field.

At the outset arrangements were made for all correspondence addressed to soldiers who had become casualties to be returned to the Base Post Office for redirection with

the aid of hospital lists, or, in the case of the dead, to be passed through the office of the Deputy Adjutant-General, 3rd Echelon, for verification. Both these arrangements broke down, as hospital lists were not forthcoming in time, and the staff of the Deputy Adjutant-General could not cope with the work. Ultimately it was arranged in December 1914 that all correspondence marked "killed" or "missing" by an officer of the unit in question should be returned from the field branch post office concerned to the home depot of the unit, where it was sorted into bundles and sent to the appropriate Record Office, or the War Office in the case of officers, to be retained until the relatives had been notified of the casualty; after which it was sent back to the Post Office for return to the senders.

The task of dealing with correspondence for men admitted into hospital as "wounded" or "sick" proved more complex. After several attempts to solve the problem, the War Office finally gave instructions, in December 1914, that all correspondence endorsed "wounded" or "hospital" by the accredited post-orderly should be returned to the senders, if undeliverable in France. At the same time a "Hospital Redirection Card" was printed and issued to all hospitals, with instructions to notify the Base Post Office of the address of any patients who were likely to remain in hospital in France sufficiently long for their letters to reach them before their discharge. In practice, the system of redirection did not work as smoothly as it should have done, owing to the frequent incorrect endorsement of correspondence by the post-orderlies, but no better method could be evolved. Correspondence for officers who were transferred from one unit to another was dealt with on much the same lines, and a special redirection card was issued so that such officers might notify their old unit of their new address.

During the year 1916 the weekly number of bags of mail received from the Home Depot for the B.E.F. rose from 65,079 in the first week in January, for 40 divisions, to 86,163 in the first week in July, for 56 divisions; to over 100,000 a week in November, with 59 divisions; and the four weeks ending on 31st December recorded 139,788, 157,948, 150,945, 123,342.¹ The proportion of letter to parcel bags in 1916 was about 2 to 5. In one week in December 1915, for which figures are available, there were

¹ These figures were surpassed in Xmas week 1918, when 171,840 were carried.

posted in the B.E.F. Army post offices 5,160,713 letters and 52,477 parcels; ten months later the totals were more than doubled. In the quarter ending September 1916, 486,388 postal orders were issued and 437,686 were paid.¹

The loss of army mails by accident or enemy action was very rare. In December 1914 a postal truck containing 50 bags of mails was burnt in a railway collision; in January 1916, a field post office at Suzanne on the Somme was destroyed by shell fire; in March 1916, 37 bags were lost when the packet steamer "Sussex" was torpedoed; in June 1916, the Army post office near Poperinghe came in for heavy shelling and a lorry outside, loaded with mails, was struck and set on fire; and in August 1916, 26 bags were lost in a railway accident.²

ARMY PRINTING AND STATIONERY SERVICES

These services, which in 1916 were charged, under the Adjutant-General, with the production of printed matter and its distribution, the supply of all material necessary to office administration, and the issue of army forms, books and stationery generally, originated out of the Base Stationery Depot, mobilized to supply books and stationery, which went overseas as part of the original Expeditionary Force in August 1914. It then consisted of three War Office officials,³ commissioned as officers, and seven other ranks. Expansion was continuous: the Services numbered 29 officers and 313 other ranks in August 1916, and 62 officers and 860 other ranks in November 1918.

The original unit was placed directly under the Inspector-General of Communications, but in December 1914 the head of it was appointed an Assistant Director for Stationery Services at Headquarters, Lines of Communication, and in October 1915, Director at G.H.Q., with a deputy director on the L. of C. In June 1916 the organization grew into a directorate, with the title of Army Printing and Stationery Services, whose main divisions were Headquarters, Printing and Photographic Company, Publications

¹ These figures increased by September 1917 to 665,327 and 982,674.

² In the following years mails were lost once by a railway accident, and on seven occasions by enemy action, the Germans in November 1917 capturing the 6th Division bags at Gouzeaucourt.

³ Captain (afterwards Colonel) S. G. Partridge, Lieutenants (afterwards Lieut.-Colonels) F. A. Green and W. H. Clifford. To the first-named, in particular, is due the credit for the organization of an entirely new service of which he became Director.

Department, Army Printing and Stationery Depots, Type-writer Inspection and Repair Services, Rubber Stamp Factory, and Technical Store, with assistant directors for the northern and southern lines of communication, and a deputy assistant director controlling the Army Photographic Section and Printing Section at each Army headquarters.

The original depot was established at Havre, and additional base depots were formed at Boulogne and Calais in March and July 1915 to serve G.H.Q. and the First and Second Armies. A subsidiary depot was opened at Rouen in May 1915 for the ever-growing 3rd Echelon G.H.Q., and there were eventually six base depots. During this early period, after the first gas attack at the Second Battle of Ypres, 22nd April 1915, 4,000 yards of red tape were issued for the manufacture of extemporized respirators.

The demand forms received by the depots rose from 176 in the first month of the war to 21,279 in August 1916 and 36,373 in August 1918, and this increase was due not only to the expansion of the Army, but also to the variety of articles asked for. The number of patterns of Army Forms and Books rose to 1,104, in addition to many hundreds of special forms not registered as Army Forms; whilst the articles of stationery and office equipment grew in like proportion.

Early in 1916 the general shortage of stationery supplies, especially of paper, was acutely felt, and the resources of the depots were severely taxed in meeting the demands. In consequence improvisation and substitution became necessary, and the size of army books and forms was reduced as much as possible. In March 1916 one of the first salvage operations was commenced by the opening of centres in Army areas for the collection of waste paper, which was baled and sent to England for repulping.

The Publications Department was formally added to the Services in 1916, although it began its existence in embryo as a section of the Havre depot in September 1914, when the Stationery Services took over the distribution of Field Service Post Cards from the Army Postal Services. Addressing plant was obtained from England and the distribution of Army Orders, amendments to regulations and manuals, green envelopes, leave forms, and so forth, was undertaken.

The hand-press equipment of the Printing Company R.E. at G.H.Q. originally provided proved inadequate for

more than a few pages or more than a few hundred copies. Work required in any large quantity or size had to be put out to local contract or sent to the War Office. The former course was impossible in the case of confidential and secret matter and was always inconvenient; and the latter led to delays. The first A.P. and S.S. printing press was established at Havre in July 1915, a second at Boulogne in January 1916, and eventually a section, with the necessary plant, was allotted to G.H.Q. and each Army headquarters. The work done varied from the "Order of Battle", many pages of secret tabular matter, and forging German pigeon message forms for the Intelligence, to such items as unit Christmas cards and divisional horse show programmes, turned out on repayment. By 1917 nearly the whole of the printing, including line block, half-tone and colour, for the Army in France was being done; by the time of the Armistice there was a "battery" of eight linotypes, with one at G.H.Q.

A small Typewriter Repair Service was inaugurated in February 1915, but with the supply of typewriters falling off owing to the shortage of Atlantic shipping, this section had to be greatly augmented. A base workshop for repairs was organized at each depot, and in December 1915 a repair service of travelling mechanics on motor bicycles was introduced. Each man had a small workshop at the headquarters to which he was attached, and carried a repair kit on his bicycle. In this way 7,200 machines were kept going, with a loss from all causes, including enemy action, of only $2\frac{1}{2}$ per cent.

The constant increase of the army and the creation of new commands and posts resulted in a demand for india-rubber stamps to correspond. To meet the need there was set up a factory which, in the year ending October 1918, made over 57,000.

During the battle of the Somme the small photographic equipment of the R.F.C. proved unequal to coping with the number of prints of aeroplane photographs required for other than R.F.C. units. Efforts were made to reproduce them by half-tone printing, but the process proved slow and unsatisfactory. Moreover photographs of large trench areas had to be prepared by the laborious method of pasting small photographs together. The A.P. and S.S., therefore, offered to undertake the work, and in October 1916 installed an experimental section at Amiens, equipped with mechanical photo-printing plant,

to deal with 5,000 whole plate bromide prints a day.¹ The results were so successful that a similar section was authorized for each Army. Photographic work extended to panoramas, mosaics, maps and stereoscopic photographs, and the reproduction of Graves Registration photographs, photographs of deserters, escaped prisoners, and spies of both sexes; also general outdoor photography for operations, training and record purposes.² The Amiens plant had depended on electricity, and electricity at a constant voltage. This, in the autumn nights of 1916 when air raids were frequent, was not forthcoming from the town supply, so that the section there and those allotted to Armies were equipped with their own mobile generating plant. Stores of spare parts and chemicals had of course to be formed, and in 1917 regular "technical stores" were instituted.

The A.P. and S.S. became well known in the B.E.F. on account of the rapidity with which they turned out printing, including illustrations; for the reproduction of aeroplane photographs, for the series of manuals bearing the letters "S.S." followed by a number, and for the posters, in various languages, issued during the advance in 1918, directing, for instance, the inhabitants left stranded or starving by the German retreat where to go for food, calling on the British soldier to "play the game" and keep clear of certain dangers in enemy territory, and warning the German inhabitants as to their duties and obligations.

EXPEDITIONARY FORCE CANTEENS³

A field force canteen had been organized in the South African War, 1899-1902. No arrangements, however, were made to provide one on mobilization for the Expeditionary Force, and when, in August 1914, it was suggested to Lord Kitchener that the troops would require one, he replied: "This war is not going to be a picnic" and nothing was done. Whilst the Army was on the Aisne in September and October 1914, it could obtain nothing locally; for the

¹ The photographs—including those for Intelligence and Police purposes—taken or reproduced rose in number from 25,000 in 1916 to 2½ million (whole plate equivalent) in the ten months of war in 1918.

² The special services rendered in 1918 will be dealt with in the history of that year.

³ Expeditionary Force canteens were established in most of the theatres of war, but France alone is dealt with here. Similar work was done in the United Kingdom under the direction of "The Army Canteen Committee", which in 1917 became "The Navy and Army Canteen Board".

Germans had passed over the country, leaving little behind them except the more unpalatable articles in the chemists' shops; but it was possible to obtain small quantities of necessaries, such as matches and cigarettes, from Paris by sending cars to fetch them. When, however, the force moved to Flanders, the French capital was too distant, and the local supplies of "luxuries" were not to the British taste—the beer was so weak that the troops put rum into it and French cigarettes did not prove popular. During the winter of 1914–15, as already narrated, there was a shortage of even essentials normally supplied by the Quartermaster-General's Department, such as boots, underclothing and uniforms, not to mention matches, tobacco, and, as some commanders deplored, port wine.

In the early part of 1915, therefore, the Canteen and Mess Co-operative Society was authorized to establish a branch in France, and the Expeditionary Force Canteen, managed by the Society, came into being. The organization was under military control, and from September 1916 onwards its officers were granted honorary commissions in a special section of the A.S.C., whilst the other ranks became enlisted soldiers attached to the same section. The control of the organization was vested in Mr. (now Sir) A. W. Prince, managing director of Messrs. R. Dickeson & Company, who held the office of honorary director, and Mr. (now Colonel) F. Benson, general manager of the Canteen & Mess Co-operative Society, who became general manager.

At the commencement of the work, a sum of £10,000 was provided by the Army Council by way of loan, from the South African Garrison Institute Funds still available, to furnish stores, transport, canteen huts and equipment. A further sum of £17,000 was lent from the same source, but, owing to the rapid growth of the operations of the organization, additional capital was soon found to be necessary, and the honorary officials found guarantees to the amount of nearly £250,000, without any charge for interest. Operations still continued to expand, and, as a result of application to the Treasury, the latter provided by instalments a total loan of £720,000, which sum was repaid, with interest, in a comparatively short time.

The first depot was established at Havre, and among the earlier branches opened were those at St. Omer, Poperinghe, Armentières and Bailleul. For the half-year ending June 1915, the takings amounted to roughly 3¼

million francs (at 25 francs to the £).¹ Nearer the front divisional canteens (institutes) were introduced, the first, it is believed, by the 9th (Scottish) Division in September 1915, in order to protect the soldier against the exorbitant prices which the shops and cafés were beginning to charge. In the early days these canteens obtained goods from French and home sources, later from the E.F. Canteens. The divisional canteens in their turn supplied wheeled canteens which many brigades acquired, and below these again battalions had dry canteens.

The original purpose of the Expeditionary Force Canteens was to supply small comforts and articles, such as the troops were accustomed to purchase in their canteens and regimental institutes in peace time, but wines and spirits, cigars, underclothing, boots, footballs and a multitude of other things in demand were soon added, and the canteens gradually became universal providers. As regards clothing and equipment, the organization developed its operations to supply every article of apparel not included in Army Ordnance issue. As time progressed the organization gradually added to its business the conduct of officers' clubs and rest houses, a great undertaking in itself; the provision of stores in bulk to units; the provision of meals in leave billets; and the running of bakeries, mineral water factories, piggeries, cinemas and theatres.

All goods supplied by the Expeditionary Force Canteens were sold at the lowest prices economically possible or desirable, and any profits earned were devoted to the general welfare of the troops.

THE ARMY CHAPLAINS' DEPARTMENT

The chaplains of the various denominations and the representatives of the great religious bodies played an important part not only in the spiritual but in the material life of the troops, and an account of the British Army in France would be very incomplete without mention of their

¹ In the half-year ending December 1918, they had risen to 223½ millions. At this period there were 295 canteens in operation in France, and the staff of officers and other ranks of the organization exceeded five thousand. Among the latter were representatives of every conceivable occupation from chiropodists and compositors to butchers and piano tuners, all actively employed in their own particular trades. In 1917 the personnel of the organization in France was augmented by the employment of some seven hundred women, members of Queen Mary's Army Auxiliary Corps, better known as the W.A.A.C.'s, who rendered most valuable service.

exertions. An eminent French writer, Monsieur André Siegfried, has remarked as a fact which should never be overlooked in an estimate of the British Empire, that every Englishman is religious at heart, however little he may show or practise his belief openly. Certain divisions of the British Expeditionary Force fought with a religious fervour as strong as, or stronger than, their patriotism; but throughout the B.E.F. there was, besides the unseen inward reverence, an outward observance of religious duties more marked than in ordinary life in peace. The army chaplains were not only comrades sharing the common dangers, leaders in the outward observances, and comforters in sickness and death, called affectionately by the name of "padres", but they seemed to be the connecting link with home, with that other life of peace, once known but perhaps never to be recovered. Nothing can be truer than that the troops liked having chaplains with them.

At the outbreak of war the Army Chaplains' Department, administered, on the Church of England side, by the Chaplain-General, Bishop Taylor-Smith, was small, containing only 117 commissioned chaplains, of whom 89 were Church of England, 11 Presbyterian and 17 Roman Catholic. Many of them were serving in foreign stations. There were, besides, a number of temporary acting chaplains, including Wesleyan, Baptist and Congregationalist, whose names, when they gave "full time"—and there were forty of this category—were shown in the Army List. There were also a number of chaplains to the Territorial Force.

On mobilization there was no difficulty in providing the 65 chaplains required for the British Expeditionary Force, the scale of attachment laid down being one Church of England chaplain for each brigade (cavalry or infantry), one Roman Catholic chaplain for each division (cavalry or infantry) and one Presbyterian chaplain for each division, provided the formation contained a Scottish unit. Four chaplains (2 Church of England, 1 Roman Catholic and 1 Presbyterian) were provided for each of the two bases and the advanced base; and one Wesleyan chaplain was also assigned to the troops and three ^{stars} the bases. During the retreat and early operations most of the chaplains with the troops were sent to the field ambulances, as it was considered that with these units they could best be of service. This was a last minute decision, but was probably the best, although it did not take into account

the transport required for the carriage of prayer and hymn books.

No provision had been made in War Establishments for administrative duties, except that a principal chaplain, with one clerk and one batman, was to be with the 3rd Echelon G.H.Q. This appointment fell to the senior chaplain at Aldershot, the Reverend J. M. Simms (Presbyterian), from his seniority in the Chaplains' Department. A source of strength to all denominations, full of kindness, experience and common sense, he could at first form no idea of the part he was required to play; for he was placed at Rouen without car or transport, and his 64 chaplains were scattered throughout the Army; he was, as it were, a shepherd without sheep. A scheme for administering his department was only gradually built up. It first took official shape after a conference called in November 1914 at G.H.Q. by Major-General Sir Nevil Macready, the Adjutant-General, under whom the Army Chaplains' Department, like the Medical Services, was administered. To this conference were summoned Dr. Simms, the Rev. E. G. F. Macpherson (senior Church of England chaplain) and Monsignor (later Bishop) W. L. Keatinge (senior Roman Catholic chaplain). The two latter were forthwith appointed to positions advisory to the Principal Chaplain, and all three were allotted cars so that they could henceforward move about and visit the whole field of their duties. The question of additional chaplains was gone into, with the result that the number in a division was raised to 12, including a senior chaplain, and others were provided for the general hospitals. In view of the ever-increasing work, Dr. Simms and Monsignor Keatinge were given personal assistants, the Rev. W. Drury and the Rev. B. S. Rawlinson. The Rev. O. S. Watkins was recognized as Senior Wesleyan Chaplain.

Provision for the needs of the branches of Nonconformity (other than the Wesleyan), the Baptists, Congregationalists and Primitive and United Methodists, had already received attention. In order to simplify administration, a "United Army and Navy Board" was formed for them, with the Rev. J. H. Shakespeare^{an} (Baptist) and the Rev. R. J. Wells (Congregationalist) as joint secretaries. The Rev. G. Standing became Senior Chaplain of the United Board. One Free Church chaplain was attached for duty to each brigade of a division, he being responsible for all Free Churchmen, irrespective of their particular denomination,

of that brigade. For the Jewish soldiers also a staff of chaplains was sent to France, the Rev. M. Adler becoming Senior Chaplain.

The size of the Army and its needs continuing to grow, in March 1915 a new establishment was fixed, in which a definite place was given to the Free Churches. Its main features were :

The total number of chaplains for each division was raised from 12 to 14 ;

One Church of England chaplain was provided for each general or stationary hospital ;

One Roman Catholic chaplain and one Presbyterian or Nonconformist chaplain for each group of not more than three general or stationary hospitals.

In May 1915 the Principal Chaplain was ordered to remove his office from the 3rd Echelon at Rouen to G.H.Q., where he henceforth remained.

The routine work of Dr. Simms's office, after consultation with him or his assistant, was generally performed by an assistant adjutant-general, the Principal Chaplain giving counsel and advice by private letter to his chaplains, who similarly wrote direct to him. This system worked smoothly and satisfactorily, but certain influential persons at home were not entirely satisfied with the absence of any local episcopal atmosphere for the Church of England chaplains, and in August 1915, the Right Rev. L. H. Gwynne, Bishop of Khartum, who was on leave from the Sudan in 1914 and had been serving from the first as a volunteer chaplain with the B.E.F., was appointed the representative of the Chaplain-General in France, as Deputy Chaplain-General. Henceforth there were two parallel systems, one for the Church of England chaplains under the Deputy Chaplain-General, and the other for the remaining denominations, under the Principal Chaplain. Both heads were given the rank of major-general, and they worked together in perfect amity and concord. But this system of dual control was not repeated in any other theatre.

Further increases in the number of chaplains followed, the establishment with a division being raised to 17. Assistant chaplain-generals and assistant principal chaplains were appointed to the Armies and chief bases, deputy assistants being allotted to corps and similar headquarters. By the end of the war 878 Church of England chaplains and 820 of other denominations had been sent to the theatre of war. Of these 176 had given their lives.

On the eve of the Somme, the commander of the Fourth Army issued an order that no chaplain was to go nearer to the front than the advanced dressing stations. An immediate protest was made, the order was withdrawn, and replaced by a circular from the Adjutant-General which said:

“Some doubt appears to exist as to the position chaplains should occupy during active operations. It is considered that, provided their presence in no way hampers the operations in progress or in contemplation, no restrictions should be placed on their movements; and that chaplains should be encouraged to go where the Senior Chaplains, Church of England, Nonconformist and Roman Catholic, of divisions, decide that their services can be most advantageously employed, and where they can be of most use to the troops.”

Besides performing spiritual duties, conducting services and comforting the sick and dying, much welfare work was done by the chaplains. They organized some of the earlier entertainments, and one of them introduced the first cinema; they turned their hands to any service required; and they were a potent influence in the domain of morale, and often a useful link between the man in the ranks and his officer. They were the first to keep records of burials. Of their great work one special memorial survives transferred into the spiritual life of the Empire. Known to all as “Toc H.”,¹ it was founded in December 1915 at Poperinghe by the Rev. N. S. Talbot, senior chaplain of the 6th Division, and by the Rev. P. B. Clayton, later garrison chaplain of that town.

AUXILIARY SOCIAL SERVICES

Besides the organized department of army chaplains, many religious bodies in the course of time came forward to assist in providing a religious atmosphere, recreation, entertainment and comfort for the troops when out of the line. These were the Young Men's Christian Association, the Church Army, the Scottish Churches Huts Joint Committee, and the Catholic Women's League and Catholic Club, besides a number of associations and individuals. Only the principal of them can be mentioned here,² with the observation that all institutions of whatever denomination worked together and helped each other with stores,

¹ The signaller's version of “T. H.”, i.e. Talbot House.

² Early in 1918 a decision was made that all private organizations should be absorbed by those not so owned, leaving practically only one for each denomination.

entertainers and lecturers, the Y.M.C.A., the largest of them, in particular, giving the assistance of the lecturers whom it brought out to all other organizations.

The Young Men's Christian Association

Experience spread over many years of social and religious work among the men of the old Volunteer Force and, later, of the Territorial Force prepared the Y.M.C.A. for the important rôle it was called upon to play in the Great War. Within ten days of the outbreak of hostilities, no fewer than 250 centres of recreation had been opened up in different parts of the United Kingdom.

In the early days of November 1914, permission having been obtained from the military authorities, the first contingent of Y.M.C.A. secretaries was sent out by Sir Arthur Yapp, the managing secretary, to serve the Expeditionary Force in France and Flanders under the leadership of Mr. O. H. McCowen. Centres were immediately organized in Havre and later in the other base camps at Rouen, Boulogne, Dieppe, Etaples, Calais; in the auxiliary base at Abbeville, and in Dunkirk, Abancourt, Paris and Marseilles. Ultimately there were from thirty to fifty distinct Y.M.C.A. centres in each of the larger bases, and some three hundred centres in continuous operation on the L. of C. Many of these centres were in permanent or semi-permanent buildings, or consisted of large double or treble huts, each with concert hall, writing, billiard and class rooms, quiet room or chapel, and canteen. Pianos and gramophones were provided, stationery was free, whilst meals, tobacco and sweets were supplied at a low tariff. Extensive work was also carried on by the Association in convalescent hospitals, Army schools and rest camps. Special service was undertaken, for leave men and men travelling, at railway centres like Poperinghe, Hazebrouck, Béthune and Amiens; buffets were established at several stopping places on the railways, and at certain junctions hot drinks (tea, coffee or cocoa) were distributed free of charge. Many of these centres were kept open day and night, and at Etaples railway siding alone more than 200,000 cups of cocoa were distributed monthly to the troops passing through. The staff was largely voluntary, and consisted of lady workers and men of low medical category or over service age. The total number of workers on the Western Front averaged 1,500, but from time to time reached 1,750.

It was not until 30th June 1915 that the Y.M.C.A. received permission to open its first centre in the Army areas, and it established an experimental one in a deserted convent at Aire, then the headquarters of the First Army. In August of the same year, work was started at Reninghelst in the Second Army area. These centres developed rapidly, so that by the end of 1916 the Y.M.C.A. was to be found at most of the important towns and villages from Poperinghe in the north to Albert in the south.

In the ruined houses, barns and cellars, and in dug-outs in which the Y.M.C.A. worked near the front, tea, coffee, cocoa, bovril and oxo, with biscuits, cake and cigarettes, were the principal articles provided; and notepaper and a few books and old newspapers were available. Centres remained open uninterruptedly for three years in Arras. There were ten little centres in the Ypres Salient during the later years of the war, and at these—a corps assisting with transport—bloaters, eggs and apples could be purchased. One worker carried on in Ypres for 2½ years, living all the time in a small dug-out.¹

In June 1915 the Y.M.C.A. opened its first hostel in France for the use of relatives. If a N.C.O. or a private soldier was dangerously wounded and the hospital authorities thought there was anything to be gained by it, permission was given for the relatives of the man concerned to visit him in hospital. A Y.M.C.A. motor car met them at the boat, and they were motored to their destination, wherever it might be, and were entertained as guests of the Y.M.C.A. during their stay. The daily number of such guests averaged from 100 to 150, though at times there were many more.²

The other associations provided the same recreation, refreshments and accommodation for the troops, not on such an extensive and far-reaching scale, but in a little less rough-and-ready fashion.

¹ During February 1918, the turnover of the Y.M.C.A. canteens in the Ypres Salient alone was 245,000 francs, and in March it had risen to 260,000 francs; whilst at the same time in this district 5,000 to 6,000 gallons of hot drinks, chiefly cocoa, were given free to the men each week.

² In 1917, by arrangements with the medical authorities, the Y.M.C.A. established centres in connection with casualty clearing and dressing stations. For the battle of Messines, for instance, 34 small Red Triangle centres were improvised, and every wounded man who, alone or assisted, was able to walk to a dressing station, passed through one of these, where hot cocoa, sandwiches, biscuits, chocolates, cigarettes, were given to him, and if he so desired a postcard was filled in and despatched for him.

The Church Army

The Church Army, having provided evangelists to assist the army chaplains in the South African War, was not altogether unprepared for the demands that a great war made upon it. A hospital at Caen, opened in September 1914, was its first undertaking on the continent. In quite early days tents were opened in camps and training centres at home. In March 1915 they appeared at the bases in France, whence they pushed up nearer to the front, until there was hardly a place in France and Belgium where any considerable number of our men, and later women, were assembled in which there was not a Church Army centre. Some huts, "huts of silence" as they were called, afforded no other attraction but a place for quiet prayer and meditation; many of these were the only convenient places for church services. In the end, besides the institutions in the United Kingdom and provision for the Navy, there were over 800 huts and recreation centres in France (with 2,000 workers), Belgium and Italy, besides 340 in other theatres of war.

The Church of Scotland

The Church of Scotland's Guild at the outbreak of war at once took steps to extend the work which had been carried on since 1904 at Territorial summer camps, by the erection of tents for welfare work in the training camps of the New Armies. During 1915 the desirability of following overseas the men whom the Guild had been serving was frequently considered, but want of funds, which were eventually raised by the Churches then existing, prevented any definite action being taken until March 1916, when Mr. G. McAlpine, secretary of the Guild, and Mr. R. F. Gardiner, superintendent of camp work, visited France and submitted a report to the Committee on Christian Life and Work. A joint committee of the two Churches was formed under the name of "The Scottish Churches Huts Joint Committee". In the course of time 25 centres of work, with 350 workers, were established in France at the bases and on the L. of C., and 9 in the northern forward zone.¹ Mr. McAlpine served as general superintendent and Mr. Gardiner as business manager.

¹ After the Armistice, 20 were established in Germany.

The Catholic Women's League and Catholic Club

The members of the Roman Catholic Church organized two institutions,¹ "The Catholic Club", founded by Mr. Stephen Harding, who was in charge of it in France, and "The Catholic Women's League", of which Mrs. Fitzalan Hope was the president, and Mrs. Charlotte Baynes the manager in France. They began work at the bases in 1915, and had by the end of the war 13 centres at the bases, 12 smaller ones in the First Army area, and one at Audruicq ammunition and railway depot.² The huts were primarily used as clubs, but wherever the Catholic Club huts existed, a chaplain's room was set apart and the camp chaplain generally made it his headquarters, and later the same arrangement was made in the C.W.L. huts. Mass was said every morning, and after the club was closed in the evening there were prayers, and sometimes late services when parties were going up the line. Chapel huts purely for religious purposes, were built in several camps.

*The Salvation Army*³

Mr. Roosevelt, twice President of the United States of America, once said, "Whatever the lot of men, the Salvation Army is found with them"; and this was certainly borne out by its work during the war; its branches all over the world contributed both service and money. Salvationists accompanied all the Overseas forces and the "Army" was represented in all the theatres of war as well as in neutral countries, Holland, Switzerland and Denmark, where prisoners were interned.⁴ German Salvationists visited the British wounded in hospital in Germany.

A first party, under "Lieut.-Colonel" Mary Murray, sent to join the British Expeditionary Force left London in August 1914, but, going to Brussels, it had some difficulty in escaping to the British lines. The entire lack of

¹ They were amalgamated in 1918.

² Later there were two large clubs in Germany.

³ There is unfortunately no complete record of the Salvation Army war work in France: the book, "The War Romance of the Salvation Army" (Philadelphia, Lippencourt) deals only with work with the American Forces. General E. J. Higgins was in charge in France, his chief assistant being Lieut.-Commissioner William Haines (who died in 1929).

⁴ In the United Kingdom, hostels, homes and huts were organized for the troops, buildings lent to the War Office, thousands of Belgian refugees housed and looked after, wounded and soldiers' widows and families visited, and the widows relieved in the days before pensions were settled.

motor ambulances becoming known,¹ by "General" Booth's initiative five were presented to the Red Cross Society in November 1914, and these were gradually added to until there were thirty cars bearing the inscription "The Salvation Army Ambulance", which formed a complete section manned by Salvationist drivers, and in 1918 was officially recognized as "The Salvation Army Section". Gradually, also, hostels and huts were established in France, which like those of the other great organizations formed centres of religion and recreation, until there were forty at various bases, the large troop depots and other places, with officially appointed chaplains at Calais, Boulogne, Rouen and Havre bases.

Finally the Salvation Army organized a "Relatives War Graves Visitation Department", under the direction of Mrs. "General" Higgins, with headquarters at Boulogne, Arras and Ypres. Besides caring for relatives who came to the theatre of war, it obtained photographs of graves for those who were unable to make the journey.²

Concert and Theatrical Parties

It has been mentioned in a previous volume³ that during the winter of 1914-15 the troops began to improvise entertainments, concerts and theatricals for themselves. The organization of these forms of recreation continued to grow and expand: nearly every division soon had its team of entertainers, "Follies", "Whizz-Bangs", etc., drawn from its own ranks, and in the course of time, corps—whose headquarters and troops were not moved so often as were the divisions—obtained cinemas by private enterprise. Early in 1915 professional help came from England, when the first of Miss Lena Ashwell's concert parties landed at Havre.⁴ These parties worked with the Y.M.C.A., which made the arrangements for billets, and fixed the times and places of concerts. In all, over six hundred artistes gave their services. Both "permanent" and "touring" parties in France were provided. The seventh concert party, which came out in August 1915, was the first to perform plays. In November 1916 the first of the five repertory companies

¹ None reached the B.E.F. until October 1914.

² See "Graves Registration", below.

³ "1915" Vol. I. p. 6.

⁴ The organization of these parties was the suggestion of Miss Decima Moore (Lady Guggisberg). The Hon. Mrs. Haverfield and Miss Ashwell were the original workers.

(known as Lena Ashwell's Acting Parties) to which the troops themselves gave assistance by finding male artistes, was formed. The permanent parties worked at the bases and the hospitals, the touring ones visited training schools, depots, rest camps, divisions out for rest, and the smaller units on the L. of C., such as convalescent depots, anti-aircraft sections, prisoner of war camps, and even, when they arrived, the Chinese labour depots. In 1916, nine "firing line parties", of men unfit for military service, were collected to entertain in the Army areas, but they came to an end in February 1917 through the impossibility of recruiting enough men, although a few single-handed entertainers continued the work.¹ The funds for the equipment and maintenance of the parties were raised by the organizers.

THE PRESS AND WAR CORRESPONDENTS

Before the war a pamphlet, "Regulations for Press Correspondents Accompanying a Force in the Field", based on the experience of South Africa, had been drawn up. In accordance with this, an officer to take charge of press correspondents was appointed on mobilization. On the 10th August it was definitely decided by the Secretary of State for War to allow a limited number of war correspondents to accompany the British Expeditionary Force; but pictorial newspapers were not to send representatives and photography was forbidden. On the 15th August, however, it was ascertained that the French Government would not permit the presence of press representatives of any nationality in the zone of the Armies, and the British could only conform to this ruling. As a result, a number of press correspondents and others set out to enter the theatre of war and thus gather what information they could. In Belgium some of them appointed agents to supply information; some lived just outside the forbidden zone in France; others entered it and were arrested, some with photographic apparatus in their possession; they were released on promising to go out of the area and to write nothing about what was going on. Nevertheless a certain amount of information reached the newspapers; very inaccurate, as may be seen by reference to old files, but some of it, obtained in Belgium, might have proved of

¹ In January 1918 permission was given for mixed parties to go up as far as a boundary drawn through Amiens—St. Pol—Doullens—St. Omer (inclusive).

definite value to the enemy. To satisfy public opinion, Lord Kitchener, in September 1914 sent out to G.H.Q. Lieut.-Colonel E. D. Swinton and Captain Earl Percy (who died as Duke of Northumberland in 1930) as "eye-witnesses" to write articles which would not reveal news of any military value to the enemy, but still give the public some idea of what the Army was doing. This arrangement, never satisfactory, was disturbed by the arrival of the Indian Corps in October with two "eye-witnesses", not Regular officers, attached to it by the Secretary of State for India. One article prepared by them violated all censorship regulations, apportioning praise and blame, and mentioning by name not only individuals but units, so that an order of battle could be constructed from it. The matter was adjusted temporarily by the articles prepared in the Indian Corps being sent to Lord Kitchener for censorship at the War Office, and finally by the appointment of an officer of the Indian Army, Lieut.-Colonel J. W. B. Merewether, as "eye-witness".

On the 4th October 1914 Sir John French informed the Secretary of State that accredited journalists of a good type, under control, would be less harmful than irregular correspondents; but General Joffre was not disposed to allow any to come near the Armies. Towards the end of November it became known that, whilst still objecting to accept permanent representatives at the front, he was disposed to allow small parties of journalists to make short tours in the zone of the Armies. The British Government were not informed of this officially until the end of January 1915, and they very soon afterwards heard that the Belgian Government would follow the same system.

In February therefore Major A. G. Stuart, Indian Army, the officer appointed on mobilization to take charge of press correspondents, was given authority to take out to France two parties of press representatives for tours at the front, each of two or three days. Finally on the 2nd May 1915 arrangements were made for representatives of the press, to be selected by the Newspaper Proprietors' Association, to come out and remain permanently. On the 12th May the first party, Mr. (later Sir) Philip Gibbs, and Messrs. M. H. H. Macartney, Douglas Williams, Valentine Williams and Frederick Palmer (American press) arrived, and were quartered at Tatinghem, near St. Omer, and later at Tilques. They were given such information as was desirable, and paid visits to the front and places of interest.

Their despatches were censored; but these gentlemen, and those who in turn succeeded them, thoroughly realized the necessity for restrictions and conformed both to the letter and the spirit of the regulations. There were, therefore, no difficulties.

In addition to the regular correspondents, special visits were made to the front by distinguished pressmen, and in February 1916 the first party of them, representing the neutral presses of Sweden, Norway, Denmark and Switzerland, came to France.

The 1st Canadian Division when it arrived brought with it its own "eye-witness", Mr. Max Aitken (later Lord Beaverbrook), and the Australian divisions were accompanied by Mr. H. S. Gullett and Mr. C. E. W. Bean, who both subsequently became responsible for the compilation of the official history of the Australian Forces.

The success, nay the existence, of the British Expeditionary Force in the early days of the war depended on secrecy as regards its whereabouts. It is now firmly established that the German General Staff had no information as to where the expedition landed, or where it assembled; they could only guess at the place, and imagined it to be at Tournai, based on Boulogne and Calais, when it was at Mons based on Havre. The Germans stumbled on the B.E.F. at Mons and Le Cateau, and had no clear idea as to where it was after Le Cateau, until it struck them at the battle of the Marne. The whole force was withdrawn from the Aisne district and transferred to Flanders without the movement coming to German knowledge until it had been completed. At the First Battle of Ypres, it was thought by the enemy that there were Territorial Force divisions in reserve waiting to counter-attack. Complete secrecy and the denial of all information to the enemy are of such importance at the opening of hostilities, and it is so difficult to give any information to the newspapers without it reaching the enemy, that absence of news must be regarded as part of the price that the public must pay for success in the field.

As soon as Sir Douglas Haig assumed command, the regulations governing the work of the press representatives at the front were carefully revised. It was considered that the forthcoming operations would in all probability be such that a larger measure of publicity might with advantage be provided, the more so as the correspondents of Allied and neutral Powers were publishing in their

journals views which ignored or made little of the ever-increasing part which was being played by the British Army in France. The new Commander-in-Chief was averse to the press representatives being "spoon-fed" and held the view that when, for military reasons, it was necessary to withhold information from the public, it could only be done with the co-operation of the correspondents themselves. Living in the war area, they were bound to hear rumours and make deductions, however carefully they were shepherded to prevent them from seeing things which, for military reasons, had to be kept secret. It was therefore definitely decided to take the correspondents as fully as possible into the confidence of G.H.Q., allowing them the complete liberty, of which they availed themselves, to go to any part of the front at any time, so that they could record that human and personal aspect of the war which must be outside the scope of official despatches. When giving them information, what portions should not be divulged in their despatches were explicitly specified; otherwise they could make free use of the material according to their own methods of selection without official dictation or direction. The correspondents were accommodated in a special château within easy distance of G.H.Q. and the officers of the press censorship staff who lived with them were given the double duty of accompanying them in their tours and censoring their despatches. As press censors, these officers were given a wide measure of responsibility, and only in the case of acute disagreement, which never occurred, were they instructed to refer the case to G.H.Q. At the same time the General Staff at division, corps and Army headquarters were informed of these arrangements and were directed to conform thereto. The head of the Intelligence held a weekly conference with the press correspondents at which he explained the general idea in the mind of the Commander-in-Chief, and in addition, prior to the commencement of any large operations, he paid a special visit to explain the plan in detail.

These arrangements were soon working well, and obtained throughout the rest of the war. The press representatives, with Mr. (the late Sir) H. Perry Robinson of "The Times" as doyen, co-operated most loyally and efficiently. The only difficulty encountered was due to the natural desire of the public of the Overseas Dominions to have as much information as possible about the operations of their troops. The request was supported by the Govern-

ment in London, and was complied with. The British public, for their part, naturally wished a corresponding importance to be given to the operations of local units of the British Army; but as the indication of any British unit might have divulged to the enemy the movement of troops from one portion of the line to another and the order of battle, it was rarely possible to distinguish individual British units. The same objection did not apply to Dominion units, who were in any case readily identified by the enemy immediately they entered the line. As will be seen later in the history, advantage was taken of this to mislead the enemy; but the difference in the treatment of the contingents tended to suppress and conceal the share in the operations taken by the Homeland units.

In general the correspondents were left entirely free as to the method of dealing with the matter which was at their disposal, subject to the general warning, however, that undue optimism as regards the progress of operations would only lead to disappointment.¹

It may be of interest to record that after the stabilization of the front the "Continental Daily Mail", published in Paris, reached the troops with great regularity on the day of issue and obtained a great circulation, while the most popular weeklies appeared to be "John Bull", "La Vie Parisienne", whose illustrations adorned many a dug-out, the "Bystander" with Bairnsfather's cartoons, and "Punch", whose artists, poets and "watchdogs" did much to keep up the spirits of the troops.

GRAVES REGISTRATION

In the South African War matters connected with cemeteries and registration of graves had been in the hands of the Royal Engineers, but under the stress of the war of movement during the first months in France in 1914 every available officer, N.C.O. and sapper of the R.E. had been fully employed on military work. The dead were buried by their comrades or the inhabitants, near where they fell or in local cemeteries, burial returns being rendered by the

¹ The general warning was only removed in the case of the early days of the battle of Cambrai when, under pressure from London, the correspondents were advised that it would be opportune to make the most of any British success obtained. Full advantage was taken of this liberty, with the inevitable result that when the German counter-attack met with a considerable measure of success there was deep and widespread disappointment throughout Great Britain.

chaplains or their units, or by medical units when the men died in their charge. Mr. (later Sir) Fabian Ware, who, at the end of October 1914, had been sent to France as a commissioner of the British Red Cross Society and the Order of St. John of Jerusalem, at the suggestion of his Society and Order, proposed to Br.-General G. H. Fowke, the Engineer Adviser (as he then was), that the ambulance unit which he had brought out should undertake the marking and registration of all British graves which it could locate. General Fowke was glad to be relieved of the difficulty of finding personnel for such work, and, with the authority of the Commander-in-Chief, Mr. Ware began his task.

In February 1915, after Sir John French had communicated with the War Office, the Red Cross unit under Mr. Ware was officially appointed to carry on the work under the name of the Graves Registration Commission. It was authorized, under the Adjutant-General, to deal with the methodical marking and registration of the graves of all British officers and men buried in France and Belgium. The leaders of the unit were given military rank as officers ; but until October 1915, when the unit was definitely given a military status, the Red Cross Society provided both the personnel and the motor cars required.

For the purposes of graves registration the zone of the British Expeditionary Force was divided into seven sectors, and with the help of the burial returns all graves in them were reported, and where this had not already been done, marked with a cross, or in the case of Jewish and Indian soldiers with another form of approved memorial. Photographs, the cost being borne by the Joint Committee of the Red Cross Society and St. John's Ambulance, were taken of the graves for transmission to relatives.

During the winter of 1915-16, in view of the passing by the French Chamber of a law which provided land at the cost of the French nation for the burial of British soldiers, the British Government appointed a national committee for the purpose of making permanent provision for the care of the graves in France and Belgium, and the King was pleased to approve of H.R.H. the Prince of Wales becoming President. Of this committee, besides others, two French officers and Lieut.-Colonel Ware were members.

The work of the committee now became more responsible and laborious ; for in addition to the care of graves and ordinary duties, it had to deal with the acquisition of land

and answer the enquiries from relatives of the dead. In March 1916, therefore, its name was changed to "Com-mission of Graves Registration and Enquiries", Lieut.-Colonel Ware being appointed Director. Graves registration units were formed for the different sectors, with a special unit at G.H.Q. under O.C. Graves Registration. In May 1916, in consequence of the extension of the system of registration of graves to areas other than France and Belgium, the Directorate was transferred from G.H.Q. to the Adjutant-General's Department at the War Office.

Up to March 1916, the number of graves registered in France and Belgium was 49,413, and the Directorate had assumed control of 33 cemeteries.

In May 1916, the Directorate suggested the introduction of the double identity disc, which had been adopted in the French army, and it was brought into general use on the 24th August 1916.

RECRUITING

In a previous volume ¹ it has been mentioned how, in July 1915, the National Registration Act had been brought into force. It was part of a definite plan to stimulate recruiting, a stage towards conscription, and a means to discover how many men and women between the ages of 15 and 65 were engaged in each trade, whether serving war purposes or not. When the results of the registration became available in the middle of September, it was possible, after giving due consideration to the needs of munitions, agriculture and general purposes, to discover how many men were holding back from joining the forces, and how many could be withdrawn from work for military service. Before resorting to compulsion, voluntary service was given its last chance. On the 11th October Lord Derby was appointed Director-General of Recruiting, and five days afterwards he brought forward the "Derby Scheme". Under this, men between 18 and 41 were still allowed to enlist voluntarily; others could attest with the obligation to come up if called on, and these were classified as married or single, and each category was divided into 23 "Groups," according to age. To act as stimulus a War Pensions Act was passed, which took into consideration not only the wives and children of married men, but the dependents of all soldiers. The War Office notified that voluntary enlistment to any arm except the infantry would shortly cease. When

¹ "1915" Vol. I. pp. 50-54.

the Derby Scheme lists were closed on the 15th December, 215,431 men had enlisted thereon, and 2,184,979 had attested. Making allowance for "starred" men considered indispensable for home work and the physically unfit, it appeared that over 650,000 single men had evaded enrolment for service. It was the turning point. Every form of inducement and pressure had now been tried. Mr. Asquith had already announced that unless the bulk of the single men came in under the Derby Scheme, compulsory service would be introduced for them before married men who had attested were called up, and on the 4th January 1916 he introduced the Military Service Act.

By this Act, which became law on the 27th January, after which date all voluntary enlistment even for the Territorial Army ceased, every male British subject between 18 and 41 years of age who (a) on the 15th August 1915 was ordinarily resident in Great Britain (Ireland was excluded), and (b) on the 2nd November 1915 was unmarried or a widower without child or relative dependent on him, was deemed to have been duly enlisted for general service, could be assigned to any branch of the service, and had no choice of arm or unit. Provision was made for exemption on grounds of engagement in an indispensable profession or trade, or of being trained or educated for that work; for serious hardship, financial or domestic, if called up; for ill-health or infirmity; and for conscientious objections. If a man preferred to join the Navy, the Admiralty had first call on his services. Tribunals were set up to deal with applications for, and to issue certificates of exemption. The Act was extended to married men on the 25th May. It was a compulsory application of the Derby Scheme; but to prevent the slur of compulsion being cast upon the men attested under that scheme, a new term "Class" instead of "Group" was introduced for those men who were now compulsorily enrolled; Classes 1-23 including all single men born between 1875 and 1897, one class for each year, and Classes 24-46, the married men between the same ages.

In February 1916 a pamphlet of 140 pages was issued by the Director-General of Recruiting, under the title of "Group and Class Systems. Notes on Administration". This explained fully the application of the Act and the duties of "Local Tribunals", of which there were about 2,000, of "Appeal Tribunals", 73 in number, and of the "Central Tribunal". To each of the appeal tribunals there was

appointed a military representative to protect the military interests of the nation; he appeared in any case where he considered that the application for a certificate of exemption was unjustified; but he had no vote. The official badges of war work already in use were regularized and declared to be four: the Admiralty badge, the War Service badge issued by the Ministry of Munitions, the War Office badge (issued before the War Service badge came into existence), and the War Munitions Volunteers badge.

As regards medical categories, six were at first recognized: general service, field service at home, garrison service abroad, garrison service at home, labour, and sedentary work (clerks, storemen, batmen, cooks, orderlies and sanitary duty men). In May they were altered to seven, and lettered:

A :	General Service ;
B 1 :	Abroad : Garrison Service ;
B 2 :	Labour ;
B 3 :	Sedentary Work ;
C 1 :	At Home : Garrison Service ;
C 2 :	Labour ;
C 3 :	Sedentary Work.

Groups 2 to 5 (single men) of the Derby Scheme were called up on the 25th January 1916, and the others, up to 23, in succession, Group 1 last, between that date and the 28th March. Classes 1 to 23 (single men), under the Act, were called up between the 3rd and 28th March. Groups 24 to 46 (married men) and Classes 24 to 46 (married men) followed between 7th March and 13th June, and between 3rd and 24th June, respectively.

The results, owing to the many exemptions, were unsatisfactory; the application of compulsion between January and July brought only 43,000 recruits for general service to the Army, whilst 93,000 men failed to appear when called on, and no less than 748,587 claimed exemption in addition to 1,433,827 already starred (in reserved occupations) or badged. Whatever result the introduction of compulsory service may have had in Great Britain, and it was much less than anticipated, since volunteering had already taken the cream of the nation, it had an immense effect on public opinion in Germany, where it indicated that at last Great Britain was taking the war in grim earnest. Of the Dominions, only New Zealand followed suit in introducing compulsory service, which it did towards the end of 1916.

By an Army Council Instruction which came into force on the 1st June 1916, the old Category A was divided into three classes, and a fourth, A 4, was added to it.

- A 1 : men actually fit for despatch overseas in all respects, both as regards training and physical and mental qualifications ;
- A 2 : recruits who should be fit for A 1 as soon as trained ;
- A 3 : returned Expeditionary Force men who should be fit for A 1 as soon as hardened ;
- A 4 : men under 19 years of age who should be A 1 or A 2 as soon as they reached 19.

Classes D and E were also introduced. Class D comprised men unfit for service in A, B or C, but likely to become fit in six months ; Class E, those not likely to be so. Class D was divided into :

- D 1 : Regular R.A., R.E. and infantry and T.F. infantry in command depots ;
- D 2 : Regular R.A., cavalry, R.E. and infantry in regimental depots ;
- D 3 : men in any depot or unit awaiting treatment.

The following standards were laid down as a guide for placing men in the various categories :

- A : " able to march, see to shoot, hear well and stand " active service conditions ;
- B : " free from serious organic diseases, able to stand " service on the lines of communication in France, or " in garrisons in the tropics ;
 - B 1 : " able to march 5 miles, and see to shoot with " glasses and hear well ;
 - B 2 : " able to walk 5 miles to and from work, see " and hear sufficiently for ordinary purposes ;
 - B 3 : " only suitable for sedentary work.
- C : " free from serious organic disease, able to stand " service conditions in garrisons at home."

The standards otherwise for C 1, C 2 and C 3 were the same as for B 1, B 2 and B 3.

The Army in France continued to fall below establishment until April 1916, but after that date the situation improved, and on the 18th May the deficiency was only 46,200. The monthly wastage from trench warfare averaged 35,000, and the reinforcements 45,000, so that by the 1st July the Army was only about 10,000 short ; but the

200,000 men who, it was calculated, would be required to replace the battle casualties of the offensive—and the total came nearer 400,000—were not yet fully trained. In the first place, the number of recruits anticipated had not appeared: secondly, in calculating reinforcements four months' training at home had been taken as the basis, and, owing to the inferior class of recruit obtained in 1916, bad weather and other difficulties, the time required had been longer. Henceforward the history of recruiting was to be one long record of falling numbers and of a struggle to keep the Army in France—which required not only reinforcements but officers and men for all the new specialist units—more or less up to strength by tightening up the conditions of exemption, by combing out men from home industries and services behind the front; and, when a crisis occurred, by reducing the number of troops in the minor theatres. At the official close of the Battles of the Somme on the 13th November 1916, the British Expeditionary Force was 165,000 other ranks, mainly infantry, below establishment, there being actually present in France at the front and on the lines of communication 1,465,650 men.

No definite attempt was made in 1916 to organize women's labour, but a large number of women entered war work during the year. Besides engaging in their own special tasks of nursing and of canteen work at camps, munition factories and railway stations, there were, as a result of the withdrawal of men by the Derby Scheme and Military Service Act, 150,000 women employed on munition work. They were to be found too, in every form of business: in the great banks, in the railway service, at manual work on the land and at gas works, and as motor drivers, gardeners and hunt servants.

CHAPTER VII

TRENCH WARFARE

(Sketches 5 to 10)

THIS chapter and the one following deal with nine local actions, the most important fighting in the period between the taking over command by Sir Douglas Haig and the Somme battle. They give some idea of the conditions of trench warfare, the sudden attacks to which the trench garrisons were liable, and the constant vigilance required. One of them, Mount Sorrel, was officially classified as a "battle"; three of them—The Bluff, St. Eloi and Vimy Ridge—as "actions"; and in the other five, although they obtained no such recognition, considerable losses were incurred. Three of them were German gas attacks.

The front on which the British had settled down after the fighting at Ypres and Loos in 1915, and the additional length of front which in the spring of 1916 they had taken over from the French, placed the British Expeditionary Force at great disadvantage in relation to the enemy both as regards ground and observation. Only in the Armentières sector, where in October 1914 the III. Corps had pushed the Germans back, was there a fairly defensible line. Elsewhere for almost the entire length of the British front the enemy held the higher and drier ground.

That manœuvre is possible in trench warfare just as in open warfare, Ludendorff was to show when he drew back the front to the Hindenburg Line in February 1917. Sir Douglas Haig was only too well aware of this; he would gladly, by suitable readjustment, have made more secure the parts of his line which were to be held passively during his projected offensive. When the front from the Scarpe to Loos was taken over from the French, he directed General Allenby to hold it temporarily by posts and select the best line he could behind it; but the best line was some way behind, and to withdraw to it meant giving up all the

French conquests in Artois in 1915. General Joffre would not hear of this or of any other withdrawal. Although in the opening phases of the campaign in 1914 enormous stretches of French territory had been abandoned without hesitation, objection was now raised to the surrender of the smallest part. There were strong political reasons against giving up any further Belgian territory and for clinging on to the Ypres Salient, though a retirement to the line of the ramparts and the canal would have saved a heavy daily toll of lives. The Allied generals had it in their minds to improve their position by advance rather than by retirement, and were convinced that the intended offensive would be successful. Whilst therefore the enemy, who meant to remain on the defensive except at Verdun, went on improving his defences, the French and British, feeling certain that they would soon be moving on, did little to improve theirs; they were thus at a serious disadvantage when attacked. German wire was a real obstacle, the French and British wire was often little better than a conventional sign. Deep-mined dug-outs, of which the enemy, as it was to be discovered at the Somme, had sufficient to shelter most of the garrison of the front defences, were practically unknown on the Allied side.

Given this general policy, and the fact that the Allies were in the worse position from the defensive point of view, it would have seemed appropriate for them to have kept as quiet as possible and not provoked the enemy to use his advantages. Joffre's policy of "nibbling" having gone out of fashion, the French to a great extent did follow this course, and the enemy appeared to be agreeable to it. When the British took over from their Allies, they generally found a kind of unofficial suspension of arms or truce prevailing, at any rate above ground. With a view to cultivating an "aggressive spirit", as it was called, G.H.Q. did not allow this state of affairs to continue. Sniping, fire surprises and raids¹ were ordered and encouraged, and they naturally provoked retaliation: to the three British attacks related in the next chapter, the Germans replied

¹ For number of raids made see Chapters VIII. and XII.

The essence of a raid is that the raiders should enter the enemy's trenches by surprise, kill as many of his men as possible, and return before counter-measures can be taken. Special tasks may be added, such as obtaining prisoners for "identification", damaging mine shafts, destroying a length of trench or post which is giving particular trouble but cannot be permanently held if captured. The number of men employed was usually 10 to 200. The instructions for a raid regarded as a model one are given in Appendix 6.

with five, and as far as the British were concerned, the Western Front was never quiet.

Unfortunately in the first half of 1916 the Germans enjoyed other advantages besides the general superiority of position and stronger defences; they possessed better trench warfare equipment in their hand-grenades, rifle-grenades and trench mortars, and more of it; they were more industrious in repairing and improving their defences; lastly, being a homogeneous army, they could concentrate a large number of heavy guns and masses of ammunition for a minor operation with greater ease than the Allies. Verdun and the Somme had not yet taken heavy toll of the best German professional officers and N.C.O.'s and the last of their peace-trained soldiers. The German trench-fighter was a formidable antagonist, though the officers and men of the New Army were getting equal to tackling him in minor warfare. Underground the British tunnellers early established and kept superiority. Above ground the result was always doubtful, depending more on the number of machine guns it was possible to keep in action and, in a less degree, on the volume and accuracy of the artillery fire, than on personal bravery and skill. Indeed superiority in heavy guns often turned the scale. It will be noticed in the narrative that with sufficient concentration of artillery it was always possible to gain possession of a small portion of the enemy's front. Whether the aggressor could remain in possession of his conquest depended on the enemy's pleasure; the Germans took the Bluff, the British turned them off; the Württembergers captured Mount Sorrel and Tor Top, the Canadians dispossessed them; the British gained ground at St. Eloi and at Vimy, they were not allowed to retain it.

As regards the wisdom of encouraging fighting in trench warfare, there will always be a difference of opinion. It was a means of gaining experience; on the other hand, it cost the lives of many of the bravest subordinate leaders and soldiers. Moreover if the line had been held more lightly and no more action taken than absolutely necessary, there would have been more time and opportunity for training troops, and life at the front would have been less uncomfortable. It was, in any case, monotonous. Most of the daytime—invariably in the morning—the three lines, firing, support and reserve, were deserted except for a few sentries leaning against the parapet with periscopes handy, and for a sniper or two; everyone else was under

cover, silent and, if possible, asleep. At dark a whole population suddenly appeared, literally out of the earth; working parties would set about draining, digging and wiring; from the rear, along the communication trenches, would come parties carrying rations, water, ammunition, sandbags, duck-boards, and everything imaginable. Behind these again the roads were packed with horsed wagons and limbers. Occasionally there would be a raid, more often an alarm, and the scene would be lighted up with innumerable Very lights and rockets, some for illumination, others as "S.O.S." signals to call for an artillery barrage. Then dawn would approach, the trench garrison would stand to arms and be dismissed to begin another similar day.

THE FIRST PHOSGENE GAS ATTACK

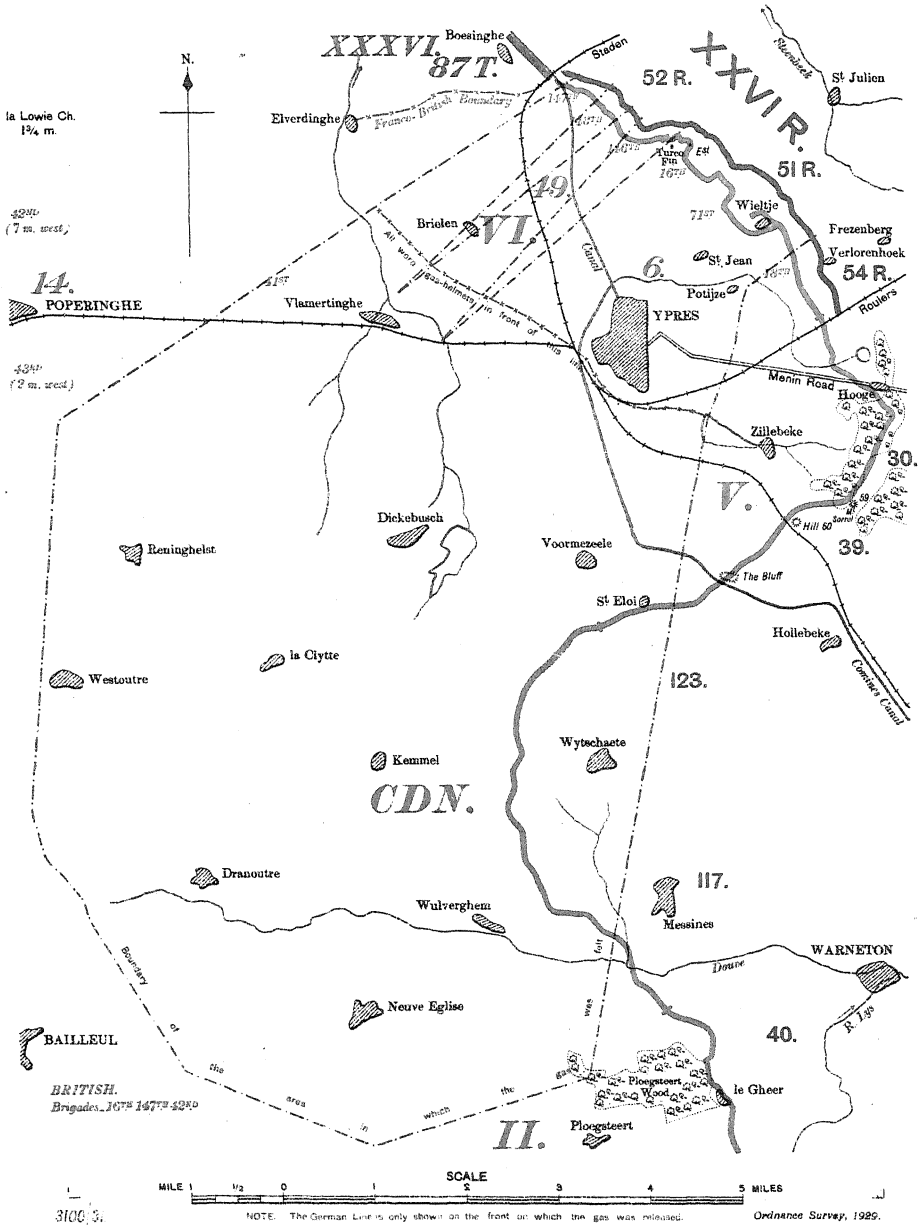
19TH DECEMBER 1915

Sketch 5. On the night of the 4th/5th December 1915 a German non-commissioned officer was captured near Ypres, whose regiment belonged to the *XXVI. Reserve Corps* holding the sector between the Roulers and Staden railways, north-west of the town. He gave information that gas cylinders had for some time been built in along the corps front, and that an attack was to have been made at a recent date, but had been postponed. From another source it had been learnt that the enemy proposed to make a gas attack "somewhere in Flanders" on some date after the 10th December when the weather was suitable; "it might be at Christmas or even later". It was also known that reinforcements, in the shape of the *26th (Württemberg) Division*, had arrived at Courtrai from the Eastern theatre.

The front opposite the *XXVI. Reserve Corps*, except about a hundred yards on the left occupied by part of the French 87th Territorial Division, was held by the 6th Division (Major-General C. Ross) and the 49th Division (Major-General E. M. Perceval), both belonging to the VI. Corps (Lieut.-General J. L. Keir) of the Second Army (General Sir Herbert Plumer).

Standing measures against cloud gas attacks were in force: the direction and strength of the wind were very closely observed by an officer detailed in each corps in the salient, and whenever conditions were favourable to the

THE FIRST PHOSGENE GAS ATTACK. SUNDAY, 19TH DECEMBER 1915.



3100 3.

NOTE. The German Line is only shown on the front on which the gas was released.

Ordnance Survey, 1929.

enemy, the order "Gas Alert" was issued. This meant Dec. 1915. that a sentry was posted near each alarm horn or gong, at every dug-out holding ten men or more, on every group of small dug-outs, and at each signal office; that gas helmets and gas alarms were inspected once every 12 hours; that all ranks wore the helmet outside the great coat, or rolled up on the head, and had the top button of the great coat left undone, so that the helmet might be tucked in; and that special precautions were taken to lubricate the working parts of all rifles, machine guns and guns in forward positions. The action to be taken in the event of a gas attack was thoroughly understood by all ranks. A special warning of attack was, however, issued to all divisions in the line in front of Ypres.¹

From the 15th December onwards, the wind and weather being more or less favourable for an enemy gas attack, the "Alert" was in force, and a bombardment by 4.5-inch howitzers of the enemy's trenches opposite the VI. Corps was organized for the purpose of destroying the gas cylinders if they existed. The bombardment, limited by the scanty daily ration of ammunition,² had not been completed when an attack was launched, and as the cylinders were well dug in none appear to have been exploded by the shelling, although considerable damage was done to the hostile parapets.

On the 19th December at 5 A.M., when it was still quite dark, a single parachute light of a kind not generally used by the enemy was seen to ascend from his lines, and at 5.15 A.M. red rockets, also of an unusual type—so unusual as to cause sentries to awaken their officers—were sent up all along the *XXVI. Reserve Corps* front. Very shortly after these signals had been fired the hissing sound of the release of gas was heard and its smell noticed. On the left, opposite the 49th Division which had the 146th (Br.-General F. A. MacFarlan), the 148th (Br.-General R. Dawson) and the 147th Brigades (Br.-General E. F. Brereton) in the line, No Man's Land was narrow, in two places little more than twenty yards wide, and the discharge of gas was preceded by heavy musketry fire from the German trenches. On the right, in front of the 6th Division,

¹ It will be recalled that no notice had been taken of the information given by a prisoner before the first gas attack of the 22nd April 1915. See "1915" Vol. I. pp. 153-5.

² Per division (12 howitzers), 250 rounds for the week ending 20th December 1915, and only 200 the week following; that is about 3 per day per howitzer.

Dec. 1915. which had in the line the 18th Brigade (Lieut.-Colonel M. D. Goring Jones in temporary command), the 71st Brigade¹ (Br.-General M. T. Shewen) and the 16th Brigade (Br.-General C. L. Nicholson), No Man's Land was generally wider, over three hundred yards, and here slow rifle fire was begun simultaneously with the emission of the gas, followed a quarter of an hour later by heavy fire, no doubt to cover the advance of infantry.

Warning was immediately given by the sentries in the front trenches by sounding the gongs and Klaxon horns provided for the purpose, and within a minute the garrison² had lined the parapet. Well controlled rifle and machine-gun fire was immediately opened by some battalions and continued until the gas had cleared, whilst others waited until the Germans attacked. On receipt of the pre-arranged gas attack message signal, the artillery promptly opened a shrapnel barrage on their night lines. The fire seemed to discourage the enemy; for no general infantry attack followed after the gas, although men in full marching order were seen lying on the parapet, and the trenches were certainly strongly manned, as a great volume of rifle fire was heard when a British aeroplane flew low over them. Small parties were seen to leave the trenches in several different places—an officer with about a dozen men in single file at one spot, a large party of about thirty at another—which endeavoured to cross No Man's Land. One party actually got as far as the British parapet and was there dealt with; the others were shot down before they got so near. The Germans then began an intense bombardment with shrapnel of the salient north-west of Wieltje in the 71st Brigade sector. Here the officer in command judged that shrapnel fire could not herald an infantry attack, and ordered his men to cease fire and go under cover. Lacrymatory and H.E. shell were used against the right of the 49th Division, on the second line, on the exits of Ypres and on the batteries, whilst Vlamertinghe was shelled by 17-inch howitzers

¹ The 71st Brigade had originally formed part of the 24th Division, but had been exchanged for the 17th Brigade of the 6th Division when, after the Battle of Loos, it was decided to stiffen new divisions by bringing in experienced battalions. See "1915" Vol. II. p. 274.

² Companies of the 2/Durham L.I., Queen's Westminster (these two battalions, on the right, were not affected by the gas), 14/Durham L.I., 9/Suffolk, 1/Leicestershire, 8/Bedfordshire, 1/King's Shropshire L.I., of the 6th Division, and of the 1/5th and 1/6th West Yorkshire, 1/5th York & Lancaster, 1/4th K.O.Y.L.I., and 1/4th Duke of Wellington's of the 49th Div.

and Elverdinghe by 13-inch. There was, however, no organized attempt at wire-cutting. Dec.
1915.

The measures named in the defence scheme were carried out: the reserves of the 6th and 49th Divisions were moved forward, and the 14th Division (Major-General V. A. Couper), the corps reserve, was ordered to stand to arms; but there was never any need to employ the reserves. The gas, which is now known to have consisted of chlorine with 20 per cent of phosgene, formed a white cloud over fifty feet high, and passed away in about half an hour before an increasing north-east wind. Its effect, however, was felt over a very large area, as it spread fanwise from the front of attack, three miles, to a breadth of eight miles and a depth of ten miles, reaching almost to Bailleul.

About 6.15 A.M., after the discharge of some green rockets, the front was deluged with gas shell, which came with deadly quietness through the darkness, and exploded with a dull splash. Before it was realized what was afoot, some men were gassed, but the British helmets as a rule seemed to be sufficient protection. Heavy howitzer fire was then resumed by the enemy and lasted until about 9.30 A.M., when the situation was reported normal, with rather more shelling than usual. About 8 A.M., as soon as it was light, an enemy observation balloon was put up; an aeroplane flew low over the Canal line; and about 9 A.M. six aeroplanes came over as far as Vlamertinghe—Elverdinghe. These no doubt reported on their return that there were no signs of a retirement.

The total casualties from gas, which were carefully investigated afterwards, were 1,069, with 120 deaths, three-quarters of them in the 49th Division.¹ Lieut.-Colonel E. O. Wright, the A.D.M.S. of the 49th Division, was killed by a shell whilst supervising the evacuation of gassed men.

The immunity of the divisions of the VI. Corps from more serious loss was probably due to the rapidity with which the gas passed; for the solution with which the helmets were impregnated was not calculated to resist high concentrations of phosgene. Special effects were, however, observed which at the time were rightly attributed to phosgene; amongst others, that all food which had been exposed to the gas became tainted, and, if eaten, caused vomiting,

¹ Valuable information as to the effects of gas warfare will be found in the official history, "Medical Services. Diseases of the War" Vol. II. pp. 242-525.

Dec. and that men died suddenly when making an exertion
1915. twelve hours after the attack, although they had apparently been little affected in the interval.

At 2.15 P.M. the Germans recommenced a heavy bombardment, and continued it with intervals until the evening of the 21st, so that the shelling of the VI. Corps lasted 58 hours, but it was endured with the same resolution as the gas attack.

The general impression left was that the enemy had expected his new gas would either destroy the garrison of the front system, caught asleep in the dark, or create a panic, and that he would only have to walk over and take possession of Ypres.¹ Had not the troops been on the alert and steadfast, there might indeed have been disaster.

NOTE

GERMAN ACCOUNT OF THE PHOSGENE GAS ATTACK²

“No infantry attack was intended on the 19th December 1915 on the sector of the front between Boesinghe—Pilckem and Verlorenhoek. The object of the gas attack, which had been ordered and prepared months before (building in of gas cylinders), was solely to damage the enemy by losses and destruction of his positions; in addition, experience in the release of gas would be perfected.

“At the end of the discharge, twenty patrols went forward against the British positions. They were to discover the effect of the discharge, and also bring in prisoners and make booty.” But only two of the patrols reached the British trenches. The rest could not advance under the heavy fire, and some suffered severe losses.

“The general impression was that in spite of the relatively very favourable conditions, the gas had not had the expected effect, and that a break-through of the enemy position solely as the result of the gas discharge would not be possible.”

THE BLUFF

14TH AND 15TH FEBRUARY AND 2ND MARCH 1916

Feb. With a view to creating diversions just before and
1916. during the attack by the German *Fifth Army* on Verdun,

¹ The intense desire of the Kaiser for a success on the Yser, to cover up the previous failures, before his troops were transferred to the Eastern theatre for the campaign there, was known, and has since been confirmed by Lieut.-Colonel A. Niemann, who in 1918 was attached to his suite as representative of the General Staff (“Kaiser und Heer”, pp. 274-5) and by the German Official Account, vi.

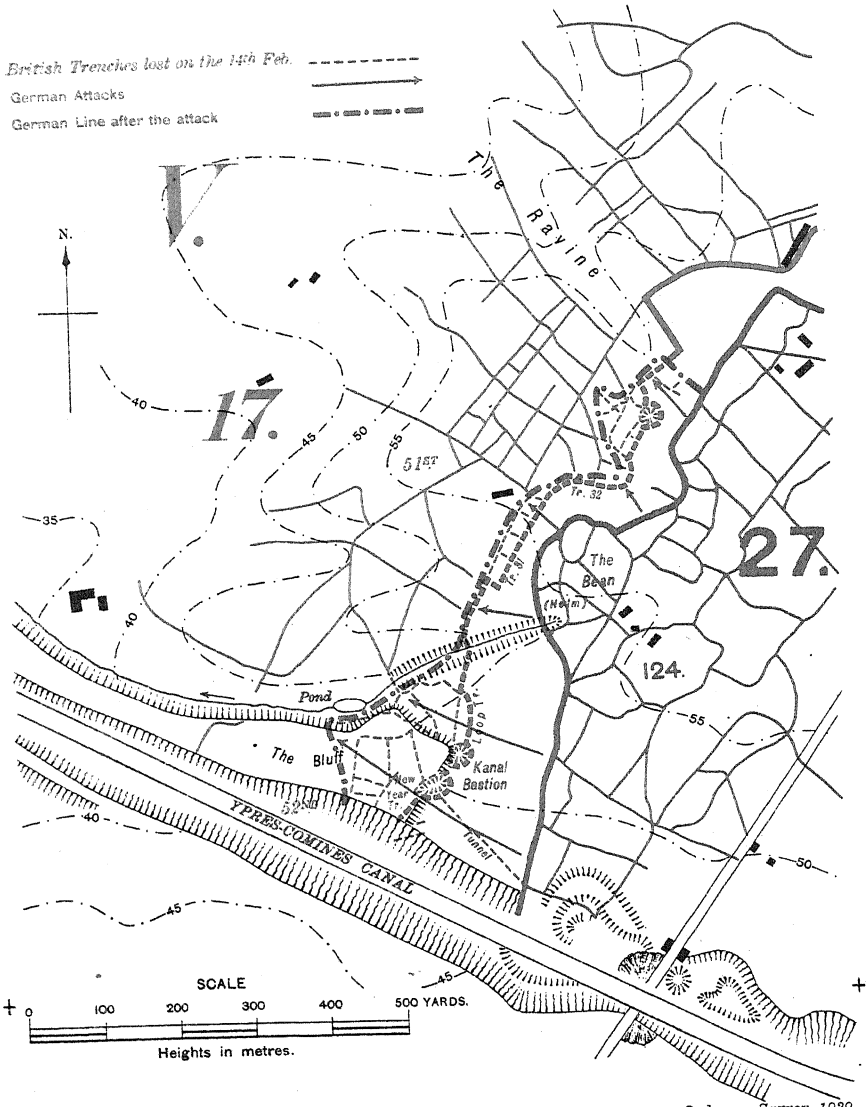
² Kindly furnished by the *Reichsarchiv*. There is no mention of this unsuccessful attack in German histories or books on gas warfare.

SKETCH 6.

SKETCH 6.

THE BLUFF, 1916.

THE LOSS ON THE 14TH FEBRUARY.



3100/31.

Ordnance Survey, 1929.

originally planned to begin on the 12th February, the other enemy Armies received instructions to demonstrate from the 8th February onwards, at the same time taking the opportunity, if possible, to improve their line. They were also to endeavour by artillery fire, exhibition of captive balloons, and troop movements to give the impression that reinforcements had arrived. An attack on the Loos salient by two divisions was planned, but abandoned, and it was finally settled that the summit of Vimy ridge, then in French possession, should be recovered. When the date of the German offensive against Verdun was, on the 10th February, postponed from the 12th to the 21st, the attack against Vimy was fixed for the same date, but the demonstrations ordered were allowed to proceed.¹

In the period 8th to 19th February, therefore, the Germans carried out a series of operations against various parts of the Ypres Salient, sometimes merely by heavy artillery fire, sometimes by attacks preceded by intense bombardment; but their purpose was naturally not understood at the time. In meeting them the Second Army was greatly assisted in one way or another by all the squadrons of the recently formed II. Brigade of the Royal Flying Corps, though the greater part of the work fell on No. 6 Squadron. Bad weather seriously interfered with the work; but reports from the air made it fairly certain that no serious attacks were in preparation, and it was mainly in ranging the heavy artillery that positive service was rendered. Early in February measures had been concerted by which on receipt of a message, "General artillery action", squadrons ceased their routine duties and sent out machines to co-operate with the artillery and to reconnoitre.

On the 12th February an attack was made in the early morning on the 20th Division (Major-General R. H. Davies), which was in the act of relieving the 14th (Major-General V. A. Couper) in the Boesinghe sector, on the extreme left of the British front. The Germans actually broke into the front line, but were driven out by immediate counter-attack, the 12/Rifle Brigade losing 4 officers and 180 men. The attack was repeated in the evening without success, and again on the 19th, when the Germans were in one trench for a time. On the afternoon of the 14th, after the explosion of a number of small mines, as well as bom-

¹ The above will be found in Rupprecht, i. pp. 422-31. The German attack against Vimy ridge, duly took place and was a complete success. The French made no attempt to recover the lost ground. See Chapter VIII.

Feb. bardment, a series of attacks, which all failed, were launched against the 24th Division (Major-General J. E. Capper) at Hooge and north and south of Sanctuary Wood. Further to the right, on the same day and at the same hour, the enemy was more successful.

Sketch 6. Two miles south of Ypres the Ypres—Comines canal turns to the east, and soon after this change of direction it passed, in 1916, at right angles through the British and German defences. It was at this point a considerable obstacle, being 120 feet wide, full of water and in a cutting. The depth of this cutting was increased by the fact that when the canal had been constructed, the spoil from the excavation had been built up in terraces on either side. Those on the northern bank ended abruptly in an irregularly shaped artificial hill, just inside the British lines, about thirty feet above the local ground level. It was one of the finest observation posts on the Ypres front and was called by the British "The Bluff", and by the enemy "Kanal Bastion" or "Grosse Bastion".

No Man's Land was only 150 yards wide near the canal, but 400 yards to the north it was reduced to about forty yards by a German salient, known to the British as "The Bean" and to the Germans as "Der Helm". In October and November 1915 the enemy had blown two mines under the British front line, about one hundred and fifty yards north of the canal, and in January 1916 a larger one, with a crater over a hundred yards wide, in front of the Bluff. This had caused 78 casualties, and temporarily destroyed the infantry position in front of the Bluff. But the Germans had made no attack on any of these occasions, nor had they attempted to take advantage of the explosion, and the British had occupied the front edge of the craters. A system of defensive mines, to prevent the repetition of such incidents, had been pushed on as rapidly as possible by the 172nd Tunnelling Company R.E.; but the high water level and the loose nature of the made ground near the canal bank put very considerable difficulties in the way of the tunnellers.

On the afternoon of the 14th February the front of the V. Corps (Lieut.-General H. D. Fanshawe), which extended from south of St. Eloi to Hooge, was held by the 17th Division (Major-General T. D. Pilcher), the 50th Division (Major-General P. S. Wilkinson) and the 24th Division (Major-General J. E. Capper), already mentioned. The 17th Division—which had relieved the 3rd Division

between the 5th and 8th February—had taken over about Feb. 4,500 yards of front astride the canal, and had placed the 52nd Brigade (Br.-General H. C. Surtees) south and the 51st Brigade (Br.-General R. B. Fell) north of the canal. The former was responsible for the waterway, and the Bluff on the northern bank and New Year Trench, running up from the canal. As the canal here was spanned only by a single plank footbridge a long way in rear of New Year Trench, this distribution was a somewhat pedantic application of the general rule, that a road or topographical feature intersecting a position should not be used as a boundary between two formations, but definitely allotted to the sector of one or the other of them. At any rate, it resulted in a single platoon of the 10/Lancashire Fusiliers, isolated from its battalion, receiving the task of holding the Bluff defences, the most important part of the line. The 50th Brigade (temporarily under Lieut.-Colonel R. M. Edwards of the 10/West Yorkshire) was in corps reserve, and the 17th Division, thus reduced to eight infantry battalions, had only one in divisional reserve.

The 51st Brigade had a front of about thirteen hundred yards, and its four battalions were distributed: 10/Sherwood Foresters and 8/South Staffordshire in front line, and the 7/Lincolnshire in reserve, but with two companies at the disposal of the officer commanding 10/Sherwood Foresters for immediate counter-attack should the Bluff be taken by the enemy. The 7/Border Regiment was on its way up to relieve the South Staffordshire, its bombers¹ and Lewis gunners having taken over from those of the South Staffordshire on the previous night. Thus, not only was the defence of the Bluff in the hands of another brigade, but there was a mixture of two battalions in the line. The brigade machine-gun companies of the division, which had joined it only the day before, had not yet gone up to the front.

During the morning of the 14th the left of the 52nd Brigade near the canal, the front of the 51st Brigade, and the fronts of the 50th and 24th Divisions north of it, had been heavily shelled several times, and from 3.30 p.m. onwards the bombardment on the 51st Brigade front, as well as the Hooge front in the 24th Division area, became intense. It led the platoon of the 10/Lancashire Fusiliers, defending the Bluff, to seek refuge in "The Tunnel", a

¹ Steel helmets, issued for experiment, had been received in sufficient numbers for battalion bombers, but not for whole units.

Feb. former German mine gallery leading from the canal bank to the Bluff. Trench-mortar fire—now the usual preliminary of an attack—as well as howitzer fire was strongly in evidence. Retaliation by the heavy artillery was therefore requested, and all preparations made to meet an assault. At 5.45 P.M., the front parapet by this time having been levelled by very accurate fire, the enemy exploded one small mine at the Bluff (which buried the platoon sheltering in the Tunnel, only three men escaping), and two under the left of the position held by the 10/Sherwood Foresters. He then assaulted on a front of about half a mile, from the canal to “The Ravine”, a small watercourse running roughly parallel to the canal, and thus the attack somewhat overlapped the front of the Sherwood Foresters. Simultaneously the unsuccessful attack on the 24th Division, already mentioned, took place. The Germans got possession of the Bluff, annihilating a platoon which had been sent up to replace the one lost in the Tunnel, and captured the front line of the Sherwood Foresters, but were unable to reach the support trenches, except at one place, whence they were expelled. From the South Staffordshire trenches and the Ravine behind them, which they entered, they were also driven out. Instead of using the Lincolnshire companies for immediate counter-attack, the acting commander of the Sherwood Foresters, the lieutenant-colonel being on leave, applied to brigade headquarters for permission to use them. All wire communication being cut by the bombardment, valuable time was lost before he received a reply. Then reinforcements were sent in piecemeal, and a series of small local counter-attacks took place, bomb fighting continuing through the night without any result being achieved. At 7.30 A.M. on the 15th, the situation was that the enemy occupied the Bluff and the 51st Brigade front line from the canal to the Ravine.

At 2.20 P.M. on the 15th a reorganization of the forces of the 17th Division was carried out: the 52nd Brigade ceased to be responsible for any ground north of the canal; two battalions of the 50th Brigade were placed at the disposal of Br.-General Fell; and he was directed to recover the Bluff. A series of bombing attacks were carried out in the dark, which were to be followed up by infantry advances. But misfortune dogged these hurried operations and nothing was gained: once the enemy had been left in possession for 24 hours—even twelve—and given

time to reorganize his defence it was generally difficult to dislodge him without lengthy preparations.

At 6 A.M. on the 16th it was clear that all attacks had failed, that the situation was the same as on the previous morning, and that the lost ground could not be recovered except after deliberate preparations and bombardment.

The corps commander, General Fanshawe, deemed it best to entrust the operation to troops who knew the ground. On the night of the 16th/17th, therefore, the 76th Brigade (Br.-General E. St. G. Pratt), recently relieved and then in reserve, a field artillery brigade and a field company R.E. of the 3rd Division were placed at the disposal of the 17th Division for a renewed attack, and the 76th Brigade took over from the 51st.¹ It had first to set to work to consolidate a new line from which to start.

The casualties of the 17th Division from noon on the 14th February to noon on the 17th had been 67 officers and 1,227 other ranks, including 311 missing.²

The difficulties in the way of an attack to recover the area which had been lost were considerable. The ground over which it must take place was terribly broken by shell holes and the remains of trenches. The most important feature, the Bluff, was flanked on one side by the canal, and on the other by a pond and a small stream which made a swamp; whilst, owing to the terraces in which the canal banks were built up, a frontal approach could only be made along the top of an embankment, 80 yards wide and rapidly narrowing to 30 yards, without cover and in view of the enemy's position south of the canal.

It was decided first to make the attempt by a frontal attack on the whole length of the lost trenches, at dusk, so as to have the night for consolidation, and the 29th February was fixed as the approximate date. The operation is an excellent example of a "set piece", well carried out.

¹ The 76th Brigade was raised as part of the 25th Division; but, with a view to stiffening the new divisions (see "1915" Vol. II. p. 274), after the Battle of Loos some brigades and battalions of old divisions had been exchanged with them. The 76th Brigade, consisting of two Regular and two New Army battalions of the 25th Division, had thus changed places with the 7th Brigade of the 3rd.

2	Killed.	Wounded.	Missing.	Total.
Officers	11	47	9	1,294
Other ranks . . .	162	763	302	

The German bulletin claimed only "1 officer and some dozens of other "ranks as prisoner". "Regt. No. 124" gives the number as "over a "hundred prisoners".

Feb. On the nights of the 22nd/23rd and of the 23rd/24th February, the 76th Brigade was relieved by the 52nd Brigade, so as to give it a rest before it attacked, and the six battalions—four of the 76th (completely equipped with steel helmets collected from other units) and two of the 51st Brigade—to be employed under Br.-General Pratt,¹ were practised daily, sometimes singly, sometimes all together, over an exact representation of the German position marked out by shallow trenches, according to aeroplane photographs obtained of it.

Meantime, under divisional arrangements, large parties of Surtees's brigade were engaged at night in digging assembly and communication trenches, the former in the remains of a wood and under the shelter of rising ground ; in burying armoured cable and making communications as secure as possible ; and in carrying up trench mortar and small-arm ammunition, engineer stores, rations, and grenades.

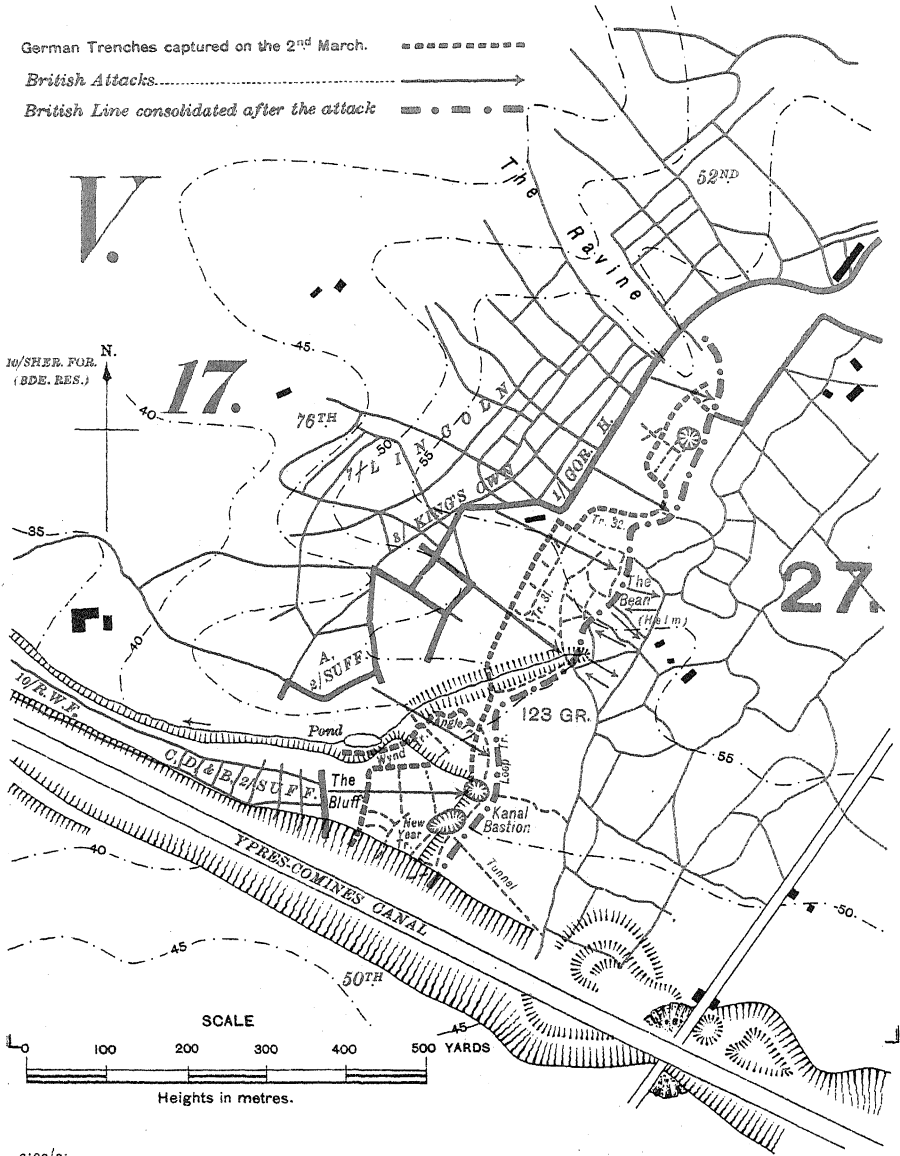
The enemy's artillery made the work of preparation difficult, particularly after the 27th, when severe weather, accompanied by snow, set in, and all the new trenches showed up clearly. The change in the weather also affected the situation. It was evident that the men could not be kept some fifteen to eighteen hours in the assembly trenches in the cold ; for to make an attack at dusk they must be brought up in the dark of the previous night. After a discussion between Br.-General Pratt and Br. General H. C. C. Uniacke, G.O.C. Royal Artillery V. Corps, who was charged with arranging artillery co-operation—the former inclining to a long bombardment and the latter to a surprise assault without any bombardment—it was decided in the new circumstances to carry out an artillery bombardment up to the original time of assault at dusk, then cease fire and bring the infantry into position during the night, and assault, after another 90 minutes' bombardment, at dawn.

The actual date could not be fixed, as, owing to the weather, the artillery registration had not been completed ; but it was settled that the assault should take place on the second morning after the first day fine enough for registration. On this proposal being submitted to General Plumer, he also made the suggestion that the assault

¹ Died 24th November 1918. His brigade-major, whom the officers engaged unanimously regard as the leading spirit in the attack, was Captain W. de la T. Congreve, V.C., killed in action 20th July 1916.

THE BLUFF, 1916.

THE RECAPTURE ON THE 2ND MARCH.



should be a surprise without any preliminary bombard- Feb. ment. Finally, it was decided at a conference at 17th Division headquarters, during which General Plumer was present, that on the evening of the 1st March a bombardment should begin at 5 P.M. and last 45 minutes, with subsequent lift and barrage, but should then stop, every effort being used to make it appear that an attack had been intended, but had failed to materialize. After a complete pause, Br.-General Pratt was to decide at 2 A.M., according as the enemy had or had not shown signs of activity in making repairs, whether or not there should be a preliminary bombardment of twenty minutes before the assault.

The plan was not only to recover what had been lost, Sketch 7. but to improve the British position by consolidating a line across the Bean in front of the old re-entrant portion. There were to be three battalions in front line: the 2/Suffolk on the right, to assault New Year Trench, the Bluff, and Loop Trench; the 8/King's Own in the centre; and the 1/Gordon Highlanders on the left; all with sections of the 56th and East Riding Field Companies R.E. and small parties of tunnellers attached to them. The 10/Royal Welch Fusiliers was to be in support of the Suffolks, and the 7/Lincolnshire (51st Brigade) divided to support all three front line battalions, two companies being behind the centre. The 10/Sherwood Foresters (51st Brigade) would be in reserve. On the extreme right of the attack a raid was to be made along the bank to destroy all the German mine shafts found there.

The British bombardment on the 1st March ¹ was most March. effective; the trench and Stokes mortars available, though small in number, enabled all parts of the enemy's works which the howitzers could not reach to be dealt with.² A reconnaissance in the afternoon established the fact that the Bluff defences were almost destroyed, but that the trenches further north were not only far from levelled, but had been improved and provided with fresh wire. The intense bombardment was carried out, as arranged, from

¹ Carried out, in addition to the 17th Division artillery (Br.-General R. G. Ouseley), by two 15-inch, four 9.2-inch, three 8-inch and two 6-inch howitzers; two 6-inch, fourteen 60-pdrs. and eight 4.7-inch guns: all belonging to the Second Army and Canadian Corps heavy artillery, under Br.-General H. C. C. Uniacke, with the assistance of the 6th Squadron R.F.C.

² The trench and Stokes mortars were in two groups, one north and the other south of the canal, with a total of nine 1½-inch, ten 2-inch, three 4-inch, and four Stokes,

March. 5 P.M. to 5.45 P.M., an 18-pdr., pushed close up to the front, being used to blow in 40 yards of the German front line on the left of the part to be attacked, so as to form a "block". Then the guns and mortars kept up a slow rate of fire during the night to prevent the enemy from repairing his trenches or putting out fresh wire: snipers and machine gunners fired at the same rate as usual. The night was fine and clear, and the enemy remained quiescent, there being no gun or machine-gun fire, while his sentries hardly fired a shot. At 2.15 A.M. on the 2nd, Br.-General Pratt reported that he would not require the 20-minute preliminary bombardment, and that the infantry was moving up into its assembly positions. This operation was completed by 3.45 A.M. without attracting any attention from the enemy's infantry or artillery.

At 4.15 A.M. the troops began to move forward in small groups, guided by men of the battalions of the 52nd Brigade in the line, and punctually at 4.30 A.M. the assault was launched. The only mishap was the explosion of a store of fireworks, collected with great difficulty by Major-General Pilcher in order to direct artillery fire. At 4.32 A.M. the British artillery began the barrage fire behind the front attacked. The surprise was complete, except on the extreme left, where a half-company of the Gordons was shot down almost to a man by a German officer machine-gunner, eventually killed, with his crew, by an officer.¹ Everywhere else the front waves advanced a considerable distance, trampling down what remained of the wire without hindrance from the enemy.

There had been a somewhat interesting preliminary to the assault. It was agreed at the conference at which an attack without bombardment was discussed, that the advance against the Bluff itself would be impossible unless there was covering fire to force the Germans to keep their heads down during the movement from the assembly trenches across No Man's Land; this would take two minutes. General Uniacke then offered to "drill the enemy" for the purpose. A 60-pdr. battery was detailed to fire a salvo on the Bluff trench, followed by a second after two minutes' interval, at irregular periods by day and night. The ruse was entirely successful; at zero hour a salvo was fired, and when the 2/Suffolk entered the defences of the Bluff, it found the

¹ 2nd/Lieut. C. Sanderson. The capture of the trench was largely due to his gallantry, and he was awarded the D.S.O. He was killed in action on 18th June 1917.

sentries under cover, expecting no doubt the second salvo, March. and most of the garrison in the dug-outs excavated in the western face of the big crater.¹ The 8/King's Own overran its objective, and, finding no Germans in the first two lines, reached the third across the base of the Bean, which it used as a covering position until next evening, whilst the objective was being consolidated. Some of the battalion went on beyond without finding any Germans. Subsequently a party of sixty Germans behind the King's Own front, in the old British front trench, began firing, but it was soon compelled to surrender. The 1/Gordon Highlanders was held back for a time by the resistance it encountered on the left; but after reinforcing twice, with the assistance of a company of the 7/Lincolnshire, and of the 9/Duke of Wellington's (52nd Brigade) which had remained in the line and was protecting the left of the attack, it obtained possession of all its objectives by 5.10 A.M.

Many of the Germans encountered had no equipment on and were without rifles. Not a bayonet was fixed, and there was no rifle fire from the enemy's old front trench of the 14th February after the assault. Five officers and 248 other ranks were taken prisoner, but this total includes 47 who remained in the Bluff dug-outs all day and were extracted from them in the evening.

The raiding party destroyed the enemy gallery in No Man's Land leading to the Bluff, but all the men of the 172nd Tunnelling Company employed were killed by machine-gun fire.

It was not until 9.30 A.M. that the enemy's artillery opened, and the bombardment did not become intense until 11 A.M. By that time the British front line had been thinned by Lieut.-Colonel G. S. G. Crauford of the Gordons, the senior officer in the line, and the work of consolidation was well under way; but, as the fire continued heavy until 3.15 P.M., in spite of British retaliation, both the old and new trenches were badly damaged and required much work before they could be made secure. One of the old trenches became known as International Trench, because it contained bodies of men of three nationalities who had fallen in the 1914 battles. Some attempts at bombing attacks were made in the evening by the enemy on the British left, but they failed completely; for once the British

¹ A photograph in "Grenadier Regt. No. 123", p. 62, shows the crater half-full of water, and the entrances to nine dug-outs on one side.

March. bombers, equipped with plenty of Mills grenades, enjoyed the mastery.¹

The battalions which took part in the action were relieved on the night of the 3rd/4th by the 8th Brigade, the operation being difficult owing to the state of the trenches, and a snowstorm which by midnight rose to a blizzard leaving the ground thick under snow. The casualties from noon on the 1st March to noon of the 4th had been 62 officers and 1,560 other ranks.²

The operations at the Bluff were subsequently confined to mining, with the result that on the 11th December 1916 the Bluff was reported safe from underground attack. In consequence of information given to the Intelligence by a prisoner, who drew a plan of the galleries, the German workings were cut off by driving a deep system of mining through difficult ground out to and behind the German lines and then firing heavy camoufflets.³ The German galleries were then captured and annexed to the British shallow system. Thereafter the Bluff was beyond molestation, until on the 7th June 1917, in the great Messines offensive, the Germans were driven from the area.

NOTE

THE GERMAN ACCOUNT OF THE BLUFF FIGHTING ⁴

After fifteen months in the Argonne, the 27th (*Württemberg*) Division (General Graf von Pfeil und Klein-Ellguth) was relieved between the 16th-30th December 1915, and brought to Flanders for the first time, so that it might rejoin the 26th (*Württemberg*) Division and reconstitute the XIII. (*Württemberg*) Corps. It was sent almost immediately (6th January) into the line, and took over

¹ Every man engaged in the attack carried two grenades in his pockets, and besides those taken up by the bombing parties, there were 52,000 in the various brigade dumps.

The German account, which follows, speaks of a night attack organized to recover lost ground being repelled by machine-gun fire.

		Killed.	Wounded.	Missing.	Total.
76th Bde. :	{ Officers . . .	7	28	1	924
	{ Other ranks . . .	168	583	137	
17th Div. :	{ Officers . . .	3	23	—	698
	{ Other ranks . . .	113	498	61	

The German losses (see Note) were 124 killed, 438 wounded and 346 missing, of whom 93 must have been killed, as only 253 prisoners were taken.

³ Camoufflets are under-charged mines, calculated to blow in enemy workings, but not to form craters at the surface.

⁴ This is given very fully in the history of the German 27th Division, pp. 36-9, and in the regimental histories of the 123rd Grenadier Regt., and the 124th Regt.

from the *30th Division* a sector, about two miles in length, from the Jan. Ypres—Comines canal to opposite Zillebeke, the *26th Division* being north of it. The sector was in excellent order, though built up mainly of sandbags, and well drained. It had one weak point: the Bluff, opposite its southern end, which "overlooked our positions in a most unpleasant manner. Our predecessors had tried to make away with it by exploding a mine, but had achieved nothing. Mining on an increased scale was therefore begun." The large mine fired on the 21st/22nd January brought "no real change; for the enemy sat in the great crater it made on the Bluff exactly as fast, secure and overlooking us as before". The corps commander (General Freiherr von Watter), in consequence, ordered the Bluff and the trenches near it to be taken by attack, in spite of the fact that his predecessor, General von Deimling, had come to the conclusion that although there was no doubt he could take the position he could not maintain himself there.

The *124th Regiment* was entrusted with the operation. "The Feb. firing of three mines¹ heralded the assault after hours of gun and trench-mortar fire. In a few minutes nearly the whole enemy Sketch 6. position was taken, and the Bluff was in possession of the attackers. Only at a few points did British machine guns offer a desperate resistance, and there was an obstinate fight for their possession, which brought considerable losses." The same regimental history says that by 6.5 P.M. the front line was taken, and by 6.32 P.M. the whole objective, except one machine-gun post at the junction of Trenches 31 and 32, was in German hands. "The counter-attacks, though unsuccessful, increased the [German] casualties to a critical height." Between the 14th and 18th February the regiment lost 75 killed, 229 wounded and 25 missing, and, "urgently requiring rest", was relieved on the 20th-22nd February by the *123rd Grenadier Regiment*. The history of this regiment describes the position that it took over as "shot to pieces", and says that the men had to cower in shell holes and bits of trench "up to the belly in water". The *124th's* account then continues:

"There now occurred an absolutely tragic event. The position March. captured by the *124th Regiment* on the 14th February, together Sketch 7. with the Bluff, was nearly entirely lost." The regimental history of the *123rd Grenadier Regiment* (p. 64) admits that the British "got possession of the whole of the position taken from him, and had in places pressed forward over our former front line", and secured part of the Bean. The defeat is attributed to the defences being destroyed and the men worn out after "36 hours continuous bombardment". The losses of the Grenadiers are given as 2 officers and 39 men killed, 2 and 170 wounded and 8 and 313 missing. "The *124th*", says the divisional history, "have never been able to forgive the Grenadiers, and there ensued a certain tension between the two regiments not overcome during the whole length of the war, in spite of many later fine successes in common."

The Grenadiers—with the help of detachments of the *124th* and *127th Regiments*—according to their history, tried to recapture the Bluff in the evening by night attack, but "enemy machine guns stopped every attempt at advance". The struggle was then finally abandoned, and "the position after the close of these costly combats

¹ At 5.57-5.59 P.M., "Regt. No. 124", p. 45.

March. " was in general what it had been before the German attack on the " Bluff ".

The Württemberg Official Account relates the capture but not the loss of the Bluff.

THE HOHENZOLLERN REDOUBT

2ND TO 18TH MARCH 1916

Sketch 8. The fighting at the Hohenzollern Redoubt is another example of the trench warfare experience that it was always possible by a carefully planned assault to capture a portion of the enemy's front, but impossible to stay in it if he objected to its retention. It also illustrates the problems of crater fighting.

At the close of the Battle of Loos, only the western half of the Hohenzollern Redoubt remained in British possession,¹ and the trench known as " The Chord ", dug across the work as a retrenchment, became the front line. Besides continual shelling and trench-mortaring, a considerable amount of hostile tunnelling went on during the winter in the Hohenzollern sector; in the course of this the enemy, making use of shallow mines in the clay, which there overlies the chalk, succeeded in forming craters with high lips, which afforded him valuable observation posts. This advantage enabled him to inflict many casualties on the defenders, and he finally captured the Chord. Thus the British were left clinging to the western face of the redoubt, on a slope slightly below the Chord.

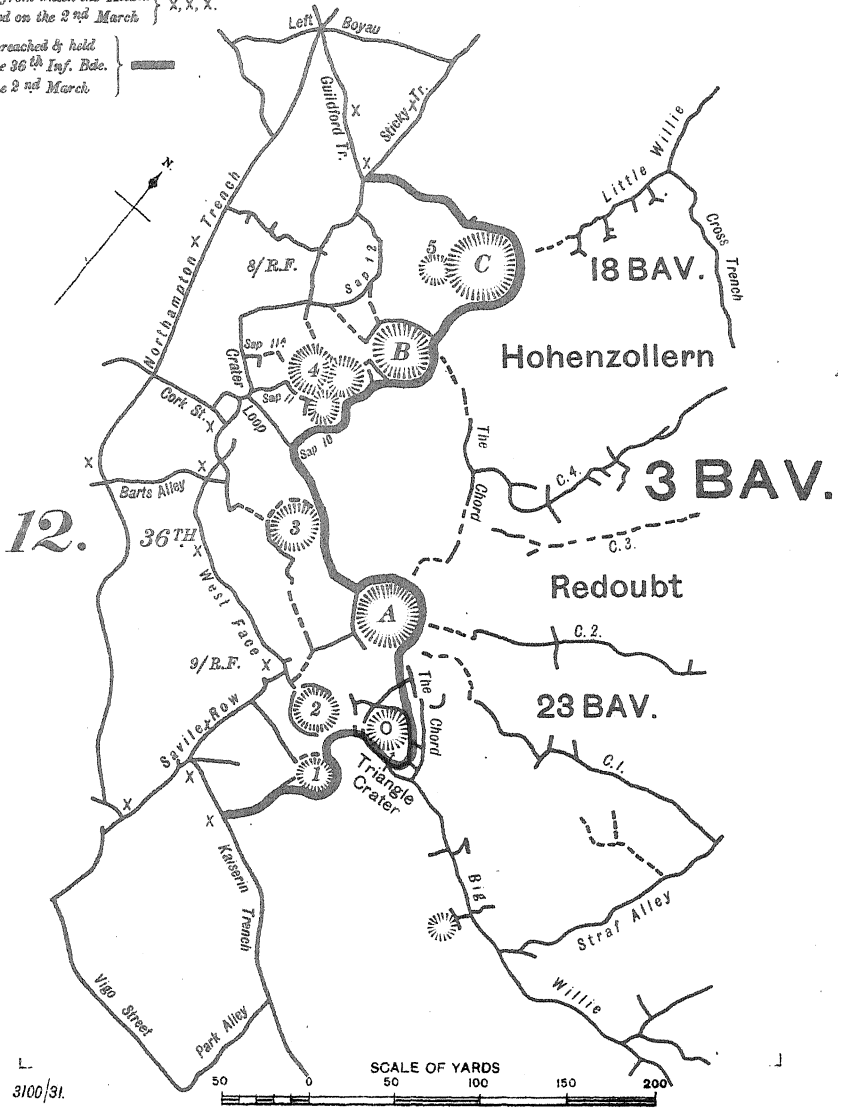
After leaving the area in November 1915, the 12th Division (Major-General A. B. Scott) of the I. Corps (Lieut.-General H. de la P. Gough) had returned to it in the middle of February 1916, relieving the Cavalry Corps, and was holding the Quarries and the Hohenzollern sectors, from opposite Cité St. Elie to opposite the dump of Fosse 8. Towards the end of February, after four months' work, the 170th Tunnelling Company R.E., by going very deep, succeeded in completing three mines under the German shallow system. If the mines were not fired soon, it would be only a matter of time before the Germans discovered them and counter-blew. If they were fired, they would certainly wreck the enemy galleries, but would form great dominating craters, and for these there was bound to be a desperate fight. After much discussion, General Gough

¹ See "1915" Vol. II, p. 388.

HOHENZOLLERN REDOUBT 2nd-18th MARCH, 1916.

Line from which the Attack started on the 2nd March } X, X, X.

Line reached by hold by the 36th Inf. Bde. on the 2nd March } ———



L.
3100/31.

decided to fire the mines, and, with their assistance, March. recover the Chord.

The attack was made on the 2nd March, after very careful preparations, by the 36th Brigade (Br.-General L. Boyd Moss), which took over from the 37th Brigade on the 29th February.¹ It was supported by the corps heavy artillery under Lieut.-Colonel F. C. Poole, the 12th Division artillery, to which were attached the 59th and 81st Siege Batteries (6-inch howitzers), and the three brigade trench-mortar batteries. There was to be no preliminary bombardments, but the guns and mortars were to open fire at the same moment as the mines were exploded.

At 5.45 P.M. the weather was clear, but previous rain and snow had made the ground very heavy. When the three mines² were blown, they formed craters thirty feet short of the Chord, with lips which gave exactly the observation over the German trenches which was required, and, with the last of the light, the infantry, 9/Royal Fusiliers on the right and 8/Royal Fusiliers on the left, at once assaulted, whilst the 35th Brigade on the right opened heavy fire. The 9/Royal Fusiliers got into the German trenches with scarcely any casualties, found the defenders just coming out of their dug-outs, and captured 80 prisoners. On the other flank, the 8/Royal Fusiliers does not seem to have been quite so quick, or the *18th Bavarian Regiment* was more on the alert than its neighbour, the *23rd*; for it had time to man the parapet. All the party sent against the Chord were shot down except a few men on the right. Other parties, however, occupied the new craters A, B and C, and the older ones, Nos. 1 to 5, as well as the Triangle Crater, not before known, which had nearly obliterated the Chord near it. Following the infantry, the men of the 170th Tunnelling Company were soon at work destroying the entrances to the German mines in the Triangle Crater. Thus the whole of the objectives were captured with the exception of the northern half of the Chord, even a flank bombing attack from the southern end by the 9/Royal Fusiliers failing to dislodge the defenders there.

Furious counter-attacks were made by the Germans during the 3rd, the 4th (in the afternoon of which day

¹ Attached to it for the operation were the 70th Field Company R.E., and one and a half companies of the 1/5th Northamptonshire (Pioneers). For the operation orders see Appendix 7.

² A, B and C on Sketch 8. The charges were 7,000 lbs., 10,055 lbs. and 8,000 lbs. respectively, mostly ammonal.

March. Triangle Crater was lost), the 5th and the 6th March. They made great efforts to capture Crater A, which gave good observation over their line, and it was found necessary to relieve the 36th Brigade,¹ the 37th (Br.-General A. B. E. Cator) taking its place. From the 7th to the 14th, the weather still continuing very cold with heavy snowstorms, there was stiff but desultory fighting, and then the enemy became less aggressive, being apparently engaged in working on his defences, but actually he was preparing a deliberate attack.

On the 18th March, the 6/Buffs, one company of the 6/Queen's, one company of the 6/R. West Kent, and the 7/East Surrey of the 37th Brigade were in the front defences: worn out after fourteen days' stay there under such unfavourable conditions of weather and frequent close fighting. The German artillery became unusually active during the morning, and some newly disclosed trench mortars did much damage. From 5.15 P.M. to 6.15 P.M. the bombardment of the captured position was intense, and the craters were rendered untenable by heavy trench-mortar fire. At the latter hour, after five mines had been fired short of the British line, an infantry assault was made by the enemy, which regained what had been lost of the Chord, and drove the 37th Brigade back to the old front line and the near lips of the craters. The Germans, however, could not remain in the craters and retired to the lips on their side.²

Further attempts to recover the Chord were abandoned. In his report of the action, Br.-General Cator recorded the opinion that the holding of the interior of a crater was costly in men, as it only formed a target into which every kind of gun and mortar lobbed shells, from the effect of which in a confined space—the bottom a morass of liquid chalk and black mud—there was no protection. Attempts were made to put up parados with hurdles, boards or other revetting material, but nothing stood for very long, as the sides of the craters crumbled and slipped down. Apart from this, he said, the defence of the forward lip was very difficult, as its breadth, and the great masses of clay, twelve to twenty feet high, lying about, prevented a

¹ It had lost 10 officers and 153 other ranks killed, and 21 officers and 720 other ranks wounded, although only about sixty had fallen in the assault.

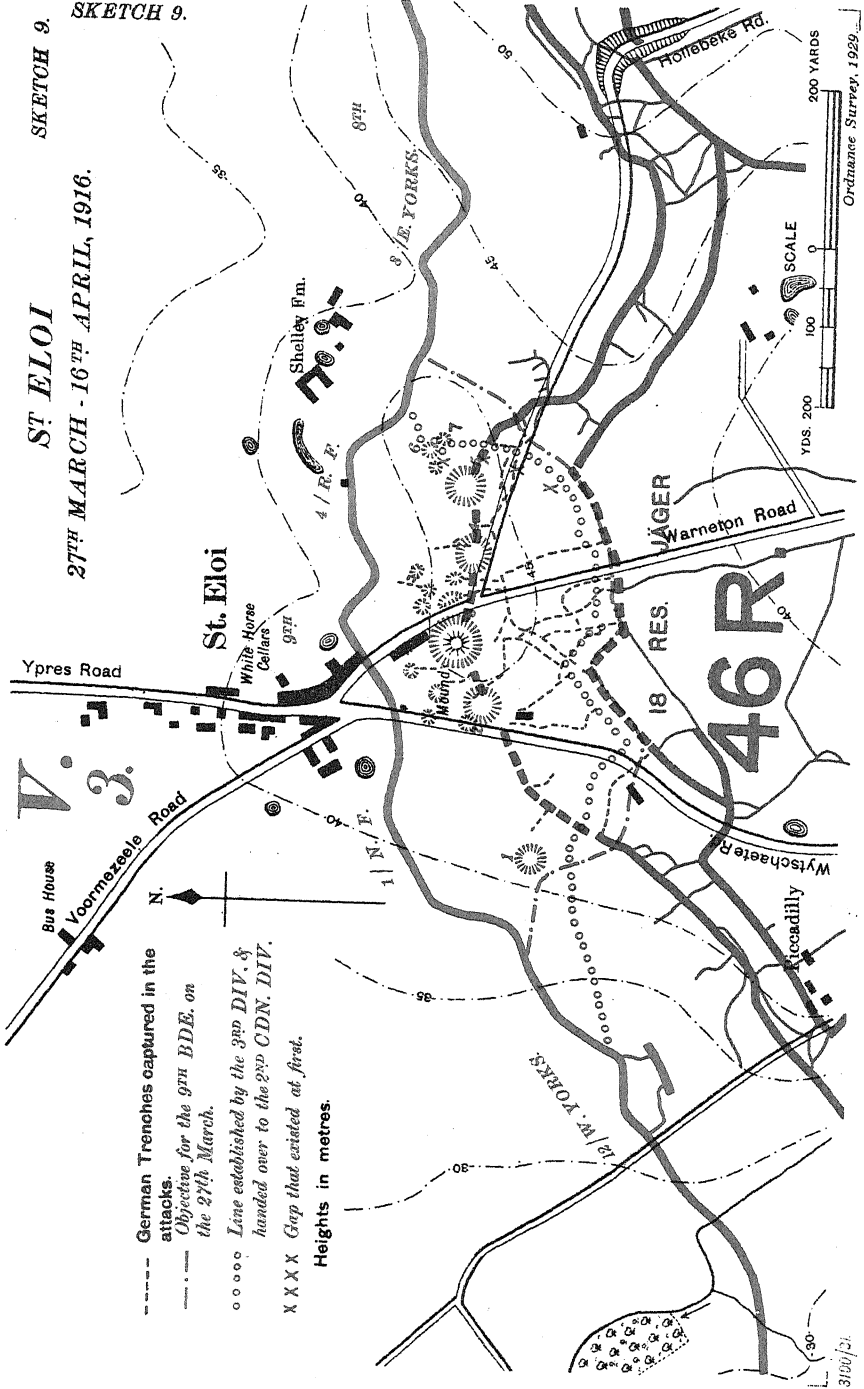
² The casualties of the 37th Brigade for the period 5th-18th March were 120 killed, 898 wounded and 66 missing, the heaviest losses having occurred on the 6th.

ST ELOI

SKETCH 9.

27TH MARCH - 16TH APRIL, 1916.

SKETCH 9.



- German Trenches captured in the attacks.
 - Objective for the 9TH BDE. on the 27TH March.
 - o o o o o Line established by the 3RD DIV. & handed over to the 2ND CDN. DIV.
 - X X X X Gap that existed at first.
- Heights in metres.

SCALE
0 100 200
YDS. 200
200 YARDS
Ordnance Survey, 1929.

3100/21

field of fire being obtained. He advised that either the **March**. near lip should be held, or a line in front of the craters. The former alternative was eventually adopted, and as the enemy followed the same course, the interiors of craters usually remained unoccupied.

NOTE

THE GERMAN ACCOUNT OF THE HOHENZOLLERN REDOUBT ¹

In consequence of a noteworthy increase in British activity in front of the Hohenzollern, heavy artillery and trench-mortar fire, and more than average patrolling, towards the end of February, the Germans suspected that an assault might be made, but it came at last as a surprise. The garrison consisted of the *I. Battalion* of the *23rd Bavarian* and the *III. Battalion* of the *18th Bavarian Regiment* of the *3rd Bavarian Division*, each with three companies in the front line and one in reserve. The *18th* managed to hold on to its trenches, but the *23rd* did not. All the immediate counter-attacks failed, and the battalions were relieved on the night of the 4th/5th **March**. On the 6th it was decided to prepare a deliberate attack, in which all the battalions of the *18th* and *23rd Bavarian Regiments* were to be employed, as well as battalions of the *55th Reserve* and *91st Reserve Regiments*. The actual attack after the firing of five mines, which, being laid short, occasioned some alarm and confusion, was made by the *III. Battalion* of the *23rd Bavarian Regiment*.

In view of a possible further attempt to recover the Hohenzollern, the garrison was doubled for the next few days, and only at the end of the month did all danger seem to have passed.

The nominal roll of the killed of the *18th Bavarian Regiment* for the period 3rd-18th **March** adds up to 2 officers and 93 other ranks. The losses of the *23rd Bavarian Regiment*, which was driven from its trenches and made the first counter-attack, were probably much greater.

THE ACTIONS OF ST. ELOI CRATERS

27TH MARCH-16TH APRIL 1916

After the German success at the Bluff on the 14th **Feb.** February, and the failure of the immediate British local **Sketch 9.** counter-attacks, it was by no means certain that the lost trenches could be regained even by deliberate attack, still less that the situation there could be improved to our advantage. General Plumer, whilst sanctioning the pro-

¹ There is a lengthy account, five pages, in the regimental history of the *18th Bavarian Regt.*, in the chapter headed "The Great Mine "Explosion".

Feb. posals for the recovery of the Bluff and trenches north of it, came to the conclusion that he must seek some other spot for the purpose of retaliation, and he selected the St. Eloi sector, a mile to the west of the Bluff, where the line ran just in front of the ruins of the village of that name. Here, as the result of their attack of a year before, on the 14th March 1915,¹ the Germans held a salient some six hundred yards wide, which penetrated into the British line to a depth of about a hundred yards. A scheme for recovering the lost ground and straightening out the line had been elaborated in November 1915, and was in preparation. Situated on the end of one of the low spurs which stretch towards Ypres from the main ridge that encircles the town, the German salient possessed a command of only a few feet over the British line; but within it was "The Mound",² an artificial bank of earth, originally thirty feet high and some half an acre in extent. As a result of a year's shelling, this was now much reduced in height and size, but it was still an observation post of great value: it overlooked the German trenches in its vicinity for a considerable distance to the right and left, and was therefore an objective worth fighting for. There was, however, observation over it from the main Ypres ridge to the south, which was in possession of the enemy and would make it, if won, most difficult to retain.

The St. Eloi area had been the scene of almost continuous mining and counter-mining during 1915. The British had fired 13 mines and 29 camoufflets, and the Germans 20 mines and 2 camoufflets, and it had become obvious that the only way to reach the Mound and the enemy trenches was by tunnelling at a deeper level. This proved possible; the shafts were sunk and the galleries were now well advanced. The prospect of the success of the mining, which seemed assured, was the determining factor in the decision made by General Plumer.³ Contrasted with the

¹ See "1915" Vol. I. pp. 30-2.

² Situated over Mine 8 in the sketch.

³ In August 1915 three shafts 50-60 feet deep had been sunk. In November, after the Germans had blown the mine at the Bluff, apprehension was felt for the safety of the St. Eloi sector, and a continuous line of shallow galleries along the front threatened by the enemy had been constructed, but the deep mines were continued for a possible enterprise in February. It was finally settled to lay five, afterwards increased to six, deep mines from the three shafts. When in January the enemy again blew the large mine at the Bluff, work on the shallow mines at St. Eloi was stopped in order to complete the deep mining scheme as soon as possible. No sound of the enemy working was detected at the lower level, though at several points the Germans were heard overhead, showing that the new

Bluff, the disadvantage of attacking near St. Eloi was that Feb. the ground was even more cut up, a waste of sticky mud broken by shell holes and mine craters of all sizes; but as spring was at hand, there was every hope of the surface drying. This hope, however, proved delusive.

On the 23rd February the commander of the V. Corps (Lieut.-General H. D. Fanshawe) by General Plumer's orders sent for Major-General J. A. L. Haldane, and informed him that his division, the 3rd, would be employed in the capture of the St. Eloi salient, and that the operation, with a strictly limited objective, would take place as soon as possible after the 10th March, as by that date the mines under the Mound and the German front trenches would be ready.

The 3rd Division was at the time nominally at rest west of St. Omer; but, as we have seen, its 76th Brigade, with artillery and engineers, had on the 15th February been sent to the Bluff to retake it under direction of the 17th Division. On the 28th, in the midst of a divisional boxing competition, the 8th Brigade had been moved up to support the 76th, and on the 16th March had gone into the trenches to relieve it. Thus, by the time that March. General Haldane had formed his plan, only the 9th Brigade (Br.-General W. Douglas Smith) was available, and it was selected to make the attack. Its training over a course laid out on full scale to represent the enemy trenches was at once taken in hand. In order to assist Generals Haldane and Douglas Smith in the solution of their problem of occupying ground gained by an explosion of mines, they were on the 4th March sent to Bray-sur-Somme in the Third Army area, where a considerable amount of mining had taken place, and was still in progress.¹ General

British galleries were well under their defences. But this, though encouraging, added to the anxieties always attendant on mining. Although nothing interfered with Mines Nos. 2, 3, 4 and 5, the enemy was heard so close to No. 1 (the westernmost mine) that it was considered safer to stop work on it rather than risk the deep workings being discovered. Actually, on the 10th March, the enemy blew a camouflet and destroyed twenty feet of this gallery. As he continued working, a camouflet was fired against him on the 24th March, which destroyed a further length of gallery, so, as it could not be repaired or extended, the charge had to be placed at 240 feet, the distance to the enemy trenches being 420 feet. No. 6 gallery was then run out at an intermediate level of 38 feet, and, as it struck the enemy's defensive system about a hundred feet from his trenches, work on it was also stopped. Activity in the upper levels continued throughout this period, and on two occasions the British tunnellers broke into the enemy galleries and blew them up.

¹ The report of the Hohenzollern operations, 2nd-18th March, was of course not yet available.

March. Haldane's own experience at Hooge in the attack of the 19th July 1915¹ had shown that craters themselves could not be held, although they could be used as a route for communication, for they at once became the target for trench mortars and howitzers. This view was confirmed at Bray, and Br.-General Cator had arrived at the same conclusion after the fighting at the Hohenzollern.² There was the choice of occupying the near lips and relying on renewed mining for further progress, at the same time removing the far lips which would otherwise obstruct the view; or pushing on at once and establishing a line beyond the craters, so as to be as close as possible to the enemy's new line and thus obtain immunity from his artillery fire. In view of the favourable mining situation, which made enemy retaliation underground very unlikely, it was determined to adopt the second course and occupy a line beyond the craters.

Consequently before the plan for the Bluff counter-offensive took its final form, it was decided that the St. Eloi operation should be a surprise attack without artillery preparation,³ to take advantage of the confusion caused by the firing of the mines. The assault was to be made in the early morning before daylight, 30 seconds after the firing of the mines. Its objective was to be the German third line, about two hundred yards beyond the craters, which therefore would not be occupied but left as a dummy position for the enemy to shell. As it was certain that they would also at first form a serious obstacle and block direct access to the enemy position, it was arranged that the two assaulting battalions should start from the flanks of the front of attack and move inwards towards each other after passing the German front line. This plan when put forward by Major-General Haldane was approved of by the Army commander.

For the purposes of the operation, the V. Corps heavy artillery,⁴ with No. 6 Squadron R.F.C. of the V. Corps,

¹ See "1915" Vol. II. pp. 102-3.

² See p. 176. The superior trench-warfare equipment possessed by the Germans sometimes enabled them to hold craters, and in any case to deny that power to their opponents.

³ The heavy howitzers were to open fire 20 seconds and the heavy guns 10 seconds before zero, allowing for the average time of flight, so that the bursting of a salvo of heavy shells and the explosions of the mines should synchronize.

⁴ Four 9.2-inch, three 8-inch, four 6-inch howitzers; four 6-inch, eighteen 60-pdr. and eight 4.7-inch guns. Also Nos. 1 and 2 "Groupes" of the Belgian 7th Artillery Regiment.

was placed under the G.O.C. 3rd Division, and Br.-General **March**. H. C. C. Uniacke (G.O.C. R.A. V. Corps), as at the Bluff, was appointed artillery commander.¹ He again arranged for assistance from the Canadian Corps artillery.² Twelve trench mortars (eight 2-inch and four 1½-inch) and six Stokes mortars were allotted to the 9th Brigade. The portion of the 172nd Tunnelling Company R.E. engaged on the mining operations was also placed at the disposal of General Haldane.

On the 17th March and following days the 3rd Division took over the St. Eloi sector from the 17th Division. Already a difficulty had arisen. Br.-General Douglas Smith had on the 8th been promoted to the command of a division, and had been succeeded in the 9th Brigade by Br.-General H. C. Potter, lately in command of a battalion in the First Army, and a stranger to the 3rd Division and the area. It was nevertheless decided that he should carry out the operation, for only the 9th Brigade was fresh. The other brigades had returned to the 3rd Division; but the 76th had just fought at the Bluff, and the 8th, which, under the orders of the 17th Division, had relieved it there, had lost some six hundred men from "trench feet", the trench drainage system having been wrecked and all the gum boots destroyed or buried by shell fire.

No assembly or jumping-off trenches were dug; nor— for fear of arousing suspicion—was the enemy's wire cut, but tools for cutting and planks for crossing it were to be carried.

The night of the 26th/27th March was very cold, with snow and sleet, so that the 1/Northumberland Fusiliers and the 4/Royal Fusiliers, detailed to carry out the assault, in moving up and lying out on muddy ground without

¹ Being required in the III. Corps for the preparations for the Somme, on the 3rd April he handed over the V. Corps heavy artillery to Br.-General H. E. Burstall of the Canadian Corps, and the 3rd Division artillery to Br.-General M. Powell, who acted as C.R.A. 2nd Canadian Division until 12th April when the artillery of the latter division rejoined from the 50th Division.

² Three 12-inch, two 9·2-inch, three 8-inch, two 6-inch howitzers; two 6-inch and four 60-pdr. guns; also eight 18-pdrs. and four 4·5-inch howitzers. The 16th, 17th and 23rd (How.) Batteries Canadian Field Artillery were also under the orders of the 3rd Division artillery from noon 26th March to 12th April.

Registration was carried out as "retaliation". To induce the enemy to believe that the attack was on a wider front than actually contemplated, a few heavy guns and howitzers registered and fired on the trenches to the north-east for the first half-hour. The "lifts" were gradual, the procedure forming a stage towards the "creeping barrage" of July 1916.

March. greatcoats, suffered considerable hardship. Between 3.40 and 4.5 A.M., after passages had been cut in the British wire, the front trenches in the danger area of the mines were cleared without the slightest noise by the men of the four battalions of the 8th and 9th Brigades and the engineers holding them.

Exactly at 4.15 A.M. on the 27th the first shell passed over the waiting troops and the mines were successfully exploded at intervals of a few seconds: the trenches rocked and to the onlookers it appeared as if a long village was being lifted through flames into the air. The artillery at once put down a barrage behind the salient, varying the area from time to time, and on the front trenches on either side of it; and at the same moment the infantry advanced in quick time, without waiting the half minute finally allowed for the débris of the mines to fall. Mines 2, 3, 4 and 5 exploded under the German front and support trenches, completely wrecking the defences; No. 1 formed a crater in No Man's Land as defence for the right flank of the attack; whilst No. 6 acted similarly on the left flank, and destroyed a German bombers' post there.¹

The Northumberland Fusiliers reached their objective with hardly a casualty, losing only one man before they arrived at the enemy wire. The Germans, shaken by the explosion, offered little resistance, and surrendered in groups.² The Royal Fusiliers were less fortunate, being caught by heavy machine-gun fire from the left whilst crossing the parapet, and lost severely, particularly in officers. The enemy's barrage opened on the whole front of the attack with great promptness—40 seconds after the last of the Northumberland Fusiliers had crossed the parapet—and violent shelling of the captured ground and the British communication trenches continued most of the day. The Royal Fusiliers did not succeed in reaching their objective; they reported that they occupied portions of a German trench south of Craters 4 and 5, with their right on the dividing line, connected with the Northumberland Fusiliers. This, however, was not the case. There was a gap; the reports that a continuous line had been formed

¹ Mines 1 to 6 contained, respectively, 1,800 lbs., 31,000 lbs., 15,000 lbs., 13,500 lbs., 12,000 lbs., and 600 lbs. of ammonal.

² Although, by overhearing a telephone conversation, the Germans had some idea that a mine explosion might take place, no precautions had been observed, except to withdraw some of the garrison, the *18th Reserve Jäger Battalion*, from the front to the support line. See the German account in Note which follows.

were probably founded on the fact that men of the two battalions had met in No Man's Land. It is now certain that the line reached by the Royal Fusiliers was in front not of Craters 4 and 5, but of Crater 6 and an old crater east of it, which it will be convenient to call No. 7. The appearance of both No Man's Land and the enemy trenches attacked had been entirely changed by the formation of the new craters; for some time it was most difficult for officers to orient themselves. This "changing the landscape", as it was called, was the principal cause of the mistakes and misunderstandings which arose as to the position of the line.

Consolidation of the captured trenches under fire was slow work, and the two support battalions of the 9th Brigade, the 1/Royal Scots Fusiliers and 12/West Yorkshire, which furnished carrying parties and working parties to open up communication trenches, endured considerable loss.¹ To add to the difficulties, the explosion of the mines had interfered with the deep drainage system devised by the Germans, and the captured trenches began to fill with water when the weather, which had been bright in the morning interspersed with showers, turned to heavy rain. Frequent reliefs of the companies in the front line became necessary, and, in spite of their previous exertions and low strength, the battalions of the 8th and 76th Brigades had to be used. During the night of the 27th/28th, the 13/King's, 2/Royal Scots and 8/East Yorkshire of the 8th Brigade took the place of the 1/Northumberland Fusiliers, 4/Royal Fusiliers and 1/R. Scots Fusiliers.²

On the next night, the 28th/29th March, on account of the exhaustion of the men from want of sleep, further reliefs had to be carried out: two battalions of the 76th Brigade (2/Suffolk and 10/R. Welch Fusiliers), took the place of two battalions of the 8th; a company of the 18th Canadian Battalion of the 4th Canadian Brigade (Br.-General R. Rennie) relieved the 12/West Yorkshire, the last remaining battalion of the 9th Brigade. Lieut.-Colonel E. G. Williams, 1/Devonshire, commanding the 8th Brigade in the absence of the brigadier, who was sick,

¹ Pipes, actuated by "pipe pushers", had been driven 6 feet below the surface to form communication trenches and were exploded at zero. Only the one laid to Crater I failed to explode.

² The 9th Brigade had lost 40 officers (12 killed, 26 wounded and 2 missing), and 810 other ranks (105 killed, 581 wounded and 124 missing), and had captured 201 prisoners of the 18th Reserve Jäger Battalion of the XXIII. Reserve Corps.

March. took over command from Br.-General Potter at 11 A.M. on the 29th. During the morning a number of Germans, at first thought to be attackers and therefore fired on, came over to the trenches east of the craters and surrendered. This seemed to augur well.

On the 30th arrangements were made for a selected force, drawn from the 1/Gordon Highlanders, 12/West Yorkshire and the 3rd Division Grenade School staff, to attempt the capture of the left half of the original objective which had not been secured on the 27th. It was then reported that the enemy was definitely in occupation of Craters 4 and 5, and had machine guns and wire in front of them.¹ The attack was therefore postponed. Attempts to cut off the enemy party in Crater 5 failed, and it was then discovered that he was not in possession of Crater 4, and a small party was sent to hold it and establish a machine gun firing to each flank.

An attempt made on the 31st by the enemy to capture Crater 2 was unsuccessful, although the amount of work done on defences had been small. On this day Lieut.-Colonel Craufurd of the Gordons, in temporary command of the 76th Brigade since the 20th, was placed in charge of the operations in place of Lieut.-Colonel Williams. Under the instructions of General Haldane, who had gone round the right half of the front up to the waist in water, Lieut.-Colonel Craufurd proceeded to make arrangements to expel the Germans from Crater 5 on the 3rd April, and capture the whole of the original objectives.

April. The assault, by the 8/King's Own, took place after half an hour's intense bombardment, at 2 A.M. on the 3rd April, in darkness and thick mist, and was completely successful, the casualties being 10 killed and 40 wounded. The Germans seemed completely exhausted and incapable of defence. Only in Crater 5 did they hold out; but the brigade-major, Captain W. de la T. Congreve,² on arriving at daylight, went up with an officer and four men and summoned them to surrender. Thereupon there came out 5 officers and 77 men, who had been cut off by fire and without food for three days. To make sure that there was no mistake about the line secured, General Haldane in the course of the morning again personally went round the

¹ A party of the *II. Battalion 216th Reserve Regiment* entered Crater 5 on the 30th, and a communication trench was sapped forward to it through the gap.

² See f.n. page 168.

whole front. The British had gained a valuable observation post in the crater which had taken the place of the Mound, but they had only a thin line of defence, without a support line behind it. All depended on whether or not this line could be put in a thorough state of defence before the enemy counter-attack which was bound to come.

Whilst the preparations for the attack of the 27th March were in progress, it had been decided by General Plumer that as soon as the objectives had been won the Canadians should take over the defence. Lieut.-General Sir E. A. H. Alderson (Canadian Corps) had then asked the Second Army either that the corps might carry out the attack, as its troops, unlike those of the 3rd Division, were fresh, or that the relief should be postponed until the front had settled down again and become normal. The first alternative was refused on the ground that there was not time to train a Canadian division over the course representing the German front, and the second was agreed to. But, in view of the exhaustion of the 3rd Division, this decision was not maintained, and the 2nd Canadian Division (Major-General R. E. W. Turner) was ordered to relieve the 3rd Division during the night following the attack of the 3rd April, when consolidation had hardly been begun and the precise situation of the enemy's new line was still uncertain.

Wearing steel helmets for the first time—fifty per company—the 6th Canadian Brigade (Br.-General H. D. B. Ketchen) took over the 3rd Division front from the 76th Brigade, completing the operation in the dark at 2.48 A.M. on the 4th, the battalions of the 3rd Division being so weak that they were relieved by Canadian companies. As a first result of the change, a night's work on the defences was lost.

The infantry of the 3rd Division went into reserve, leaving its G.S.O.I., its artillery—which remained in position until relieved at 8.30 P.M. on the 12th April by the 2nd Canadian Division artillery—its trench-mortar batteries, and 24 Lewis guns with teams, at the disposal of the Canadian division.

At noon on the 4th the Canadian Corps headquarters, which had been responsible for the sector south of the V. Corps, changed places with the V. Corps headquarters, and assumed command of the sector.¹ Lieut.-General Sir E. A. H. Alderson had under him all three Canadian divisions, the 1st Canadian Division (Major-General A. W.

¹ It was the first occasion of a whole corps relieving another corps.

April. Currie) having taken over from the 50th Division on the 3rd, and the 3rd Canadian Division (Major-General M. S. Mercer¹) from the 24th Division a little earlier. Canadian troops therefore now held the line from the St. Eloi sector (inclusive) across and beyond the Ypres—Comines canal to the right of the II. Corps sector north of Hooge.² The desire of the Dominion Government, that their contingent should be kept together, was thus carried out, and henceforward the Canadian Corps took its part in operations and was relieved as such—as was the Australian Corps later—whilst for the remainder of the B.E.F. the division remained the tactical unit.³

The position in front of the craters was taken over by the 6th Canadian Brigade with the 27th Battalion, the 31st Battalion having small parties in Craters 5 and 6 and in front of Crater 7,⁴ its front extending eastwards to the canal.

The front line was found in a deplorable condition, barely distinguishable as a line indeed after the mine explosions, continuous shelling, fighting and bad weather from which it had suffered. The parapets were broken down and there was no wire. The trenches, even where revetted and shored up, had collapsed, and were little better than a series of shallow untraversed ditches: at best captured trenches

¹ Killed in action 2nd June 1916.

² The 1st Canadian Division, it will be recalled, had arrived in England in October 1914, moved to France in February 1915, and took a principal part in "Second Ypres". (See "1915" Vol. I, p. 27.)

The 2nd Canadian Division, composed of units raised for it in Canada, assembled in England in May 1915. It arrived on the Western front in September 1915, but with only one field artillery brigade. The remaining three joined in February 1916. In the interval the Lahore Division artillery was attached. (See "1915" Vol. II, p. 402.)

The 3rd Canadian Division was formed in France on the 26th December 1915, Princess Patricia's Canadian L.I. from the 27th Division, joining it. The transfers from the 1st and 2nd Canadian Divisions were few. The personnel of seven other battalions had been corps troops for 2 or 3 months; the remaining four battalions came fresh from the Canadian Training Centre in England. Its artillery did not arrive until July 1916, the artillery of the Lahore Division being passed on to it and remaining until that date. Two railway construction companies had proceeded from Canada to France in August 1915, and were reinforced by a battalion 1000 strong in May 1916. A battalion of lumbermen was asked for in February 1916 and furnished. The further increase of the Canadian forces will be noticed in later volumes.

³ This made reliefs easier as only a divisional front was disturbed, but made it difficult for corps commanders to know their troops and commanders, and killed any sort of corps spirit. The French and Germans also followed this system. Post-war German opinion seems to condemn it on the grounds that whilst it may be possible to find sixty good generals to command corps, to expect to have 180 to command divisions is too optimistic.

⁴ It captured 3 Germans in Craters 5 and 6.

facing the wrong way, splashed with shell holes and without drainage. For dug-outs there were only a few shelters, scarcely splinterproof and full of water like every other excavation; no communication trenches worthy of the name existed; whilst the four large craters formed a continuous and almost impassable obstacle, so that all traffic had to pass round the flanks; even carrying parties had to be roped together to afford means of rescuing the men who stepped or fell into the water-filled shell holes. With the wounded and dead, both British and German, lying half buried in the mud, the area was a depressing sight for any relieving division, and the taking over was particularly difficult as the line was held by a series of detached posts with only waist-deep, if any, communication between them. General Haldane in handing over gave the following advice in writing to General Turner, who immediately went round the front himself:—

1. Make good the front line and wire it;
2. dig a support line in front of the craters and wire it;
3. reclaim our old front line;
4. provide four communication trenches from the old front line to the new front line. Two of these had already been dug, but required revetting and draining;
5. provide numerous communication trenches between the new front and support lines;
6. make tunnelled dug-outs into the rear exterior slopes of the craters as soon as earth has consolidated sufficiently;
7. make and maintain dummy trenches round the lips of the craters, so as to induce the enemy to waste ammunition by shelling them.

Br.-General Ketchen, after examining the area, felt sure that everything pointed to an early counter-attack; certain indications, however, seemed to show that it would come from the Bluff direction. He therefore reported in favour of forming a temporary defensive line on the rear lips of the craters, rather than continuing the more extensive programme of holding a line beyond them, where it was on a forward slope in full view of the enemy on the Ypres ridge. Pending a reply, the 6th Canadian Brigade, with the 2nd Canadian Pioneer Battalion and large working parties of the 4th and 5th Canadian Brigades sent up to assist, set to work to improve the defences with sandbags, and restore the drainage system of the area. But it proved impossible

April. to pump the water from the trenches, as it was thick with mud and when thrown out drained back. The intervals between the enemy half-hour bombardments—"harassing fire" designed for the very purpose of preventing consolidation—from both flanks and the front did not permit of very much being done in the craters or in front of them during the next 24 hours, although some work was done on the support line and the original front line much improved. As the men could obtain no rest and rations could not be got up to them, orders were issued for the relief of the 27th Battalion during the night of the 5th/6th April by the 29th. This operation was not more than half completed when at 11 P.M. on the 5th the enemy opened a continuous and more intense bombardment,¹ which lasted until 2 A.M. on the 6th. It was recommenced after an hour's pause, just after the working parties had been withdrawn, with trench mortars as well as guns, and continued until 3.30 A.M., when the Germans assaulted.² By this hour the new work done had been demolished, such wire as had been put up shot away, and two out of the four Lewis guns in the line were disabled. The British artillery at once turned on all available guns and placed a barrage on all communication trenches and lines of approach.

The barrage was either too late or misplaced and the Germans managed to avoid it, or pass through it in small parties, as some prisoners stated. In any case they broke through in the centre, where the garrison had been annihilated by the bombardment, got in rear of the other defenders and secured at once Craters 2, 3 and 4, in which there were only small parties of five or six men of the 28th Battalion, sent there to dig so as to attract enemy fire. These were never seen again. Crater 5 was lost only after considerable resistance. The attacks on No. 6 and the line east of it were repelled by the 31st Battalion. On a rocket signal sent up from Crater 3 (the Mound) the enemy artillery put down an intense barrage round the crater area and across the British communication trenches, which stopped immediate help. Thus protected, the Germans at once proceeded to consolidate, exposing themselves freely. Unfortunately, all communication being cut, there was doubt as to whether the Canadians or Germans

¹ Without gas, which he had intended to use, the wind being unfavourable.

² The assault was made by one battalion each of the 214th Reserve and 216th Reserve Regiments.

were in possession, and owing to that doubt no artillery April. fire was directed on the craters or the ground in front of them, the barrage behind them being continued. Later, when messages carried by runners did at last come back from the fighting line, it was reported in error, all landmarks having disappeared, that Craters 4 and 5 were still held. Actually Nos. 2, 3, 4 and 5 had all been lost. It was only 1, 6 and 7 which were still in our possession, together with the remains of new trenches communicating with them. In the centre, where 500 yards of the original British front line had been obliterated, there were two companies in such communication trenches and cover as still remained in front of Voormezeele. The mistake as to what was held seems to have arisen from bombing parties of the 28th and 31st, which occupied Craters 6 and 7, wrongly reporting themselves in Craters 4 and 5, thus repeating the mistake of the Royal Fusiliers. In a broken sea of old and new craters, shell holes and damaged trenches, where if men even dared to raise their heads above the surface by daylight they were shot, orientation was practically impossible. There were seventeen mine craters in the area, and although Nos. 2, 3, 4 and 5 were the largest, the troops did not know this, and any one pair of craters might only too easily be mistaken for another.¹

Bombing attacks, in which bombers of the 18th and 29th Battalions and two companies of the 28th Battalion, moved up in support, co-operated, failed to recover Craters 2 and 3, or Nos. 4 and 5, or the ground beyond them; and at night (6th/7th), the men being exhausted, the 27th Battalion and the rest of the 29th were relieved by the 21st.

Major-General Turner now suggested that there were only two courses: either to evacuate the craters and shell the Germans out of the line they held, as they had dealt with us; or to attack on a wider frontage, and consolidate the ground gained. The latter plan would give the German artillery a larger target for its retaliation, and it would not be able to concentrate fire as it had done on the small objective we had offered in our original attack. With the whole area disturbed and all chance of surprise absent, and in view of the proposed Somme offensive, it

¹ Up to the 5th reports that Craters 4 and 5 were held were circumstantial. From the 6th to the 14th they were conflicting, although a General Staff officer of the 2nd Canadian Division who went round the line on the morning of the 10th reported, after being fired on, that the Germans were in possession of No. 4.

April. was no time for a large operation. The first course was the only one practicable at the time, owing to lack of men and means, especially of artillery.

On the erroneous information, however, supplied by the 2nd Canadian Division that only Craters 2 and 3 had been lost, General Plumer decided that the division should hold on to its position, and do all it could to regain these craters.

During the night of the 7th/8th April, the 4th Canadian Brigade relieved the 6th, and put the 19th and 18th Battalions into the line instead of the 31st and 28th. Attacks made on Craters 2 and 3 by bombing parties of the 18th, 19th and 21st Battalions on the night of the 8th/9th, and again on the night of the 9th/10th, by detachments of the same battalions, failed; but German attacks on Craters 6 and 7 also broke down. On the night of the 10th/11th the 21st Battalion was relieved in the line by the 20th, and on the night of the 11th/12th the 18th Battalion by the 25th in the centre sector; at the same time the G.O.C. 5th Canadian Brigade (Br.-General D. Watson) took over command. During the night 12th/13th the 22nd Battalion relieved the 20th Battalion in the right sector and the 26th Battalion relieved the 19th Battalion in the left sector. These constant changes were necessitated by the fatigue, due to the stress of bombardment and lack of sleep, which the men suffered in fragmentary open trenches without a scrap of even splinterproof cover, and every movement entailed a continual struggle through mud and water-filled holes. On the 12th, with the concurrence of the corps commander, Major-General Turner decided to concentrate all efforts on improving the front line until it was reasonably strong. The enemy, except for desultory bombing attacks, confined himself to intermittent shell fire by day and shrapnel fire at night, intended to catch working parties. On the night of the 14th/15th the 24th Battalion relieved the 25th, and after the relief was completed, Major J. A. Ross made a personal reconnaissance, crawling right up to the craters. He reported that all four along the old German front line were in the possession of the enemy.¹ This was confirmed on the morning of the 16th, when the weather at last cleared sufficiently for air work to become possible, aeroplane photographs showing clearly a German trench to the west of them. All arrangements for further offensive operations for which the Canadian Corps was preparing

¹ Major J. A. Ross was awarded the D.S.O. He was killed at Courcellette in September 1916.

were at once cancelled, and on the night of the 17th/18th April the 6th Canadian Brigade relieved the 5th.¹

The area continued to be the scene of artillery bombardments from both sides for nearly another fortnight. The British front, support and communication trenches near by were blotted out. Unfortunately the new German line covering Craters 2, 3, 4 and 5 did not suffer to the same extent, owing to the restricted British heavy ammunition ration. On the 19th April the Germans captured Craters 6 and 7, but did not, as patrolling revealed, occupy them. Their attempt against Crater 1 failed, and St. Eloi then ceased to be the scene of special activity. Fighting over a morass of mud and in bad weather had imposed unheard of misery on the troops and both sides were glad to bring it to a close.

The operations had merely demonstrated once more that with due preparation, some element of surprise and free choice of date, any small part of the enemy's front—a limited objective—could be captured. In this case owing to a tired and weak division being employed, full success was not attained at the first attempt, and, a second being necessary, the opportunity for rapid and thorough consolidation was lost. The converse of the proposition however seemed equally evident: that if only a narrow front were attacked and the enemy could concentrate a sufficient quantity of observed artillery fire on the ground lost—at St. Eloi the enemy had perfect observation—it could not be held against his will. The question which remained unsolved was, what was the best width of front to attack, small enough to ensure success but large enough to prevent the enemy's artillery making it impossible to hold the captured ground.

NOTE

THE GERMAN ACCOUNT OF THE ST. ELOI FIGHTING ²

The *46th Reserve Division* (Lieut.-General von Wasielewski) of *March*. the *XXIII. Reserve Corps* (General von Kathen)—one of the corps raised after the outbreak of war—which had taken part in the First Battle of Ypres and had been in the Ypres area ever since, relieved the *123rd Division* on the 23rd March, only four days before the attack.

¹ The losses of the 2nd Canadian Division up to the close of the 16th had been 36 officers (2 killed, 32 wounded, 2 missing) and 1,337 other ranks (200 killed, 1,098 wounded and 39 missing) of whom 19 officers and 598 other ranks were in the 6th Canadian Brigade.

² A full account, of which this Note is a précis, was originally prepared for a regimental history, and was kindly furnished by the Director of the *Reichsarchiv*.

March. Its two brigades were put in side by side, the *92nd* (Colonel Maerker), with the *13th Reserve Jäger Battalion* attached, taking the St. Eloi sector. The German mine system was not in a satisfactory state, owing to difficulties with water, but the experts of the outgoing division had expressed the opinion that there was no danger of immediate mine explosions. This seemed to be confirmed by air reconnaissance, which found the British trenches as usual and without any sign of preparations for an attack.¹ Only an increase in the number of battery positions, particularly near Kruisstraat and Dickebusch lake, and new hutments near Wulverghem and Vierstraat, gave cause for thought.

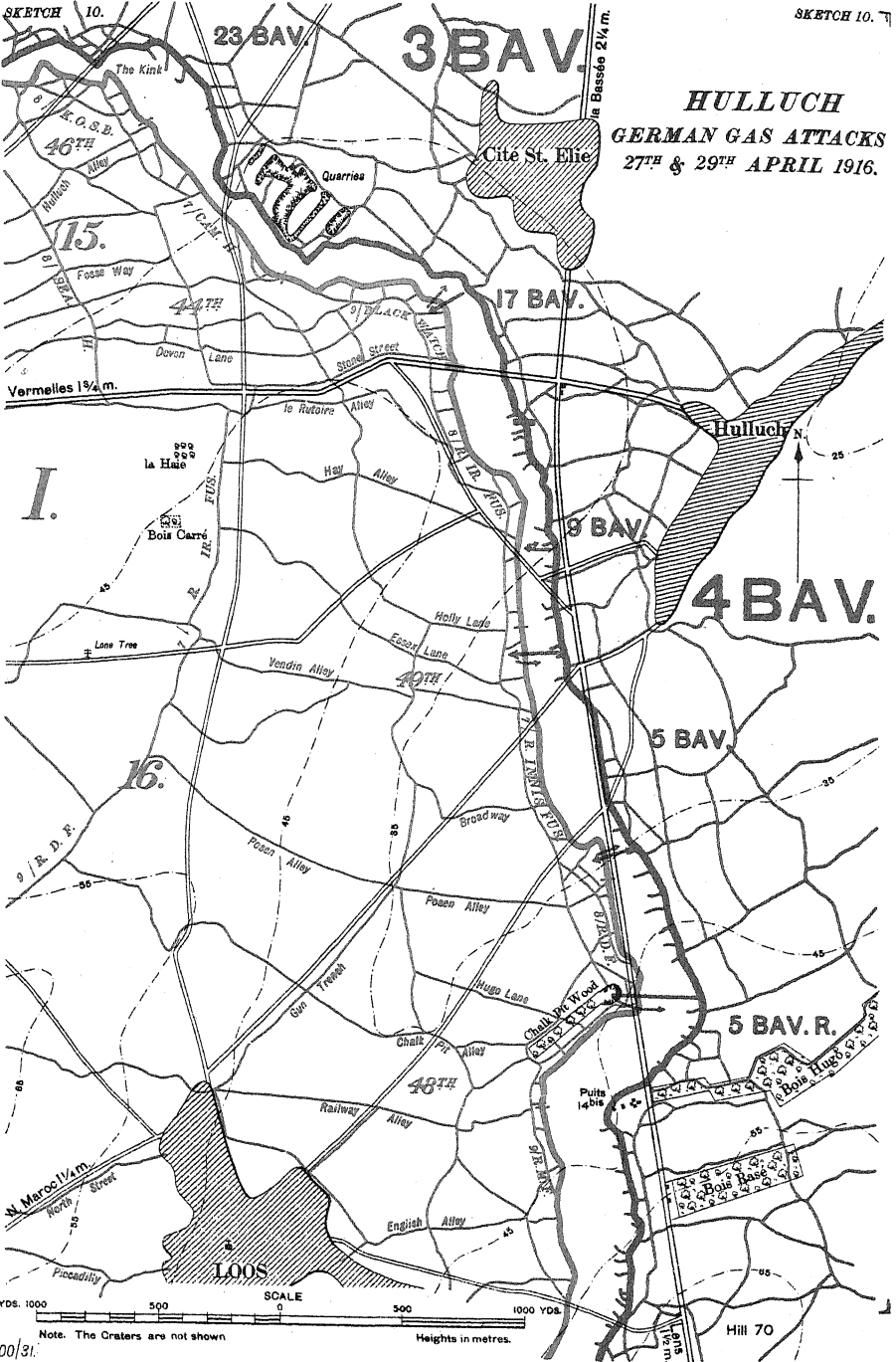
On the night of the 25th/26th March the *18th Reserve Jäger Battalion* relieved the *III. Battalion* of the *216th Reserve Regiment* in the line, the *I. Battalion* being in immediate battle reserve. During the afternoon of the 26th a German listening station overheard an English conversation with regard to the firing of mines at St. Eloi. The German tunnellers, after a long inspection, reported that there was no immediate danger, but the officer commanding the *Jäger* battalion was nevertheless instructed to hold the front line thinly and keep his companies ready in the support trenches. Nothing exceptional happened during the night, but early on the morning of the 27th noises were heard underground, and almost immediately afterwards the mine explosions took place. The German losses in the fighting 27th-29th were 107 dead, 267 wounded and 547 missing, of whom 201 were made prisoner. It is calculated that some three hundred men were killed or buried by the mines. Both front and support trenches were destroyed, whilst many dug-outs at a considerable distance collapsed.

The German account states that the ground covered by Craters 2, 3, 4 and 5 was at once lost (Nos. 4 and 5 were not occupied by the British). An immediate counter-attack was not made on account of the heavy gun-fire and the difficulty of finding out what had happened at the front. Attacks from the flanks of the lost sector made during the night failed, and the corps commander ordered that attempts to recapture it should be stopped for the time being. All available reserves of the *46th Reserve Division* and units of the *45th Reserve* and *123rd Divisions* were brought up to dig a new front position, which, in spite of artillery fire, was successfully done.

On the 30th March two patrols of the *II. Battalion* of the *216th Reserve Regiment* entered Craters 4 and 5; but attacks on the 31st by parties of the *II.* and *III. Battalions* on the trenches covering Nos. 2 and 3 failed. The heavy British artillery fire made the Germans expect a further attack, and the *46th Reserve Division* was reinforced by another battalion, and all reserves possible were collected. But as the barrage stopped any assistance from coming up, the British captured Craters 4 and 5.²

¹ This is a striking testimony to the success of the British tunnellers in concealing the excavated earth. It was carried away by man power in small sacks, deposited in hollows and camouflaged.

² A slight hollow south of St. Eloi, visible through a telescope from Kemmel Hill, which seemed to offer a favourable spot for a German position of assembly, was at first designedly left untouched by fire, but a code word arranged for concentration of fire on it. Half an hour after the infantry assault, the expected opportunity came, and the hollow was swept with 60-pdr. shrapnel and broke up what was evidently a counter-attack.



By the 6th April the German preparations for attack were completed, and the successful assault was made by the *I. Battalions* of the *216th Reserve* and *214th Reserve Regiments*. April.

The left and centre advanced without serious hindrance, but the right was held up for a time by machine-gun flanking fire, and stout resistance was encountered at Crater 5. By 6 A.M. the entire position lost on the 27th March was regained. Consolidation was at once begun, and with the help of dug-in machine guns all counter-attacks were repulsed. The position was thoroughly entrenched—air photographs show a line round the front of the craters and a support line behind them—and until its transfer to the Somme in August the *46th Reserve Division* held the front intact. The total German losses in the recapture of the craters and fighting that followed were 66 killed, 299 wounded and 118 missing, the last mostly buried.

GERMAN GAS ATTACKS ON THE HULLUCH FRONT 27TH AND 29TH APRIL 1916

On the 27th and 29th April the Germans made two gas attacks on the Hulluch front in the area of the *I. Corps* (Lieut.-General C. T. McM. Kavanagh),¹ where the opposing lines, only 120–300 yards apart, had hardly altered since the Battle of Loos. Sketch 10.

On the night of the 23rd/24th April a deserter came over, who, after giving information as to the order of battle, expressed the opinion that a raid on a large scale against our trenches on the Hulluch front was extremely likely, and that it would probably be carried out with the aid of gas. This hint seemed to confirm the signs of an impending attack which had been observed: among them the exodus of rats from the German trenches into No Man's Land, which, it was thought, might be attributable to their being driven forth by leaking gas cylinders; the systematic bombardment of observation posts, bomb stores and important communication trenches; and the evident efforts of the enemy to establish ascendancy by means of trench mortars, rifle grenades and aerial torpedoes. The *I. Corps* therefore issued a warning to its divisions and moved up four batteries of the 15th Division, then in reserve. All units practised gas alerts daily.

The *I. Corps* front, from opposite Lens, past Loos and Hulluch, to beyond the Hohenzollern Redoubt, was at the time held by the 1st Division (Major-General A. E. A.

¹ He had on the 1st April taken over from Lieut.-General Sir H. de la P. Gough, who, in view of the Somme offensive, had been given command of the "Reserve Corps", which in June became the "Reserve Army", and in October the "Fifth Army".

April. Holland) on the right; the 16th (Major-General W. B. Hickie), a division which had not yet experienced a gas attack, in the Puits 14bis and Hulluch sectors; and the 12th Division (Major-General A. B. Scott), in the Quarries and Hohenzollern sectors. The relief of the infantry and engineers of this last division by those of the 15th (Major-General F. W. N. McCracken) was to begin on the 24th, and to be completed by 10 A.M. on the 27th—the artillery taking over on the nights of the 28th/29th and 29th/30th. This movement was allowed to proceed.

On the 24th and 25th, the situation was normal, and the wind from the south-east too strong for the release of gas. On the 26th the wind fell a little, the enemy shelled the sectors of the 16th Division actively and made a small attack on those of the 12th Division. On the 27th the weather was fine and warm, with the wind entirely favourable for a hostile attack. At 5 A.M., half an hour after the usual night garrison of the trenches had been reduced and day sentries posted, the enemy began a very heavy bombardment with high explosive, shrapnel and trench-mortar shells on the front of the 16th Division and the right sector of the 15th. The troops involved, from right to left, were the 9/R. Munster Fusiliers and 8/R. Dublin Fusiliers of the 48th Brigade (Br.-General F. W. Ramsay); 7/R. Inniskilling Fusiliers and 8/R. Irish Fusiliers of the 49th Brigade (Br.-General R. D. Longe); and the 9/Black Watch of the 44th Brigade (Br.-General F. J. Marshall). At the same time the communication trenches were barraged and the villages and lines in rear fired on with lacrymatory shell.

About 5.10 A.M. chlorine gas clouds, with brownish smoke behind them which blotted out the rising sun, were seen issuing from the German trenches, two hundred yards away, opposite the front of the 16th Division from its right to the centre of the 8/R. Irish Fusiliers. With a south-east wind the clouds drifted northward across the British front as far as the 9/Black Watch, whose support line and headquarters were more affected than the front trenches.¹ The gas alert, for which everyone was ready, was given, and the guns of the corps heavy and divisional artillery (Br.-Generals W. F. Cockburn and E. J. Duffus)

¹ The gas was emitted from the trenches of the *5th Bavarian* and *5th Bavarian Reserve Regiments*; the *9th Bavarian Regiment* did not open its cylinders for fear of the gas blowing over the sector on its right. See Note which follows.

at once established barrages in rear of the German lines from which the gas was launched. At the outset the cloud was so thick that nothing two or three yards away was visible; gas helmets had to be worn as far back as brigade headquarters, $3\frac{1}{2}$ miles behind the front, and the smell of the gas was noticed 15 miles away. Then, after the flow had lasted about half an hour, small parties of Germans approached the British trenches, making for gaps in the wire. Each party consisted of from twenty to thirty men armed with pistols and grenades but without rifles. All were driven off by fire.

At 5.55 A.M. the Germans exploded three small mines, one near the right of the 7/R. Inniskilling Fusiliers, one on the right of the 8/R. Irish Fusiliers, one at the Quarries, west of Cité St. Elie in the 44th Brigade area; then, after further intense bombardment, released another gas cloud. A company of the Black Watch was caught by this, having taken off helmets after the first cloud, by order of its commander (who was gassed and died) in the belief that, having once been exposed to gas, they were of no further use. Behind the cloud advanced several parties, each about two hundred strong. Three of them succeeded in getting into the British trenches: one about Chalk Pit Wood, the right of the 8/R. Dublin Fusiliers, whence they were driven out, after about a quarter of an hour's fighting; the second in the centre of the sector of the 7/R. Inniskilling Fusiliers, which was immediately expelled and then suffered severely from Lewis-gun fire; whilst the third entered a part of the 9/Black Watch trenches held only by patrols, whence it was bombed out in three minutes. The battalion reserve of the 8/R. Dublin Fusiliers was moved up to counter-attack at Chalk Pit Wood, but the Germans had gone before it arrived. At the same time, owing probably to some gas cylinders having been exploded by British gun fire, a number of Germans were seen to climb out of their front trenches and run back towards the support trenches, being shot down as they did so. Eighty dead bodies were counted in and about the British trenches. By 7.30 A.M. all was quiet again.¹

¹ The casualties, including those due to gas were:

		Killed.	Wounded.	Total.
16th Div.	{ Officers	5	26	442
	{ Other ranks	116	295	
15th Div.*	{ Officers	2	3	107
	{ Other ranks	16	86	

* Mostly in the 9/Black Watch.

April. During the night of the 27th/28th April the 7/R. Inniskilling Fusiliers was relieved by the 8th, and the 8/Royal Irish Fusiliers by the 7th; lastly on the 28th a company of the 9/R. Dublin Fusiliers was sent up to reinforce the 8th Battalion of that regiment. The day passed without any special incident on the I. Corps front, except for a successful raid of the 1st Division into the German trenches at the Double Crassier near Loos. But at 3.45 A.M. on the 29th, after the enemy had sent up first a green and then a red light, his artillery opened heavy fire, chiefly on the reserve and communication trenches of the 16th Division. He then released chlorine gas, followed by white smoke, on the front opposite Chalk Pit Wood up to Hulluch, the clouds being denser near the latter place than elsewhere¹ and moving very slowly. No attack ensued, but about 4.10 A.M. large numbers of the enemy were observed massing in their trenches opposite the Hulluch sector, and small parties attempted to advance against the 16th Division front, but were either shot down or turned back by rifle and machine-gun fire. At this moment the gas clouds, which had been hanging about the British front and support trenches, destroying all vegetation down to the last blade of grass, suddenly swept back over the Germans. The latter were seen to leave their trenches on a front of about half-a-mile and run back with the cloud, being at the same time caught in our artillery barrage. The German bombardment ceased soon afterwards, and the gas clouds dispersed slowly to the south. About 120 additional dead Germans were seen on the 16th Division front.

It was light when the gas clouds were released, and the men of the 16th Division had full warning and were ready—not a dead man was found without his helmet properly on—yet the gas casualties were somewhat heavy.² Although it was not admitted at the time, and the casualties were unjustly attributed to the bad gas discipline of the 16th Division, the helmet was obviously insufficient protection against the strong concentration of gas which the enemy was able to produce, the heaviest incidence of casualties and the highest mortality occurring at those parts of the front line nearest to the enemy's trenches. The manufacture

¹ From the cylinders of the 9th Bavarian Regiment, which had not opened them on the 27th.

² Including shell fire, which accounts for about one-third, the total casualties were: killed, officers 7, other ranks 225; wounded 15 and 473. The total gas casualties for the two attacks of the 27th and 29th were 1,260, of whom 338 died.

of the box respirators, therefore, was pushed on with all April speed. The anti-gas blankets now fitted to dug-out entrances were also found unsatisfactory. Lewis guns which had been wrapt up in waterproof sheets, with a blanket sprayed with vermores solution (kept ready in rum jars) over them during the actual passage of the gas, were found to have suffered no serious corrosion; but some ammunition exposed to its effects was unusable, and some rifles jammed owing to a deposit on the bolts.

It was not possible immediately to release the troops who had experienced the attack, but by medical advice they were spared all possible fatigue during the following night and day, carrying and working parties being furnished by other units; and no after-effects were observed. The complete failure of the enemy's efforts and his eventual discomfiture by his own gas greatly heartened the British troops. Their uneasy, and quite justified, feeling that the gas helmet was now a doubtful protection was allayed for the time being by the information that the particular helmets in question had not been properly impregnated with chemicals.

NOTE

THE GERMAN ACCOUNT OF THE GAS ATTACKS 27TH AND 29TH APRIL 1916¹

The attack was made by the *5th Bavarian Reserve* and *5th* and *9th Bavarian Regiments* of the *4th Bavarian Division*, which held the front from near Loos to just beyond the Vermelles—Hulluch road; the *3rd Bavarian Division*, which with the *4th* formed the *II. Bavarian Corps*, was on its right.²

On the 27th April a gas attack, to be followed by a minor operation (*Unternehmung*) was to be carried out by the three regiments of the *4th Bavarian Division*. The gas cylinders had long been built in. The *9th Regiment* could not, however, release the gas, as it might have endangered the *3rd Bavarian Division* on its right (in the Hohenzollern sector). "Nevertheless, in broad daylight, at 6.45 A.M. and 8 A.M., three patrols entered the British posts and occasioned losses to the fleeing British." The failure of the gas is not referred to.

On the 29th, the account continues, the wind was less favourable than on the 27th, but at 3.45 A.M., by higher order, gas was released by the *9th Regiment*. In places and at times there was a calm, and

¹ Taken from the history of the *9th Bavarian Regiment*, pp. 77-8.

² An Irish N.C.O. sent to 49th Brigade headquarters with identifications from German dead reported that the attackers "belong to the *5th Barbarian Regiment*".

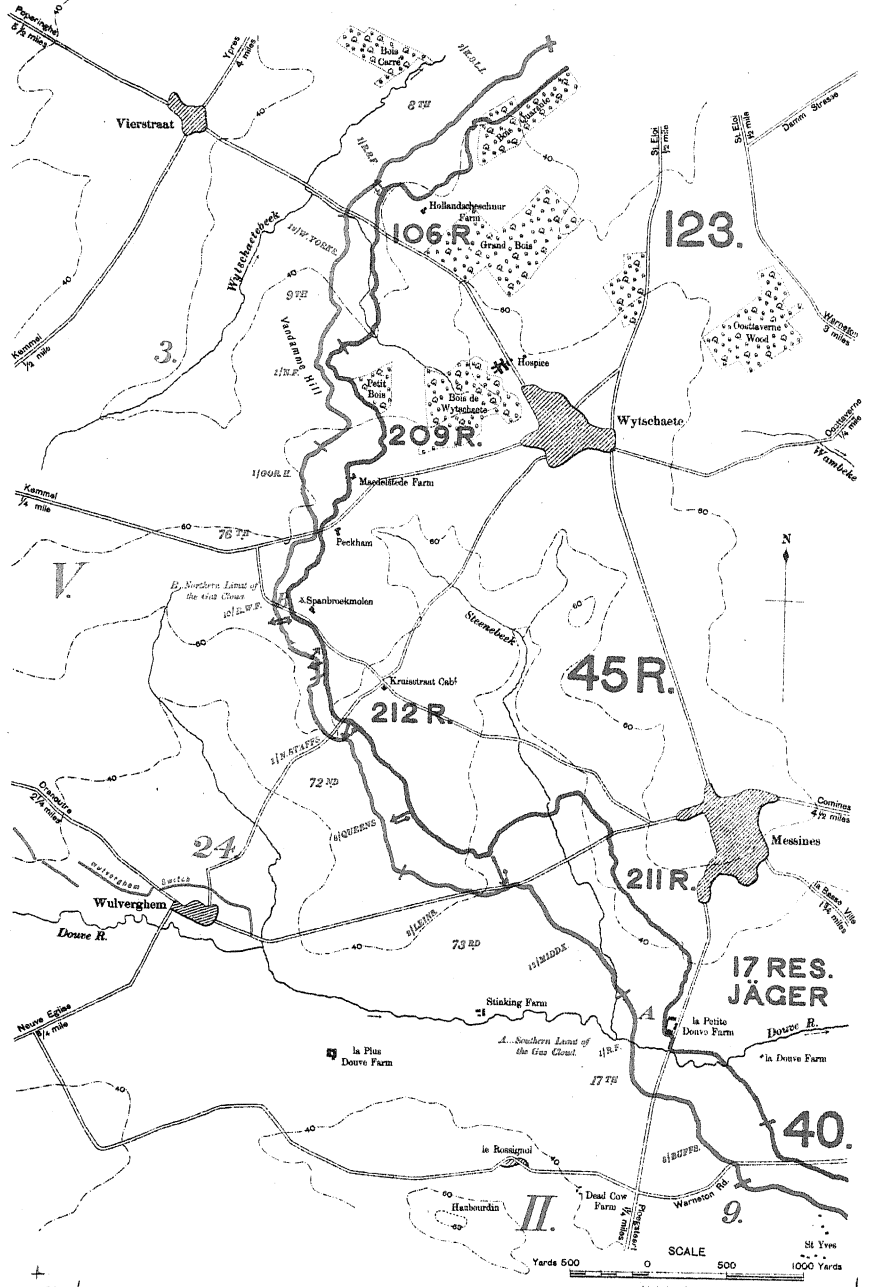
April. the direction of the wind frequently veered. The gas crept over the enemy positions as far as the 3rd line, but then returned and flooded the trenches of the *9th Bavarian Regiment* and partly those of the *5th*. The unexpected change had the result that the gas masks were not put on in the German trenches in time or with the necessary calm and care, and the *9th Regiment* had heavy losses to bewail :— dead, 1 officer and 132 men ; gas sick, 6 officers and 280 men, of whom 30 subsequently died. The losses of the other two regiments of the *4th Bavarian Division* are not available ; but the *17th Bavarian Regiment*, the left of the *3rd Bavarian Division*, records in its history, pp. 41-2, that its *No. 2 Company*, on the left, had 4 dead and 30 sick from the German gas blowing back. The losses of the gas troops and other non-infantry units are not at present available.

SKETCH II.

SKETCH II.

WULVERGHEM

GERMAN GAS ATTACK 30th APRIL 1916.



3100/31.

CHAPTER VIII

TRENCH WARFARE (*concluded*)

(Sketches 11 to 15)

GERMAN GAS ATTACKS ON THE WULVERGHEM FRONT 30TH APRIL AND 17TH JUNE 1916

At the end of April 1916, the V. Corps (Lieut.-General H. D. Fanshawe), the centre of the Second Army (General Sir Herbert Plumer), was holding a front of $5\frac{1}{2}$ miles from the Warneton road ($1\frac{1}{2}$ miles south of Messines) to a little south-west of St. Eloi. The corps front ran from the valley of the Douve, up the Wulverghem spur, then back over the top of the Ypres ridge near Peckham (south-west of Wytschaete village), and along the lower western slopes of this ridge north-eastwards to the left boundary. Thus the British position was completely overlooked from the higher ground, the Messines—Wytschaete and the main Ypres ridges, both in the enemy's possession. On the 29th April the front was divided between the 24th Division (Major-General J. E. Capper) and the 3rd (Major-General J. A. L. Haldane). The latter had, between the 21st and 29th, relieved the infantry and engineers of the 50th Division (Major-General P. S. Wilkinson), which had gone into corps reserve in villages six to ten miles behind the front, leaving its divisional artillery in the line to be relieved on the nights of the 30th April/1st May and 1st/2nd May. Each divisional sector was divided between the three brigades, each of which had two battalions in the line. Besides front and support trenches, the defences, as on the greater part of the Ypres front, comprised two lines of strong points, and in rear of them a back line, known as Wulverghem Switch.

Since the operations at the Bluff and St. Eloi the sector of the Second Army, from the south of Armentières to

April. Boesinghe beyond Ypres, had been comparatively quiet, although the Germans, having perfect observation from three sides over the Salient, subjected the front system and the communications to regular shelling: so regular indeed in place and time that precautions could be taken to evade it.

In addition to the construction of a defensive shallow mining system, a start had been made on the deep system which was to play so important a part in the great attack on Messines ridge in June 1917. It was of course of the utmost importance that the enemy should obtain no information of its existence. Heavy shelling of the front system, however, interfered with its progress, blocking the approaches to the shafts and preventing the removal of spoil. In April there was very little mining activity on the Second Army front, and the Germans only blew seven mines, one of which on the 24th wrecked the deep offensive mine under la Petite Douve Farm (south of Messines).

During the ten days preceding the 30th April, however, there were indications of preparations on the part of the enemy for an attack with gas on the V. Corps front. On the 21st, 22nd and 23rd April British shell fire exploded gas cylinders in five places in the German trenches on a frontage of a mile near Spanbroekmolen, and small greenish-yellow clouds floated down the German front.¹ The wind having gone round to the north-east on the 25th, the gas alert was ordered.

On the 26th April two deserters came over separately near Spanbroekmolen and stated that gas cylinders had recently been placed in position on that front, and were to be used when the wind was favourable. In view of an enemy raid, therefore, the entrances to the deep mines in the area were closed up and concealed as far as possible, and the 3rd Division cancelled all wiring and working parties so as to reduce to the utmost the number of detached parties which might not receive the gas warning. But the 24th Division did not think it necessary to take this latter measure, although some anxiety was felt as regards the ration parties and runners, who might be on the move when the gas came over and fail to hear the warning owing to the noise of the bombardment.

¹ The German account, "Res. Regt. No. 210", p. 129, admits that gas cylinders were exploded in this way, but adds that "a cloud 30 feet high, with flames in it, settled over the enemy's position, and then sank into the enemy's trench". These effects were not noticed on the British side.

At 9.25 P.M. on the 29th, the gas alert being still in force, April. two more deserters entered the trenches near Spanbroekmolen, held by the 76th Brigade (3rd Division). They were interrogated on the spot, and revealed that the attack was to be made that night or early the following morning. Br.-General R. J. Kentish at once reported to his division and informed the brigades on his right and left, so that by 10 P.M. they had issued warnings, and men were sent out in front of the parapet to listen for the gas. A notice sent out by the meteorological expert that the wind was of such velocity that a gas attack was improbable was not communicated to the troops.

The prospect of a gas attack in daylight, with no more protection than the P.H. helmet and the enemy little more than a stone's throw away, was bad enough; but on this occasion, as often later on, the battalions in the line had to await the attack in darkness: it was only two days before the new moon. The troops were confident, however, and feared only that, hampered in the dark by the eye-pieces of the helmet, they might not be able to distinguish friend from foe.

About 12.35 A.M. heavy rifle and machine-gun fire was opened by the enemy along the greater part of the front held by the 73rd Brigade (Br.-General R. G. Jelf) and 72nd Brigade (Br.-General B. R. Mitford), the centre and left brigades of the 24th Division, and the 76th Brigade, the right of the 3rd Division. The 13/Middlesex and 2/Leinster (of the 73rd), 8/Queen's and 1/North Staffordshire (of the 72nd) and 10/R. Welch Fusiliers (of the 76th) were in the line. Almost simultaneously, gas was launched along a two-mile frontage, with some, perhaps deliberate, gaps from la Petite Douve Farm to Spanbroekmolen.

In parts of the line the hissing made by the release of the gas was detected, but in general this was effectively drowned by the noise of fire, which moreover prevented the alarm gongs and horns from being generally heard. The smell which in a minute became very intense was therefore in most cases the first intimation of the release of gas. The wind was fairly strong, as predicted, so that opposite the junction of the 72nd and 76th Brigades, where No Man's Land was only forty yards wide, the gas reached the British front line almost without notice; but all stood to and adjusted their helmets, and made ready to resist the enemy. A brilliant display of Very lights all along the front now revealed the gas cloud to view. Simultaneously with its discharge, an enemy artillery barrage

April. had been placed on the approaches to the Wulverghem front, on battery positions and on observation posts, whilst the support trenches and strongpoints were bombarded. Nevertheless, the signal "Gas" reached divisional headquarters at 12.47 A.M., and at 12.50 the 24th and 50th Division artillery (under Br.-General L. M. Philpotts¹ and Lieut.-Colonel A. U. Stockley), mostly disposed behind Hill 68 (near Ploegsteert) and Vierstraat spur, which runs north from Kemmel, came into action on their night lines, as did the batteries of the corps heavy artillery (Br.-General R. P. Benson).

The flow and the concentration of the gas appear to have varied, both as regards time and quantity. It lasted from fifteen to forty minutes, and was shorter and more intense, or there was no discharge at all, opposite the points where the enemy meant to strike. The Germans who attacked were as a rule without masks; it would seem as though they hoped to make use of the high wind, not only because under such conditions a gas attack was improbable, but because it would enable them to follow up freely and unhampered. Some officers seeing them without masks, ordered their men to take theirs off and meet the enemy on equal terms. The cloud travelled a considerable distance with great rapidity, being quite unpleasantly strong at Bailleul, six miles from the discharge. Here it was first noticed at 1.12 A.M., which is equivalent to a speed of 300 yards per minute.

About five minutes after the first gas had been released, parties of the enemy approached the wire, no doubt for the purpose of cutting it, but were driven off by the listening posts. No further attempt was made until the flow of gas had ceased, when at various parts of the line a number of parties, each estimated at thirty to forty strong, advanced against the 72nd and 76th Brigades. One of these got into an unoccupied piece of trench at the junction of the brigades, but was at once bombed out; the others were driven off by fire. By 1.30 A.M. the action seemed over and the artillery ceased fire; but a little later two very definite raids were made by large parties, one about the centre of the 72nd Brigade, and the other further to the north, clear of the gas attack, on the left of the 9th Brigade and on the right and centre of the 8th, both places covering mine shafts. First, the enemy put down a barrage fifty yards in rear of the front attacked, followed by a bombardment with heavy trench mortars, under cover of

¹ Killed 8th September 1916.

which and of the fire of snipers lying out in the long grass April. and mustard in No Man's Land, the raiding parties reached our wire and attempted to make their way through it. The attack on the 3rd Division was repelled by Lewis-gun fire from a flank and by hand-grenades thrown by the garrison of the trench attacked. Two 9.2-inch and two 8-inch howitzers were turned on to the German trench mortars and soon accounted for them. The raid on the 24th Division—the Germans being armed with bombs, daggers and pistols—succeeded, however, in entering a short three-bay length of front trench. A counter-attack was at once organized, and in twenty minutes the enemy was bombed out, and it was found that a 40-lb. charge of high explosive had been placed in position for firing in a disused mine shaft. At other places where the Germans emerged from their trenches they were stopped by fire. By 4.30 A.M., after a lovely sunrise, the front had entirely quieted down without either the supports or the reserves having been called on, and a peaceful Sunday followed.

From the effects observed, which were similar to those of the gas attack of the 19th December 1915, chlorine with a certain amount of phosgene gas had been employed, but in a more concentrated form than previously experienced, a short exposure being sufficient to cause death. The course which the gas cloud had taken was clearly marked by the burning or discoloration of the grass and the destroyed crops and vegetation. Even at Bailleul the young shoots and leaves of plants were withered and cattle were killed in the fields two miles short of the town.¹ “A really dangerous concentration for an unprotected man must have extended 9,000 to 10,000 yards from the point where the gas was installed.” The new box respirator worn by some machine and Lewis gunners proved a perfect protection.

On the night of the 16th/17th June the enemy attempted June.

¹ There is a full account of this gas attack, with map, from the medical standpoint, in the official history, “Medical Services. Diseases of the “War” Vol. II. pp. 278-83. The total gas casualties were 562, of whom 89 died. The 3rd and 24th Division reports give their gas casualties respectively as 2 officers and 67 other ranks and 6 officers and 332 other ranks, of whom, in all, 2 officers and 81 other ranks died. Casualties from other causes amounted to 103 in the 3rd and 209 in the 24th Division. The apparent disproportion of the losses in the two divisions is due to only one battalion of the 3rd being on the front attacked, as against 4 battalions and working parties (some of which did not get the warning) in the 24th Division; and as the gas first swept south-west, the support and reserve lines of the 3rd Division were little affected.

June. a similar gas attack on the 24th Division, once more against the 72nd and 73rd Brigades. It proved entirely abortive. The gas was released from the "curtain" of the deep re-entrant west of Messines, where No Man's Land was 400 to 600 yards wide; this width no doubt largely accounted for its failure. The wind being favourable, the gas alert was ordered at 3.30 p.m. on the 16th. About 12.20 A.M. on the 17th, there being bright moonlight, the sentries and patrols of the 8/Queen's and 1/North Staffordshire (both these battalions of the 72nd Brigade had been in the previous gas attack), and the 9/R. Sussex and 7/Northamptonshire (of the 73rd) saw gas beginning to leave the German trenches, and at once gave warning. The cloud was very dense, but the wind being light, it was slow in reaching the British trenches, and there was ample time to adjust helmets. The flow continued with intervals for 50 to 60 minutes, and was carried south-eastward towards the trenches of the 17th Brigade (Br.-General J. W. V. Carroll) which was holding the right of the divisional front. Towards the end of the flow the gas began to blow back over the Germans. The British artillery barrage put down was most effective and stopped any attempt on the enemy's part to attack had he intended to do so; only a few men came over the enemy parapet, and were at once driven back. In spite of everyone (except ration parties and a few individuals moving in the communication trenches) being ready, the losses were very much the same as in the previous attack, so that it was judged that the gas was a very strong concentration against which the helmet was an entirely insufficient protection.¹

NOTE

GERMAN ACCOUNT OF THE GAS ATTACK ON 30TH APRIL 1916

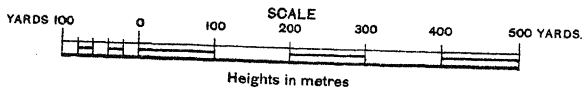
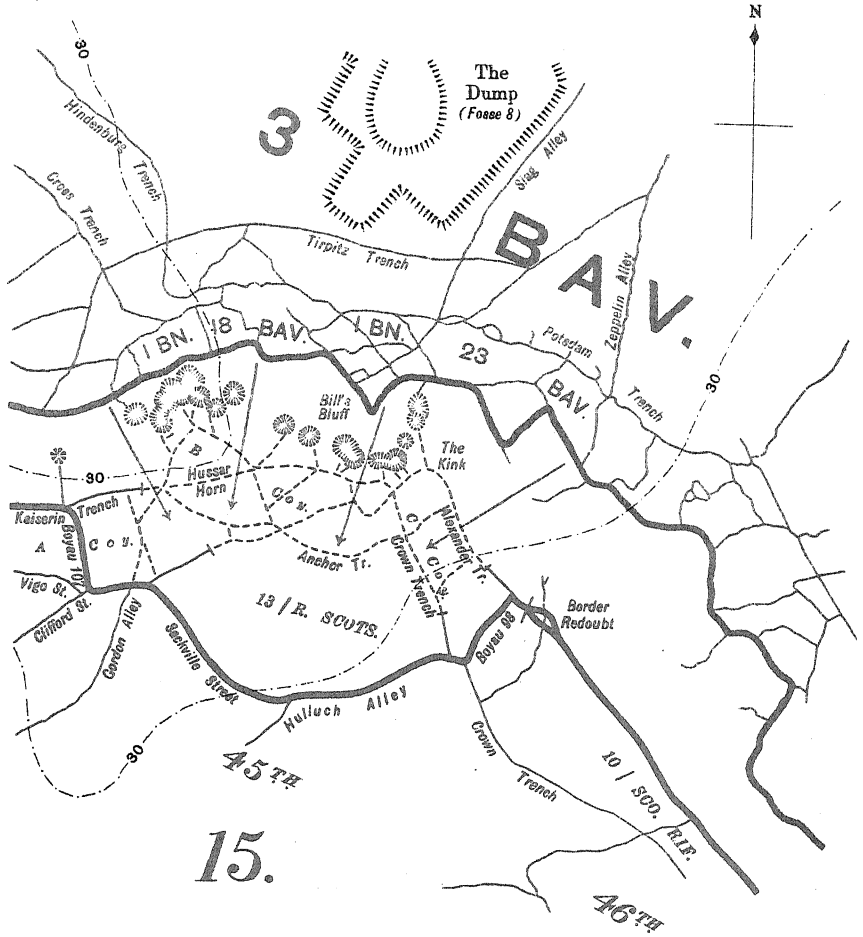
April. The front opposite the V. Corps was held by the *XXIII. Reserve Corps*, consisting of the *45th Reserve* and *123rd Divisions*, organized on the 9-battalion basis. Accounts of the attack are given in the histories of two regiments of the former division, the *209th Reserve*, in the front line, and the *210th Reserve*, which was in reserve at Comines, but ordered to send a detachment consisting of 6 officers, 2 acting officers, 12 N.C.O.'s and 110 men to take part in what is described as "a patrol enterprise in force for the purpose

¹ The total casualties from gas according to the medical reports were 562 with 95 deaths. The total casualties (including all causes) of the 72nd Brigade were 848 (mostly in the 1/North Staffordshire), in the 73rd, 187 (70 gassed), and in the 17th Brigade 48 (24 gassed).

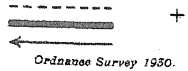
SKETCH 12.

SKETCH 12.

THE LOSS OF THE KINK 11TH MAY 1916.



British Trenches lost on the 11th May.
 British Front Line at the conclusion of the fighting
 German Attacks on the 11th May



3100/31.

"of finding and destroying mine galleries, combined with a gas April. "attack".¹ Originally arranged for the 26th, at 10 P.M. on the 29th orders were sent out for the attack to take place at 12.40 A.M. next morning. "At 11 P.M. all the listening posts were withdrawn, "and, on the passing down of the code word 'issue rations', the gas "was released, '80 per cent of 2000 large and 3000 small cylinders' "being opened, and the discharge lasting 20-25 minutes. The little "noise it made was smothered by rifle and machine-gun fire. The gas "extended to about the height of a man, but in places higher, and was "shown up by enemy light-balls above it. Enemy machine-gun and "rifle fire was immediately opened, and the enemy guns began five "minutes after ours." Officer patrols were sent forward, only to report "the enemy perfectly intact and undisturbed by the gas "discharge. Thus the enterprise could not be carried out." Beyond the wounding of the senior officer no casualties are mentioned.

THE LOSS OF THE KINK SALIENT, 11TH MAY 1916

A little to the south-east of the Hohenzollern Redoubt, *Sketch* between it and the Cité St. Elie Quarries, the British line ^{12.} formed a blunted salient about four hundred yards wide across the slight depression leading down to Fosse 8, the scene of severe fighting in the Battle of Loos. The projecting shoulders of the salient were known as "The Kink" and "Hussar Horn". The sector near the Hohenzollern had the reputation of being one of the worst on the British front, since it was overlooked at close quarters by the redoubt itself, by Fosse 8, and by various mine craters²; it suffered daily from accurate artillery and trench-mortar fire. But the Kink and the trenches near by had the worst reputation of any place in the sector. Besides shelling, a great deal of shallow mining had gone on, the British being mostly defensive, so that the so-called No Man's Land, little more than a hundred yards wide, was full of high-lipped craters some occupied by the British, some by the Germans, at a distance of a few yards of each other. By dogged persistence, the 170th Tunnelling Company had finally established superiority underground, and at the end of April all the craters, except one immediately north of the

¹ The account in "Res. Regt. No. 209", p. 103, describes how much the troops disliked the use of gas: they had to carry the cylinders up and down, and live alongside the full ones in the trenches for days before the gas could be used, suffering many casualties from shells damaging the cylinders and allowing the gas to escape. They had to sleep with gas masks on.

² An infantry brigadier from the Ypres Salient, well known for his habit of going round his line every morning, after three days in the area at this time said: "If this is typical of the Hohenzollern, for the Lord's sake send me "back to Ypres."

April. Kink, were in British possession, and endeavours were being made to wire and consolidate them. The old front trench, however, was still held in rear. Behind this were two good trenches, Hussar Horn and Anchor, which crossed and so formed switches. There was a reserve line, Hulluch Alley—Sackville Street, 250 yards behind the old British line, and a mile and a quarter in rear of the front was an Army back line, known as the Village Line, so that there was little chance of a break-in by the enemy progressing very far.

From the 27th April, the first day of the fighting at Hulluch just described, when the 15th Division (Major-General F. W. N. McCracken) had taken over the Quarries and Hohenzollern sectors, the Kink salient had been subjected to an abnormal amount of artillery and trench-mortar fire; and on the 1st and 5th May, after a short period of underground peace, the enemy opposite, the *3rd Bavarian Division*, had fired two small mines near Hussar Horn—with a view to improving his defences, it was thought, as they did no damage. The enemy had also greatly interfered by machine-gun fire at night, with the wiring of the craters, so that, in retaliation, his trenches, with the permission of the I. Corps, had been subjected on the 6th to heavy bombardment. Both sides had then resumed what was considered normal artillery activity in the sector, and there were no apparent signs of attack.¹

On the 11th May, a fine, hot, cloudy day, the usual intense shelling of the Kink salient was carried out by the enemy with field artillery and 5·9-inch howitzers. About 10 A.M. this died down, to be renewed at intervals during the day; but nevertheless, the relief of the 44th Brigade (Br.-General F. J. Marshall) on the right, in the Quarries sector, by the 46th (Br.-General T. G. Matheson), was carried out and completed by 2.30 P.M., the Hohenzollern sector on the left being held by the 45th Brigade (Br.-General W. H. L. Allgood).

The divisional front was then occupied by four battalions, two each of the 46th and 45th Brigades, from right to left the 8/K.O.S.B., 10/Scottish Rifles, 13/Royal Scots, and 11/Argyll and Sutherland Highlanders, with the other four in brigade reserve. The 44th Brigade, in divisional reserve, moved back to villages some five or six miles behind the front.

At 4 P.M. the enemy began to shell the whole front of

¹ For the explanation of the enemy attack, see the German account which follows.

the 15th Division, but after 4.25 P.M. concentrated on the Kink, from Border Redoubt to Clifford Street, held by the 13/Royal Scots. Soon after, the British artillery, both heavy and divisional (under Br.-Generals W. F. Cockburn and E. B. Macnaghten), came into action, but dust and smoke made observation of the front impossible. Major-General McCracken, in view of the heavy firing, ordered the reserve brigade to stand to, send one battalion forward to Noyelles, and man the machine guns of the Village Line. About 5 P.M. the enemy blew a mine near the Hohenzollern Redoubt, and shortly afterwards his fire slackened on the Kink front and increased near the Hohenzollern, so that Br.-General Allgood asked for artillery fire to be switched on to the German trenches near the Redoubt, feeling certain that the enemy would attack from there. This was done, and the artillery fire, combined with that of the 11/Argyll and Sutherland Highlanders, checked an attempted advance.

At 5.45 P.M. the enemy's fire on the Kink again increased in intensity. It was one of the heaviest concentrations of artillery on a small area in the war, and the villages in rear and battery positions were severely shelled with high explosive and gas shells. By this time more than half of the Royal Scots were casualties, there being indeed no survivors of the defenders of the first line, and the trenches had been converted into a sea of shell holes. One shell exploded inside the battalion headquarters dug-out soon after 4 P.M. and all the battalion staff were killed or wounded. Thus the chain of command and communication was broken, and the men of the front line were exterminated, when at 6 P.M. the Germans assaulted. Coming forward practically unseen owing to the shelter given by the craters in No Man's Land, they had an easy task. Although held momentarily back on the left by rifle fire, they had little more to do than take possession of what remained of the front line, and of Anchor Trench behind it, from which the thirty or forty men holding it were withdrawn to Sackville Street by the senior officer, who was subsequently killed. The Germans also obtained possession of the entrances to the British mining system; but these, except in one case where there was a shaft, were inclines leading downwards below the enemy's trenches and could be of no assistance to him. Thirty-nine of our miners were, however, captured. The officer commanding the reserve company of the Royal Scots at once sent bombing parties forward from Sackville Street, but they were unable to make

May. progress. Unfortunately the British artillery unaware of the enemy's success, owing to the smoke and dust, and to the interruption of all wire communications,¹ continued the barrage on the craters and the enemy's trenches behind them; and all through the night our guns shelled the ground behind his front line, so that he was able to consolidate his gains comparatively undisturbed.

At 6.30 P.M. the officer commanding the 6th/7th Royal Scots Fusiliers (reserve battalion of the 45th Brigade) took over command of the 13/Royal Scots sector, and sent forward bombing parties, assisted by others from the 46th Brigade on the right. But they suffered severely from machine-gun fire and failed to regain any ground. Br.-General Allgood now came up, and, as it was evident that the enemy could not be turned out by bombing, he organized a counter-attack across the open to take place at 9.30 P.M. Again, although the heavy and divisional artillery took part—the trench mortars had all been knocked out and buried—and the western part of Hussar Horn was reached, the attackers were mown down by machine-gun fire. At 3 A.M. all further attempts were abandoned and a new trench along Sackville Street, in place of the old one which was demolished by bombardment and unrecognisable, was dug and consolidated with the assistance of the 73rd Field Company R.E. and the 9/Gordon Highlanders (Pioneers).

Action on the 12th and 13th and most of the 14th was limited to artillery fire of the most severe description, trenches being obliterated and the men in them buried. At 6.40 P.M. on the 14th, on corps suggestion, another effort was made to turn the enemy out, and the 8/K.O.S.B. (46th Brigade) from Boyau² 98 on the right, made a most gallant attempt to take Boyau 99 (on the east of Anchor Trench); but the enemy had machine guns sweeping the two hundred yards of open which had to be crossed, and the few men who reached the trench were driven out again. Major-General McCracken then decided to abandon further efforts to regain the lost trenches. Although possession of them decidedly improved the enemy's position, the line taken up in Sackville Street, with a new support line with extra large traverses, was a better and stronger one than

¹ The cables were at the time still buried only six to twelve inches. The trouble which resulted on this occasion led to sufficient labour being allotted by corps to enable Signals to dig 6-foot trenches for the cables (see page 69).

² The French thus called a communication trench.

that near the exposed Kink. His decision was approved May. by the commander of the First Army, General Sir C. C. Monro.¹

NOTE

THE GERMAN ACCOUNT OF THE ATTACK AT THE KINK
11TH MAY 1916

There is a lengthy account of the attack on the Kink in the history of the *18th Bavarian Regiment*, pp. 131-140, which confirms the British in every detail. The regiment took over the sector from the Quarries to the Hohenzollern (exclusive) on the 1st April. It found it had inherited a bad "pitch" opposite the Kink, where No Man's Land was very narrow, full of craters which prevented any view, allowed the British (as all craters except one were in their possession) to approach unseen within a few metres, and offered facilities for starting new mining operations. Further, there was no depth of position, the line being less than a quarter of a mile in front of the important observatory on Fosse 8. The situation becoming more and more critical, it was decided by the *3rd Bavarian Division* to make an end of it at one stroke, by capturing the whole of the cratered area and the enemy trenches lying behind it by a coup de main. The *II. Battalion* of the *18th Regiment* and *I.* of the *23rd*, under the infantry commander of the division, Major-General Ritter von Claus, were entrusted with the operation.

The most careful preparations, lasting several weeks, were made. The most important of these were the enlargement of 22 old dug-outs and the construction of 29 new, so that the assault troops might have shell-proof cover during the final bombardment. The men were practised at going in and out of the dug-outs, and every man was shown the gap in the German wire through which he was to pass. After several postponements on account of weather, on the 11th May the assault troops were brought up from rest billets by train to Meurchin, $3\frac{1}{2}$ miles behind Hulluch, and they proceeded during the afternoon in small parties to the dug-outs. Ten minutes before zero they filed out into the front trenches. "As established afterwards, the British position was levelled, the dug-outs crushed in, and the trenches strewn with corpses, but the British artillery replied and covered our position with lively fire."

The assault at 6 P.M. was led by bombing parties, followed by bayonet men (wearing black armlets) carrying wirecutters, spades, and ladders for crossing obstacles. The trenches were so badly smashed by the bombardment, the smoke and dust so thick, and there was so little resistance, that these parties went through almost to the British third line before they could be brought back to the objective, the second line. The next wave (wearing white armlets), carried entrenching tools. It reached the line without difficulty,

¹ The casualties in the 15th Division from the 11th to the 15th May were: officers, killed 15, wounded 22, missing 1; other ranks, killed 109, wounded 530, missing 258. (The Germans claim 135 prisoners.) Of these the 13/ Royal Scots lost 10 officers killed, 5 wounded and 1 missing; and other ranks 226 (14 killed, 60 wounded and 152 missing). Most of the missing were buried by shell fire.

May. and was quickly followed by the third wave (red armlets) dragging wire "knife-rests", dug-out frames, steel loopholed plates and planks. N.C.O.'s wore on their backs a white placard with the company number in large black letters, to facilitate rallying. All went according to plan. It is stated that the British artillery fire still lay on the old German position, and "bombarded it until late into the night with the heaviest shell fire, whilst on the newly captured position there was no fire". On the other hand, the British infantry recovered quickly from its surprise, and bombing attacks went on the whole night. The history speaks only of one counter-attack on the 12th (? 14th), which broke down under fire.

The losses of *II. Battalion 18th Regiment* are given as two officers and 12 other ranks killed, and 57 wounded, mostly on the 12th. The losses of the *23rd Regiment* are not available.

VIMY RIDGE, MAY 1916

Sketch When in the early part of March the front of the French
13. Tenth Army, twenty miles in length from Ransart past Arras, Vimy, Souchez and Lens to Loos, was taken over by the British,¹ it was stated that it was a quiet sector, and during the relief it appeared to answer to this description. A state approximating to a suspension of arms existed. There was little firing on either side; the enemy, protected as a rule by thick wire, seemed used to a policy of "live and let live", exposed himself freely, and even made efforts to open friendly intercourse.

From the southern boundary to Arras the new front had been quiet since the line had settled down in 1914; but from Arras northwards it had been the scene of very heavy fighting in the three Battles of Artois, the 27th September-12th October 1914, the 9th May-18th June 1915, and the 25th September-15th October 1915.² Some ground had been gained by the French, but the sector known as Vimy ridge had resisted the most strenuous efforts of General Foch. Moreover on the 8th February a length of trench half-a-mile wide, south of Central Avenue, and on the 21st February—the first day of the attack on Verdun—a knoll at the northern end of the ridge, opposite Souchez, known later as "The Pimple", the only place where the French had gained the crest of the ridge, had been lost by surprise attacks of the Germans.

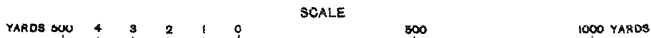
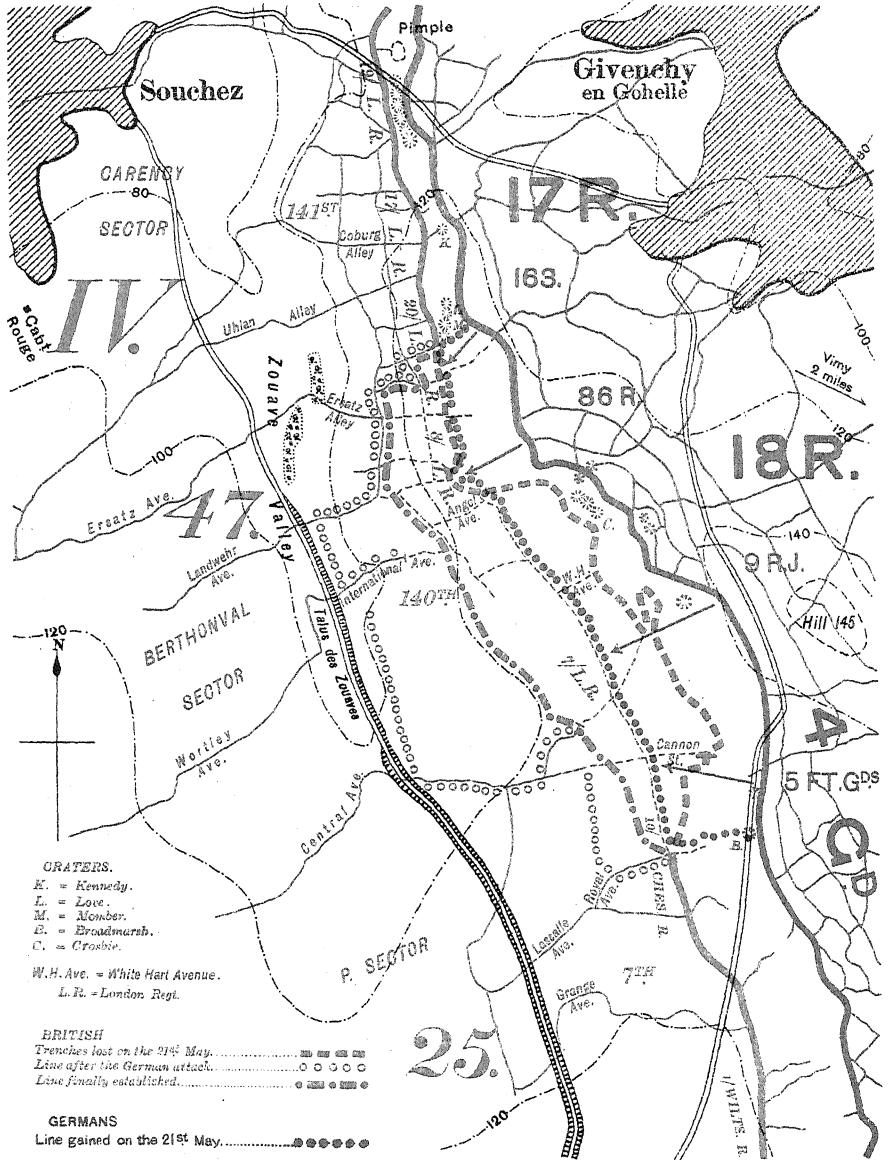
Vimy ridge, although the name is often applied to the northern end only, extends for nine miles from the valley

¹ See page 37, and Sketch I.

² See "1914" Vol. II. pp. 69 and 72; and "1915" Vol. II. pp. 41-2, 267-9, 346-7, 361-2.

VIMY RIDGE

21ST MAY 1916.



Heights in metres

3100/31.

Ordnance Survey, 1930.

of the river Scarpe, in front of Arras, to the valley of the Souchez stream, in which lie the villages of Souchez and Carency, captured by the French in May 1915. Beyond the Souchez valley is the Lorette ridge facing north. At its eastern end now stands the new chapel of Notre Dame de Lorette.¹ The western slope of Vimy ridge is gentle, but cut into, just behind the British front line of 1916, by a branch of the Souchez valley running southwards, known as Zouave valley, which therefore narrows and accentuates the end of the ridge. The eastern slope drops sharply to the plain of Douai. Along almost the entire length of the ridge the Germans held the summit; only at its northern extremity did the line taken over by the British from the French lie near the top, and even there the crest was in No Man's Land, with the trenches of the two adversaries on the slopes on either side.

Thus the enemy had perfect observation over the British forward area and the approaches thereto, so that the siting of artillery offered a most difficult problem. The situation was only rendered tolerable by the maze of old and new trenches and gun positions deeply dug in the chalk; for the enemy could not shell them all, and when he began to do so generally selected for bombardment such as were unoccupied. To encourage him to continue this discrimination, empty emplacements to which he gave attention were carefully repaired and occasionally occupied. On the other hand the eastern slope of Vimy ridge was so steep that the enemy could place trench mortars and supporting troops close to the front line entirely concealed from ground view and safe from all but very high angle fire. The plain beyond, though visible to British observers on the Lorette ridge, which afforded good distant observation, was covered with the numerous villages of the Lens coalfield, and therefore ideal for the concealment of guns.

The front defences along Vimy ridge, which on paper consisted of three lines, were, when taken over, found to be of the crudest description, and entirely lacking in continuity, our Allies having depended, as was their custom, on the efficacy of their quick-firing 75's. The trenches were described by the incoming troops as "merely shell holes joined up"; "hastily organized positions in mine craters"; "a line of detached posts, accommodated in grouse butts"; "straight trenches without

¹ Of the original chapel there remained only a small piece of brick wall when the British took over.

May. "traverses". In places actually only a few sandbags laid on the ground marked the line. The section opposite the Pimple was reported as the worst: "The continuous trench shown on the map does not exist. The whole ground is a quagmire, practically impossible for attack at present: the front trenches can only be reached by night over the open, and with great difficulty in deep mud". By May, however, the surface was as dry as a bone, except in Zouave Valley. There were few good communication trenches: most were unfit for use, all were undrained and utterly unsanitary. Dead bodies, months old, still lay unburied, and a vast amount of debris and rubbish covered the whole area. The wire, where any existed, was "thin and weak", or "in bad condition"; the positions for machine guns were "very poor". The dug-outs, except those some distance from the front, were "small, damp and bad". To sum up, the ground might be sufficiently organized for the launching of an offensive, but offered only precarious tenure as a defensive line.

The British, following their usual policy, after giving due warning by firing a few shells over the enemy's head, at once brought the quietness of the sector to an end. But, discovering that the parapets were not bullet-proof, there was a pause to thicken them of about a week, during which the two adversaries dug day and night in full view of each other. Active hostilities were then resumed, prematurely as it turned out, for German fire, backed by excellent observation, prevented the British from doing as much as was needed. The sector then became a so-called "windy corner of the Western Front",¹ and not only above ground but below.

Whilst the Germans, as one officer puts it, had been smiling over the parapet, they had been pushing on below ground. The British had taken over an extensive mining system, but it was soon discovered that the enemy's work was much further advanced, deeper, and in many places already under our front line. It will be recalled that Sir Douglas Haig, on learning details of the true state of the French line, had directed General Allenby to hold the better parts by outposts, supported by strongpoints, and then select the best line that could be found.² The unfavourable mining situation having been revealed, it would no doubt have been wiser, since no offensive was intended in the Vimy

¹ Freytag-Loringhoven, p. 305.

² See page 38.

area, to have abandoned the western slopes of Vimy ridge May. and dropped back between Ecurie (3 miles north of Arras) and Souchez some 3,000 to 4,000 yards to the position held by the French before their costly offensive of May 1915. In practice, this course could not be adopted: the great efforts of our Allies would have been in vain; it would be revealed that pure defensive was intended on the Vimy front, while it was the special desire of the Commander-in-Chief that the imminence of a spring offensive should be suggested to the enemy—by means of mining and frequent raids—and that the principle of aggression should be instilled into the troops. For two or three months, therefore, a desperate struggle for mastery below ground went on, in which there were engaged at one time or other ten tunnelling companies—the 172nd, 175th, 176th, 181st, 182nd, 184th, 185th, 255th, the 23rd Division and the New Zealand Tunnelling Companies—assisted at first by five and later two French companies. Above ground when a mine was fired by either side, its infantry would rush forward and endeavour to consolidate the crater, or rather its near lip; the other side would respond by artillery fire, and both would open with machine guns. There was much bombing, but the rifle and bayonet were rarely used.

The strain, both mental and physical, on the infantry garrison of the front trenches during this period was very severe. The 25th Division, in the sector on which the German attack was to fall on the 21st May, lost in the preceding five weeks 70 officers and 1,200 other ranks. Gradually the British miners established supremacy.¹ In the Carency sector² on the 3rd May, at 4.45 p.m., four mines were fired by the British a little north of Ersatz Avenue, and the three big craters formed, whose lips gave splendid observation, were seized and consolidated by the 1/21st London (142nd Brigade), and the 2/3rd London Field Company R.E. of the 47th Division. They were named "Momber", "Love", and "Kennedy" Craters, after the tunnelling, field company and battalion commanders concerned in the operation.³

On the 15th May, at 8.30 p.m., five mines were fired in front of the trenches in the Berthonval sector, between

¹ See German account, which follows, for this and other points in reference to the enemy.

² The Berthonval sector extended from Central Avenue to Ersatz Avenue; north of it was Carency sector and south of it, "P" sector.

³ The casualties were only 4 killed and 18 wounded.

May. White Hart Avenue and Angel Avenue, under the German advanced line (which the enemy had gained by an earlier operation) for the purpose of securing an observation line. Under a barrage of field artillery and trench-mortar fire, the craters of these mines, known as the "Crosbie craters", were at once occupied by six detachments of the 11/Lancashire Fusiliers and a detachment of the 9/Loyal North Lancashire of the 74th Brigade (25th Division) under the orders of Lieut.-Colonel J. D. Crosbie (temporarily in command of the brigade). A position on the forward lips was consolidated by the working parties of these battalions, the 105th Field Company R.E. and the 6/South Wales Borderers (Pioneers).¹

No enemy counter-attack or special retaliation followed these successes, except heavy bombardment of the craters every night. The Germans were maturing a thoroughly digested plan, which they meant to carry out a few days later. They had come to the conclusion that, being worsted underground, the only way to restore the situation was to capture the mine shafts by an attack above ground. They blew no more mines, except one far back in their own lines, on which they placed an observation post, but proceeded systematically with trench mortars to obliterate the British line, gradually destroying the defences on the ridge. For some days, too, before the 21st May, they consistently registered on the communication trenches and batteries in the sector which they eventually attacked. Infantry officers were convinced that an attack was imminent; but no signs of the enemy's preparations for an attack had been observed from the air.² Intelligence pointed to the Germans having neither men nor guns available for an attack, so that the withdrawal of five divisions from the First, Second and Third Armies, ordered by G.H.Q. to take place during May and the early weeks of June for the purpose of strengthening the Fourth Army and forming a general reserve for the Somme offensive, was allowed to proceed. This entailed minor adjustments of the line between Armies and corps. Thus it happened that a change of Army, corps

¹ The casualties were 14 officers and 93 other ranks.

² During the four weeks preceding the German attack air reconnaissance in the Vimy area had been possible on only ten days: a few additional light railways, one large dump of trench stores and, at one place, assembly trenches were seen. On the 17th May, when the last reconnaissance before the attack took place was made, the German trenches were examined from a height of 2,500-4,000 feet, but the light did not permit of anything being seen in them.

and divisional commands, and of garrisons, took place on **May**. the night of the 19th/20th May in the Berthonval sector, unfortunately the exact sector of the front which the enemy was about to attack. It brought with it the inevitable disturbance of the Signal and other arrangements for obtaining information and ensuring co-operation: brigades of field artillery of the 47th and 25th Divisions (under Br.-Generals E. W. Spedding and H. A. Bethell) were actually changing when the attack occurred. The sector had hitherto been in the Third Army area; it now passed to the First Army, and also from the XVII. Corps (Lieut.-General the Hon. Sir J. H. G. Byng) to the IV. Corps (Lieut.-General Sir H. H. Wilson), and from the 25th Division (Major-General B. J. C. Doran) to the 47th Division (Major-General Sir C. St. L. Barter), the latter division extending three-quarters of a mile to the south, so that Central Avenue instead of Ersatz Avenue became the Army boundary. Thus Lieut.-General Wilson,¹ who had the 47th and 23rd Divisions in the line, became responsible for the sector that the Germans were about to attack. His third division, the 2nd (Major-General W. G. Walker), was in reserve in the Bruay area, ten to thirteen miles behind the front.

The 47th Division had had only two battalions of the 142nd Brigade in the front line of the Carency sector, and one of the 140th Brigade, commanded by Lieut.-Colonel E. Faux, in place of Br.-General G. J. Cuthbert (who was acting as divisional commander during the absence on leave of Major-General Barter), in the Souchez sector, under the Pimple. The rest of the latter brigade was holding the Lorette defences—a special back position covering the important height of Notre Dame de Lorette. These defences and the Souchez sector were now handed over to the 23rd Division; the 140th Brigade took over the Berthonval sector from the 74th Brigade (25th Division, XVII. Corps); and the 141st Brigade (Br.-General W. Thwaites) the Carency sector from the 142nd Brigade (Br.-General F. G. Lewis). Thus the 47th Division now held the Berthonval and Carency sectors, and had the 142nd Brigade in reserve.²

¹ For the curious similarity between his war career and that of General Freytag-Loringhoven opposed to him, see the German account which follows.

² The trench strengths of the three brigades of the 47th Division were:—

	Officers.	Other Ranks.
140th . . .	95	3,004
141st . . .	80	2,108
142nd . . .	84	1,986

May. The 7th Brigade (Br.-General C. E. Heathcote), of the 25th Division temporarily under the 47th Division, was in P sector, next to the south.

When the XVII. Corps had taken over the Berthonval sector from the French, it had been finally decided to hold the most easterly line as the main line of resistance, but this had been found impossible as the enemy had too good a start in mining, and enjoyed excellent observation on it. The policy was thereupon adopted of holding it as an outpost line with detached posts, which were only approachable during the hours of darkness, the garrisons being left in them from 9 P.M. one day until 9 P.M. the next, and of consolidating the original support line well down the slope as the line of resistance. In consequence, however, first of the wet state of the ground, and later of constant interference from the enemy, who destroyed each day what had been done the previous night, the development of the defences had not progressed. There was practically no wire covering the front line, very little of a support line, and no shelters of any kind in the detached posts.

The day of the 20th May, after the 140th Brigade had come into the sector, and the night of the 20th/21st, were comparatively quiet; but there was a good deal of trench-mortar fire, and divisional headquarters became anxious and ordered brigade headquarters forward to Cabaret Rouge about a thousand yards from the front line. From 5 A.M. to 11 A.M. on Sunday the 21st the Berthonval sector and the sectors on either side of it were heavily shelled. There was a pause until about 3 P.M., when an intensive bombardment of the front from Royal Avenue to Momber and Love Craters was begun: the portion held by the 1/7th and 1/8th London of the 140th Brigade, and about two hundred and fifty yards on either side of it, occupied, respectively, by the 10/Cheshire of the 7th Brigade (25th Division) and the 1/20th London of the 141st Brigade. This bombardment covered not only the front system and observation posts, but extended back over the communication trenches, with a barrage in Zouave Valley, beyond the battery positions to 47th Division headquarters (at Chateau de la Haie, 4 miles west of Souchez), and to villages used for billeting seven or eight miles behind the line. The whole front area was soon enveloped in a cloud of smoke and dust, so that the British artillery never really knew when the assault was delivered; and confusion was rendered worse by bursts of lacrymatory shell. All

accounts agree that never had such a bombardment been seen,¹ and spectators could only wonder that there was any rifle fire from the 140th Brigade when the assault took place. Soon the front line and the support line were nearly obliterated, and all communications cut. For four hours the pounding continued—it was estimated that 70,000 shells were poured into the small front attacked—the artillery of the 47th Division, behind poor cover, suffering almost as much as the infantry and having four guns knocked out. According to arrangements made in case of attack, the heavy artillery of the XVII. and I. Corps on the right and left assisted that of the IV. Corps,² and the British guns fired so fast that the dumps at times were nearly exhausted, but without any perceptible effect on the hostile batteries.³

At 7.45 P.M. the German guns lifted 150 yards, a mine was fired near the head of Royal Avenue, and one minute afterwards the assault took place. Its left was directed on Royal Avenue, in front of which was Broadmarsh Crater, north-west of a new mine captured by a raid on the 18th/19th, and its right on Momber Crater. Germans were seen in the smoke and dust, but not until they were half-way across No Man's Land, advancing in line at three yards' interval and followed by closer lines which included men carrying wire, timber and machine guns. The enemy had little more to do than to take possession of the 140th Brigade sector, for the rifles and bombs of the few dazed defenders still unwounded were unserviceable or buried, while the 47th Division artillery could do little to assist them, as all the communication wires were cut and it was short of ammunition. Crossing the front and support lines without a pause in overwhelming numbers, and even penetrating further, the Germans were only stopped by running into their own barrage. They captured most of the men of the forward companies of the 1/7th and 1/8th London before these had time to come out of their shelters, though here and there hand-to-hand combats took place.

¹ The reason for an abnormal number of batteries—80 firing on a front of only 1,800 yards—with unlimited ammunition will be found in the German account. The allotment of ammunition was "on the average 200 shells per hour per battery". "Res. Jäger Regt. No. 9."

² For the organization of corps heavy artillery, see page 60. Br.-General J. G. Geddes was G.O.C. IV. Corps artillery and Br.-General F. C. Poole of its heavy artillery.

³ Fire was observed from the balloon of the 10th Kite Balloon Section, and the artillery patrols of No. 18 Squadron, R.F.C.

May. The survivors took refuge in the reserve line, lying along the road cutting at the bottom of Zouave Valley, known as the Talus des Zouaves. The situation appeared so desperate that the divisional field companies R.E., 1/3rd, 1/4th and 2/3rd London, under the C.R.E., Lieut.-Colonel S. D'A. Crookshank, were collected to man the trenches on the western side of the Zouave Valley.

The enemy success against the 7th and 141st Brigades was not so great, and only the front line of outpost trenches, small parts of the support line, and eventually Broadmarsh Crater, were lost. Both the 10/Cheshire and 1/20th London formed defensive flanks in their communication trenches, and prevented the enemy from extending his success. He continued heavy fire for another eight hours in order to cover the consolidation of the position he had won. Having got possession of all the British mine shafts in the area, except one at the head of Royal Avenue, he seemed content, made no further attempt to advance, and settled down to work in anticipation of counter-attack.

Small counter-attacks were at once made by the reserves of the battalions concerned, but until a first lull in the shelling occurred about 10 P.M. it was difficult even for battalion commanders to get any accurate idea of the situation. Br.-General Thwaites,¹ who was crossing Zouave Valley when the barrage came down, had at once telephoned warning of the attack to divisional headquarters, and the 142nd Brigade had been moved up and was in position three miles behind the front. By General Wilson's instructions, the 99th Brigade (Br.-General R. O. Kellett)² of the 2nd Division, in IV. Corps reserve, was given orders to move up in 'buses and lorries to 47th Division headquarters, to be at the disposal of Major-General Barter. Arrangements were then made by the 47th Division for a counter-attack at 2 A.M. on the 22nd by the brigade reserves. In this only a few weak companies of the 1/15th London (140th Brigade) and 1/18th London (141st Brigade)

¹ Wounded at 7 P.M. on the 23rd, when the command of the 141st Brigade passed to Lieut.-Colonel J. P. Tredennick of the London Irish.

² The 99th Brigade of the 2nd Division originally belonged to the new 33rd Division, and had been exchanged in November 1915 for the 19th Brigade which had taken the place of the 4th (Guards) Brigade when the Guards Division was formed. In December 1915 two of the New Army battalions of the 99th Brigade had been replaced by the 1/Royal Berkshire and 1/K.R.R.C. from the 6th Brigade, so that the brigade now consisted of these battalions and the 22nd and 23rd Royal Fusiliers. Br.-General Kellett was on leave until 11.30 P.M. on the 22nd, Lieut.-Colonel R. B. Barker, 22nd Royal Fusiliers, acting for him.

took part, and they failed to regain any of the 140th Brigade trenches, for the enemy had already dug in and put out wire. On the right, however, the 8/Loyal North Lancashire regained what had been lost of the 7th Brigade support trench.

Meantime, other reinforcements had been ordered up: a battery and a half of 9.2-inch howitzers and two 60-pdr. batteries, from the First Army to the IV. Corps; the 6th Brigade (Br.-General A. C. Daly) and two brigades R.F.A. of the 2nd Division, from reserve of the IV. Corps to the 47th Division; but gun ammunition was scarce, most of what was available was defective, and the new batteries required time to become acquainted with the area.

The 22nd was comparatively quiet, and it was possible for staff officers to discover where the front line lay among the sea of shell holes which had taken the place of the trenches. The IV. Corps aeroplane squadron, No. 18, with the help of Nos. 10 and 25, located most of the enemy batteries, and by fighting patrols kept enemy pilots from approaching the British line. At 8.30 A.M. General Wilson held a conference at 47th Division headquarters. He decided that an attack to recover the greater part of the lost ground should be made under orders of the 47th Division next morning at 1.30 A.M., after the moon had risen, by two reserve brigades, the 99th (2nd Division), new to the ground, and the 142nd (47th Division), assisted by the 7th Brigade (25th Division) on the right; that is by three brigades of three different divisions, but all under the command of Major-General Barter.

During the day, however, the Commander-in-Chief directed that no counter-attacks should be made without full preparations, and at 7.30 P.M. General Monro (First Army), having communicated this to General Wilson, the latter decided to postpone the counter-attack ordered for 1.30 A.M. until dusk on the next evening. During the night of the 22nd/23rd, therefore, no more was done than to get more batteries into action, bombard the new German position and the communications, and relieve the 140th Brigade by the 99th, and part of the 141st by part of the 142nd. These reliefs had to be carried out, at intervals, in the face of a heavy enemy barrage on Zouave Valley, for a deserter had revealed to the enemy that a counter-attack would take place that evening.

At 2 P.M. on the 23rd there was a further conference at

May. IV. Corps headquarters at Ranchicourt (9 miles W.N.W. of Souchez). There were present Generals Monro and Allenby, commanding the First and Third Armies, General Wilson, and two officers from G.H.Q., Major-General J. Headlam (Artillery Adviser) and Br.-General J. Davidson (Operations Section). The last-named officer explained that the Commander-in-Chief wished a line to be established in a position which could be maintained; that to this end he was prepared to allot what guns and ammunition were required, and, if necessary, more troops. General Wilson expressed himself in favour of not postponing the attack further, as this would give the enemy more time to strengthen his defences. The two Army commanders concurred in his view, and the attack was ordered to take place that night as already arranged. The weather on the 23rd was too bad for aeroplane work.

The assault was to be launched at 8.25 P.M. after rather more than an hour's intensive bombardment. The object of the attack was to recover the old support line—and the old front line if possible—to consolidate it, and form a new support line half-way between it and the Talus des Zouaves. Whilst the 7th Brigade (25th Division) dealt with the enemy south of Central Avenue, the 99th Brigade, with the 226th Field Company R.E., was to take the principal part in the attack, on the front from Central Avenue to Landwehr Avenue, and the 142nd Brigade that from Landwehr Avenue to Uhlan Avenue.

A hostile bombardment on the area from which the counter-attack was to be made was, however, begun at 11.30 A.M. It distinctly increased at 2 P.M. and again at 6 P.M., but, owing to lack of heavy ammunition, the British could make no effective reply by counter-battery work. Then shortly before 8 P.M., as if the enemy had received accurate warning of the time and place of attack, he put down three distinct barrages, one on the 99th Brigade, just in front of the 1/Royal Berkshire but behind the 22/Royal Fusiliers, who were lying out on the lower eastern slopes of Zouave Valley; one on the Talus des Zouaves; and a third on the communication trenches. The commander of the two leading companies of the 1/R. Berkshire, now came to the battalion commander, Major A. G. M. Sharpe, who had just seen for himself that the shallow jumping-off trenches had been obliterated, and protested that it was murder to proceed: one platoon sent forward had been reduced to half its strength, and the Berk-

shire had lost a hundred men. All communications, except May. by one wireless set, had been broken, and by this set in the last message before its mast was shot down, Major Sharpe in code informed the 99th Brigade that he could not attack. He sent an officer to the 22/Royal Fusiliers on his left with a similar message, and Major R. Rostron, commanding, at once came to the Berkshire trench headquarters, and there decided not to make an isolated attack. He then sent out runners to stop his companies. B Company, however, did not get the message and therefore advanced. Although at 8.25 p.m., punctually, enemy machine guns began to sweep No Man's Land the company reached the German front trench and shell holes near it. Two officers, one the medical officer of the battalion, went out to bring it back. They found little but dead and wounded: the company, with the section of the 226th Field Company R.E. attached to it, had, in the words of the report, "been wiped out".

The battalions on the right and left of the 99th Brigade went forward. The 3/Worcestershire (7th Brigade) on the right captured its objective; the 1/24th and 1/21st London of the 142nd Brigade regained the old front line and support trenches by bombing, were driven out of them, and retook them, only to be driven out again. Meantime two officers from 99th Brigade headquarters, Lieut.-Colonel Barker and the brigade-major, sent by Br.-General Kellett when he found all communications broken, had arrived at the front. The shelling having decreased, they considered that the attack might proceed; and eventually Br.-General Kellett reported that his battalions, the 1/K.R.R.C. having replaced the 1/Royal Berkshire in the front line, would advance at 1.30 a.m. The reply ordered him by direction of the Army commander to refrain from further attempts to attack.

General Wilson, on learning that the 99th Brigade had not gone forward, ordered that it should defer its attack until the following night if it did not find opportunity to advance before 1 a.m., the hour of the rising of the moon; but this postponement was not to take effect if the situation of the 142nd Brigade was such that pressure on it would be relieved by an attack of the 99th. If the 99th should advance and be unable to reach its objective, it was, if possible, to go part of the way, and then dig in. When this order was communicated to General Monro (First Army) at 12.15 a.m. on the 24th, he telephoned to General

May. Wilson that, in his opinion, it would only lead to confusion if the 99th attacked separately, and that it would be better to defer the attack. An attack under the conditions prevailing never offered any prospect of success, and Major Sharpe's action in the end received approval. During the early morning of the 24th, the 99th Brigade got up in line with the brigades on either side. Satisfied with having repulsed the British counter-attacks, the enemy gave no further trouble. Two air reconnaissances made during the night, at 1.30 A.M. and 2.40 A.M., on the 24th, found his back areas quiet, and no transport, at any rate with lights, moving. It was clear that the attack had been a local one with a limited objective.

General Wilson assembled another conference at 10 A.M., at which it was decided to relieve the 47th by the 2nd Division on the night of the 25th/26th, before resuming offensive operations on the 3rd June. In consequence, the 6th Brigade replaced the 141st and 142nd Brigades on the 25th May, and Major-General W. G. Walker (2nd Division) took over command of the sector.

Sir Douglas Haig was placed in some dilemma by the events at Vimy ridge, and expressed considerable dissatisfaction with the manner in which the situation had been handled by the IV. Corps after the German attack. In view of the preparations for the battle of the Somme, he had to consider whether he could afford the large amount of artillery and ammunition obviously necessary to recover the lost position. Moreover, the very large number of batteries brought up by the enemy for the attack, and other signs—pushing forward of saps and mining—made General Allenby (Third Army) inclined to believe that the Germans had in their minds an attack on Arras.¹ The moral effect of capturing this bulwark from the British, besides pressing them nearer to the sea, would be very great; and the Vimy operation was a valuable first step in a move on Arras via Roelincourt. Such an attack, in view of the commitments of the enemy in Russia and at Verdun, the Commander-in-Chief was not disposed to credit. At any rate, it could hardly develop without great preparations, which could not be completed before the Somme offensive took place. The alternatives proposed by Lieut.-General Wilson were either to leave the

¹ The Germans, according to Rupprecht (i. p. 425), had worked out a plan for this, but found that the forces required, 12 divisions and 40 heavy batteries, could be more profitably employed elsewhere.

situation at Vimy as it was, trusting that the Germans, satisfied with the capture of the mine shafts, would make no further serious attack; or to restore, or rather seek to improve, the old situation by capturing the top of the ridge and the German mine shafts, which involved going beyond the old front line. To do that successfully, at least forty additional heavy batteries would be necessary. The Commander-in-Chief in summing up said that, provided fourteen days to do so were allowed, the guns could be got back in time for the Somme offensive: to withdraw them thus might, however, involve breaking off an action which we had ourselves stirred up, hazard our position in a particularly sensitive part of the front, and produce a "sore point", as the Second Battle of Ypres had done in April-May 1915 some five weeks before the great Artois offensive; it might indeed not be possible to withdraw the guns. On going into calculations, he came to the conclusion that if the Vimy operations were pursued, the preparations of the Fourth and Third Armies would certainly be dislocated, and he might have to abandon the Gommecourt, the northern, portion of the Somme offensive and thus decrease the width of his attack. It was a question of "Vimy" or "Gommecourt". The situation at Vimy was certainly unsatisfactory, the Germans having the observation, but the new position was far from being untenable. The Commander-in-Chief therefore decided not to furnish reinforcements to ameliorate it, and at 2.45 p.m. on the 27th May the First Army was so informed; but henceforth the IV. Corps staff was engaged on plans for an extended attack which formed the basis of the successful one in April 1917.

The local situation meantime had somewhat improved. The Germans remained very quiet and did not occupy the old British support line. The 99th and 6th Brigades therefore, as desired, pushed out and dug a new line about three hundred yards up the eastern slope from the Talus des Zouaves. It was decided not to recommence mining in the Berthonval sector, but to delay enemy underground operations there by constant bombardment of his shafts by artillery and trench mortars. Tunnelled dug-outs for infantry supports in the eastern side of Zouave Valley were constructed. The situation remained thus stabilized until the British offensive of April 1917.

The operations at Vimy had again demonstrated that, given sufficient artillery and observation, it was possible for the enemy to drive us out of any small portion of the

May. line; that adequate artillery resources must be available to support a counter-attack; and that if reinforcing artillery is brought up some time must elapse before the preparations for its employment can be completed.

The British casualties had been considerable, amounting to over two thousand officers and men.¹

NOTE

THE GERMAN ACCOUNT OF THE VIMY FIGHTING²

General von Freytag-Loringhoven in 1916 was *Generalquartiermeister* (Deputy Chief of the General Staff) of the Supreme Command, under Falkenhayn. Being most anxious to have some experience at the front, he was on the 15th April 1916 permitted to leave the Supreme Command for six weeks to take the place in the Vimy sector of General von Zieten, commanding the *17th Reserve Division*, who was sick; and shortly after he combined that duty with the command of the *IX. Reserve Corps* (*17th Reserve* and *18th Reserve Divisions*), vice General von Boehn, who had been given four weeks' leave on account of his health.

The *IX. Reserve Corps* belonged to the *Sixth Army* and held the front almost exactly opposite the British IV. Corps, after Central Avenue became the latter's right boundary, with the *17th Reserve Division* on the right and the *18th* on the left. Thus it happened that an officer who was Deputy Chief of the General Staff of the German army, who previously had been senior liaison officer at the Austro-Hungarian Great Headquarters, but possessed no previous experience of command, found himself in command of a corps opposed to a British corps commander, Lieut.-General Sir Henry Wilson, who had been Sub-Chief of the General Staff in France, and senior liaison officer at French Great Headquarters, and equally had never before exercised command in battle.

		Killed.	Wounded.	Missing.	Total.
47th Division :	{ Officers	10	36	16 }	1,571
(22nd-24th May)	{ Other ranks	142	922	445 }	
2nd Division :	{ Officers	1	7	— }	267
(22nd-24th May)	{ Other ranks	34	220	5 }	
25th Division :	{ Officers	5	18	4 }	637
7th Brigade	{ Other ranks	93	435	82 }	
					2,475

Two only of the German regimental accounts mention prisoners, a total of 5 officers and 47 other ranks. "Regt. No. 163" mentions counting 240 dead on its own front.

For the German losses, 1,344, see Note which follows.

² There is an excellent account of the Vimy fighting in the reminiscences of General Freiherr von Freytag-Loringhoven, well known as a military writer, and in the histories of three out of the four regiments engaged: *163rd Regiment* (Schleswig-Holstein), *86th Reserve Regiment* and *9th Reserve Jäger Battalion*. There is some account of the other, the *5th Foot Guard Regiment*, in the history of the *4th Guard Division*.

Freytag-Loringhoven discovered that he had not come to a quiet May corner. He records:—"The casualties, which we suffered by mine explosions and continual night attacks, aroused in me lively anxiety, which I communicated one day towards the end of April to the chief of my corps staff and his G.S.O.1. Things could not go on as they were. . . . If by attack we could throw back the British over the position we had held until the end of September 1915 [before the French attacks], and so rob them of all their mine shafts, and hold the position won, we should have tranquillity."¹ The proposals for attack were approved by the Army commander, and, thanks no doubt to Loringhoven's influence at headquarters, far more than the necessary heavy artillery and ammunition were allotted to him, so that he could hope for a thoroughly successful operation.

For his attack on a divisional front, he had a total of eighty batteries,² of which the British Intelligence during the battle identified forty as new, on the 4-mile front between Liévin (a western suburb of Lens) and Vimy village, most of the guns very skilfully concealed amid houses and buildings.

Very careful preparations were made. The British position was photographed from the air, whilst, to prevent the British getting wind of the operation, additional aeroplane squadrons and anti-aircraft guns, "partly mounted in lorries", prevented British fliers from coming over and seeing any signs of the mounting of an attack. No conversation about the operation was permitted on the telephone. "Uninterruptedly heavy lorries with all kinds of ammunition "rolled up."

The front of attack, slightly overlapping the front of the 140th Brigade, was divided into three sectors, allotted to troops of three different divisions :

¹ The regimental accounts agree as to the reason for the attack. "Regt. No. 163", p. 114, says : "These continual mine explosions in the end got on the nerves of the men. The posts in the front trenches and the garrisons of the dug-outs were always in danger of being buried alive. Even in the quietest night there was the dreadful feeling that in the next moment one might die a horrible and cruel death. One stood in the front line defenceless and powerless against these fearful mine explosions. Against all other fighting methods there was some protection—against this kind of warfare, valour was of no avail, not even the greatest foresight. Running back, retirement, were useless : like lightning from the clear heavens, like the sudden occurrence of some catastrophe of nature, these mine explosions took place. Some change must be brought about, the British mine shafts on Vimy ridge must be captured."

"Res. Regt. No. 86", p. 104, says :—"Our companies had suffered heavy losses through the British mine explosions. It was accepted that other large parts of our trench system were undermined and might fly into the air at any moment, and that some counter-measures must be devised. We could not fight the enemy any longer with his own weapons, for he was superior to us in men and material." [This is a strange confession, particularly as "Guard Division No. 4", p. 56, states that the engineer companies had been reinforced by "Miner Sections" drawn from other arms.] . . . "The commander therefore decided to assault the British front trenches, gain possession of the mine shafts, and thus bring underground warfare to an end for a considerable time."

² "Res. Jäger Bn. No. 9", p. 45, says : "The corps artillery of the XVII. Res. and Guard Res. Corps, also six heavy howitzer batteries and three mortar batteries."

May. Southern sector : *5th Foot Guard Regiment (4th Guard Division)*
(other details not available).

Centre : *86th Reserve Regiment* } (*18th Reserve*
9th Reserve Jäger Battalion } *Division*)
Machine-Gun Troop ;
Engineer Companies : *10th Bavarian Reserve ;*
half each 9th Reserve and 12th Bavarian.
293rd Mining Company.

Northern : *163rd Regiment (less one battalion) (17th Reserve*
Division).
Machine-Gun Troop ;
268th Engineer Company.
Reserve : one battalion *163rd Regiment.*

This left two infantry regiments in each divisional reserve.

The assault was entirely successful ; but only the *86th Reserve Regiment* reported that there was little resistance ; the other battalions engaged had hand-to-hand fighting, and received fire from the flanks. Consolidation was taken in hand as soon as possible ; but as some companies had been unable to orient themselves owing to the churned-up state of the ground, they went too far, and ran into their own barrage. The night was well advanced before the line could be adjusted. At daylight some companies were still found out of place and could not be got to their right positions until 7 P.M. on the 22nd. The work of consolidation was suspended at daylight so as not to betray the position of the new line which, judging from the fall of the shells, the British had not been able to locate, although all the avenues of approach were heavily bombarded. It was not until midday on the 22nd, when "some German shells fell short and green light balls were sent up as a signal to the artillery to increase its range, that the enemy spotted our line, and henceforward shelled it uninterruptedly with the heaviest guns".

The British counter-attacks are duly recorded in one or other of the histories. News that a counter-attack would take place on the evening of the 22nd was brought by a deserter.¹ As we know, the operation was postponed, but the information may have made the Germans watchful next night and brought about the barrage which stopped the 99th Brigade. When the British counter-attack, or such part of it as materialized, did take place, it was not unexpected, and the Germans had stood to arms an hour before any British infantry moved, with the result that their casualties from artillery fire became very heavy, and part of the line was thinned out and held only by detached posts. The *17th Reserve Division* sent up reserves to cover the gaps, and this movement, being carried out over the open, caused "serious and unnecessary loss".²

¹ "Res. Regt. No. 86", p. 109.

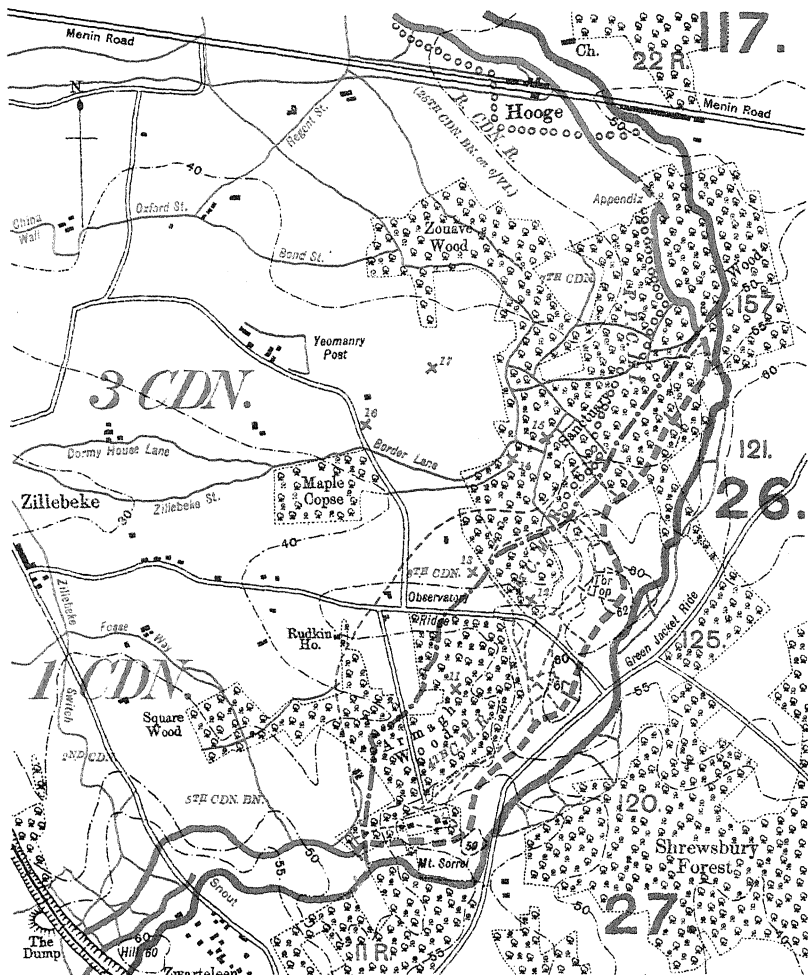
² Between the 22nd and 25th the German losses are given as :—

		Killed.	Wounded.	Missing.	Total.
In the assault :	{ Officers	4	19	—	615
	{ Other ranks	88	478	26	
In the counter-attack :	{ Officers	7	16	—	729
	{ Other ranks	127	548	31	

1,344

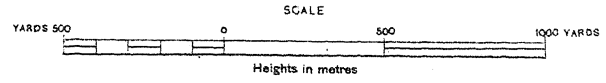
MOUNT SORREL

2ND-6TH JUNE, 1916.



BRITISH
Trenches dug on the 2nd June
Strong Points
X 11, 12, 13

GERMANS
Line before the attack, 2nd June
Line reached 2nd June
Line established after the attack
Subsequent advances, 3rd-6th June



3100/ST.

The British artillery fire slackened gradually during the 24th, May, and various reliefs were carried out. The Germans contented themselves with improving their trenches and putting out wire, and made no other offensive movement.

On the 31st May General von Freytag-Loringhoven returned to the Supreme Command.

MOUNT SORREL AND HOOGE
2ND-13TH JUNE 1916

At seven minutes past one o'clock on the afternoon of June. the 2nd June, the German *XIII. (Württemberg) Corps*, with some assistance from the corps on its flanks, after lengthy and careful preparation, assaulted the sector of the front of the Canadian Corps (Lieut.-General Hon. Sir J. H. G. Byng)¹ which lay between Hill 60 and Hooge, where No Man's Land averaged less than one hundred and fifty yards wide. The enemy captured the last portion of the crest of the Ypres ridge which had remained in British hands, and retained possession of it for eleven days until driven off again by the Canadians. Thus, as the *XIII. Corps* was a Württemberg formation consisting of two Württemberg divisions, the main struggle was between two national self-contained corps. June. Sketch
14.

At the time of the attack the Canadian Corps, supported by the 5th, 10th and 11th Heavy Artillery Groups,² was holding the front between the V. (Lieut.-General H. D. Fanshawe) and the XIV. Corps (Lieut.-General the Earl of Cavan) of the Second Army (General Sir Herbert Plumer), which it had taken over on the 4th April. This front extended from a point half-a-mile south-west of St. Eloi, through St. Eloi, the Bluff and Hill 60 (in German possession) to a point five hundred yards north-west of Hooge, with a total length of front trench line of slightly more than five and a half miles.

Along the greater part of the front of attack the German line followed the crest of the Ypres ridge and overlooked the British. Only in one portion, about a thousand yards in length, did the Canadian trenches command observation

¹ He had taken over command only on the 28th May vice Lieut.-General Sir E. A. H. Alderson, appointed Inspector-General to the Canadian Forces. For the German account of the operations see Note at end of Chapter.

² Corps artillery commander, Br.-General H. E. Burstall; heavy artillery commander, Br.-General A. C. Currie. The number of guns was, two 9·2-inch, four 8-inch, and eight 6-inch howitzers, sixteen 60-pdts. and eight 4·7-inch guns.

June. over the enemy's. This was where the front line, between Zwarteleen and the low ground near Sanctuary Wood, mounted the crest of Ypres ridge, then passed over a flat knoll, with a 59-metre ring contour, on the western side of which were some farm buildings and enclosures called Mount Sorrel, and finally continued on to a double summit marked on the map by two 60-metre ring contours—called by the Canadians "Hill 61" and "Hill 62", the latter (with a 62 ring) being better known as "Tor Top". From this point a prominent spur, called Observatory Ridge, runs westward towards Ypres. Both the crest of the Ypres ridge and Observatory Ridge provided extensive views over the ground on either side of them, as the woods were now composed of bare tree trunks and stumps, although undergrowth gave a certain amount of cover.

The Canadian Corps was disposed in great depth, extending back 12 miles to the neighbourhood of Poperinghe and Abeele. Its frontage was divided between its three divisions. The 2nd Canadian Division¹ (Major-General R. E. W. Turner) held from the corps right boundary to the ravine midway between the Ypres—Comines canal and Hill 60. It had the 5th and 4th Brigades (Br.-Generals A. H. Macdonell and R. Rennie) in the line, the former with three battalions and the latter with one battalion up. The 1st Canadian Division (Major-General A. W. Currie) in the centre, had in the line only one brigade, the 2nd (Br.-General L. J. Lipsett), which held with two battalions from the ravine to just short of Mount Sorrel, a trench front of nearly a mile.² The 3rd Canadian Division (Major-General M. S. Mercer)³ was on the left, with its 8th Brigade (Br.-General V. A. S. Williams), which had relieved the 9th (Br.-General F. W. Hill) on the night of the 31st May/1st June, with two battalions in the line, responsible for 2,000 yards of front, including Mount Sorrel and Tor Top, while the 7th (Br.-General A. C. Macdonell),⁴ with two battalions in the line, occupied the rest of the front, including Hooze : 2,100 yards of trench line, joining on to the right of the 20th Division (XIV. Corps). Thus, as the 3rd Brigade

¹ Not shown on Sketch 14.

² On the night of the 29th/30th May it had handed over 700 yards of front line at Mount Sorrel to the 3rd Canadian Division.

³ The 3rd Canadian Division artillery (Br.-General E. S. Hoare Nairne) was still composed of the three British brigades, 5th, 11th and 131st, each with a howitzer battery attached, which had been part of the Lahore Division.

⁴ He had resumed command on the 26th May, after being wounded on the 17th February.

(Br.-General G. S. Tuxford) of the 1st Canadian Division June. was in corps reserve south of Poperinghe, each division had an infantry brigade in reserve.

It was upon the 8th Brigade, whose right battalion, the 4th Canadian Mounted Rifles,¹ had taken over from the 52nd Battalion only at 1.45 A.M. on the 1st June, and on the right of the 7th² that the main German attacks fell.³

Some three weeks before the attack, patrols had reported that the enemy was pushing out "saps", that is trenches running directly to the front, to the north and south of Tor Top, where No Man's Land was then widest. Every effort had been made with artillery and machine-gun fire to disperse the enemy's working parties and interfere with the progress of their work. In places counter-saps were run out, in which machine guns were placed to sweep No Man's Land. But the enemy had been persistent, and about fifty yards forward the saps had been extended to the right and left, so that by the 29th May, as an air photograph showed, the heads of the saps were connected and a new front trench had been formed in a hollow only some one hundred and fifty yards from the British. The digging of saps was also in progress on the south side of Mount Sorrel, where the trenches already half encircled the British position, being in places less than a hundred yards from it; and other saps were being dug further south.

From the air it had been reported on 3rd May that near Nieuwe Kruseecke (on the Menin road, 2,000 yards south-east of Gheluvelt), two lines of trenches, looking like practice trenches, had been dug, bearing some resemblance to

¹ The 8th Brigade was formed out of six Canadian Mounted Rifle regiments, permanently dismounted and organized as four infantry battalions, the 1st, 2nd, 4th and 5th Canadian Mounted Rifles.

² Royal Canadian Regiment, Princess Patricia's Canadian L.I., 42nd (Royal Highlanders of Canada) and 49th Battalion (Edmonton Regiment).

³ The trench system is shown in Sketch 14. It will be noticed that only near Tor Top were there three lines in the front system, but the support line was in a bad state and under repair. Behind this was a system of strongpoints (shown by numbered crosses); there were two so-called "switches": Zillebeke Switch and China Wall, the latter a mere sandbag parapet laid on the ground (it runs north-westward from the termination shown on the Sketch.) On the night of the 31st May/1st June, Br.-General A. C. Macdonell sited another switch near Square Wood towards Maple Copse and on to Yeomanry Post, in view of a possible attack through Armagh Wood, but it had not been dug. Near Ypres, there was a back line, G.H.Q. 2nd Line. Owing to the Ypres Salient being commanded on three sides by the enemy, and to the water-logged nature of the ground, work on the defences in it was always difficult and the state of them as a whole was unsatisfactory.

May- the British line near Tor Top; but no troop movements
June- had been observed.¹ Subsequently the weather was unfavourable for air work by the squadrons of the II. Brigade R.F.C. (2nd and 11th Wings) attached to the Second Army; but reconnaissances in the early hours of the 28th May and 30th May reported "no activity", and on the 1st June one flier over the Menin—Courtrai area reported that it was too hazy to tell whether road traffic was abnormal, but there was "considerable railway activity".²

During the 31st May, when large calibre trench mortars were in evidence, and on the 1st June, enemy artillery and air activity was distinctly above the normal, with registration on various points in the Canadian front and rear systems; and on the latter date eight enemy observation balloons were up. Thus there were signs that the *XIII. Corps* was meditating an offensive operation probably against Tor Top; but, although staff officers were sent up to the front to investigate, there was nothing to indicate that it would take place as soon as it did, or in the middle of the day.³

There was ample reason for the enemy desiring to get possession of the last sector of the Ypres ridge. Tor Top was "an observation point which gave the British a view "into the whole of the back areas in the south part of the "Ypres front".⁴ Could the Germans capture it and push on along Observatory Ridge, they would acquire excellent observation actually behind the British line, and might reasonably expect that such a success would cause a general withdrawal westward from the nose of the Salient. In any case, it was hoped "to fetter as strong a [British] force "as possible to the Ypres Salient, and thus reduce the "number available for a British offensive".⁵

From 8 P.M. on the 1st June to 3 A.M. on the 2nd, the German guns did not fire near the Canadian trenches, in order, as it subsequently appeared, not to interfere with men sent out to cut passages in their own and the British wire: then the guns resumed their normal activity. In spite of the uncertainty, so normal did the situation

¹ "26th Inf. Div.", pp. 18-19, states that trenches were dug at this very place for practice of the assault.

² In the action No. 6 Squadron, working with the Canadian Corps, was chiefly concerned, with assistance from No. 5, attached to the neighbouring XIV. Corps.

³ For the German measures of secrecy, see Note at end of Chapter.

⁴ Württemberg Official Account, p. 393.

⁵ "27th Inf. Div.", p. 29, and "Regt. No. 120", p. 34.

appear that, as it grew light, at 6 A.M., Major-General June. Mercer (3rd Division) set out with Br.-General Williams (8th Brigade) to make a reconnaissance of the very front on which the storm was about to fall.¹ At 8.30 A.M., however, the firing increased, and from 9 A.M. onwards was heavy on the whole front from and including Sanctuary Wood to, and half-a-mile beyond, Mount Sorrel. Retaliation fire was called for and commenced at 9.45 A.M. : but it did not have the usual effect of decreasing or stopping the enemy's artillery fire. Shortly afterwards the 7th and 8th Canadian Brigades both called on their reserve battalions to stand to arms. At 10.15 A.M., Lieut.-Colonel R. J. F. Hayter, General Staff, 3rd Canadian Division, in the absence of General Mercer, warned its reserve, the 9th Brigade,² by telephone to be prepared to move at short notice; he then informed Canadian Corps headquarters and adjacent divisions on the flanks that the bombardment was intense, and the situation was likely to become serious. At the same time, aeroplane assistance was invoked by the code word, "Corps artillery action", whereupon No. 6 and No. 5 Squadrons dropped their routine duties, and gave their whole attention to immediate requirements, chiefly artillery work and tactical reconnaissance. At 12.30 P.M. the German bombardment quickened, and a large number of trench mortars joined in. A German observer³ has described the scene: "The whole enemy position was a "cloud of dust and dirt, into which timber, tree trunks, "weapons and equipment were continuously hurled up, "and occasionally human bodies". Trenches, shelters, wire, and all the defences were obliterated. Only in a gallery, known as "The Tunnel", dug by the 2nd Canadian Tunnelling Company in the reverse side of Mount Sorrel, in which were located the headquarters of the 4th Canadian Mounted Rifles (Lieut.-Colonel J. F. H. Ussher),

¹ General Byng, with his chief General Staff officer, Br.-General C. H. Harington, after taking over command had gone round the St. Eloi sector on the 30th/31st May. On the 1st June he visited Major-General Mercer, who explained the situation at Mount Sorrel and Tor Top. General Byng then told Major-General Mercer that he wanted him to carry out a reconnaissance with a view to a local operation to improve it. Later he went round all the brigade headquarters in front of Ypres. Whilst he was at 8th Brigade headquarters, Major-General Mercer came in to make arrangements with Br.-General Williams for this reconnaissance, and asked General Byng if he would come. After a considerable pause, General Byng said, "No. You had better go yourselves to-morrow and make your own proposals. I will come round and see them on Saturday."

² 43rd, 52nd, 58th and 60th Battalions.

³ "Regt. No. 120", p. 36.

June. was there any safety, and here wounded were carried. But very soon the entrances were blown in and the inmates were caught in a trap.¹ It was obvious that an assault was imminent: the artillery which had been maintaining a barrage behind the enemy front was called on by the 8th Brigade to increase its fire; but, caught by the German counter-batteries, its telephone cables cut and all the forward observing officers casualties, it suffered considerably—especially the batteries (Lahore Division artillery) of the 3rd Canadian Division—and could do little more to help the infantry.

Meantime, Generals Mercer and Williams had not returned from their reconnaissance. The latter had been wounded in the head, and the former stunned by a shell and rendered stone deaf soon after the bombardment began. General Mercer, however, insisted on leaving the aid post to get back to his headquarters, but soon after had his leg broken by a bullet, and a little later was killed by shrapnel fire as he lay on the ground. Br.-General Williams was later, with other wounded, taken prisoner.

The absence of the divisional and brigade commanders at the critical moment of an attack seriously crippled the conduct of the defence, and only in the course of the afternoon, when it became certain that they were missing, was the divisional artillery commander, Br.-General E. S. Hoare Nairne, directed by General Byng to take command of the 3rd Canadian Division (headquarters, Reninghelst); and it was not until about 6 p.m. that Lieut.-Colonel J. C. L. Bott of the 2nd Canadian Mounted Rifles, in brigade reserve of the 8th Canadian Brigade (headquarters in dug-outs on western edge of Zillebeke Lake), arrived to assume command of the 8th Brigade.

Meanwhile at 1.07 p.m. three mines² were fired by the Germans at Mount Sorrel, just short of the British position, a number of white rockets were sent up from their trenches, and in the bright sunlight the first line of the infantry³ was seen to be advancing. They came on, apparently, in four waves at distances of about seventy-five yards, the first wave carrying hand-grenades and wire cutters. The main assault was made against the front

¹ They remained shut up for four hours, and obtained release only to become prisoners of war on the arrival of the enemy.

² Five, according to German accounts.

³ Five battalions of the 120th, 121st and 125th Regiments of the 26th and 27th Württemberg Divisions: there were five others in support and six in reserve.

from Mount Sorrel (inclusive) to the trench half-a-mile north of Tor Top, called "The Appendix" (exclusive),¹ that is against the 4th C.M.R. and 1st C.M.R. of the 8th Canadian Brigade, and the right company of the Patricia's of the 7th. There was only time for a few bursts of rapid rifle and machine-gun fire from the men in the front line who had survived the bombardment, but machine guns in the trenches of the 5th Battalion to the south, and of the Patricia's to the north, did considerable execution before the Germans obtained a footing almost all along the site of the obliterated Canadian trenches, and overwhelmed the defenders.

The German accounts speak of heavy flanking fire from the north, of a duel between machine gunners on the parapet and hand-to-hand fighting with bomb and bayonet—it is certain that some of the C.M.R., their rifles having been damaged, used them as clubs—and of flame projectors being brought up to settle with the defenders. Only on the left (north), in Sanctuary Wood, was the German attack held back² by the desperate efforts of the two supporting companies and remains of the right company of the Patricia's;³ southward of this all resistance in the position was overcome. The Germans not only got possession of the entire front system from Mount Sorrel to Tor Top, but passed beyond it, capturing Strongpoints No. 11, 12, and 13, and a forward section of 18-pdrs. of the 5th Battery C.F.A. on Observatory Ridge, which fought to the last, all its gun detachments being killed or wounded. Then the Germans came under fire from various points, from Zillebeke round to Maple Copse; and, as at Gheluvelt on the 31st October 1914, and Pilckem on the 22nd April 1915, the day of the first gas attack, on finding that there was still resistance they halted. Under cover of these forward troops and a barrage, German reserves set about consolidating the position won, the forward troops being withdrawn to it at night.

South of the main attack, where the bombardment had not been so severe the Germans had made demonstrations, but did not advance.

¹ Just north of the Appendix there was a gap in the front line covered by patrolling.

² See Sketch 14. The German objective had included Strongpoint No. 15, the line then bending back north-eastwards.

³ Lieut.-Colonel H. C. Buller was killed, and every officer of the three companies hit. Lieut.-Colonel A. E. Shaw (1st C.M.R.) was also killed.

June. North of it, however, an attempt was made¹ south of the Menin road to break through near the gap north of the Appendix and reach Hooge. This fell on the left company of the Patricia's in the Appendix and the R. Canadian Regiment. It was roughly handled by rifle and machine-gun fire and failed, but Br.-General Macdonell (7th Canadian Brigade), anticipating that the next attempt would be made against Hooge itself, accepted from Br.-General Hon. L. J. P. Butler of the 60th Brigade on his left, who came to see him, the offer of two companies of the 12/K.R.R.C. as a reserve. No. 2 Company of the Patricia's, isolated in the Appendix, after repelling three night attacks, withdrew by Br.-General Macdonell's order before daylight over the open, carrying away all its wounded except two desperately injured men.

By about 2 P.M. the reserve battalions of the 8th Canadian Brigade, the 2nd C.M.R. and 5th C.M.R., and the 42nd Battalion (Royal Highlanders of Canada) of the 7th, began to arrive. The leading companies were considered too weak a force with which to counter-attack against the wide front presented by the enemy's advance, or, even if they should do so and be successful, to maintain the position gained. The three battalions were therefore directed to form a defensive line in the switches and communication trenches enclosing the front on which the enemy had broken in. This they set about doing; but until about 3 P.M., when the 7th Battalion (2nd Brigade, 1st Canadian Division) was deployed on the line Zillebeke (exclusive)—Square Wood (inclusive), there remained a space of six hundred yards, from Square Wood to Maple Copse, covered only by a company of the 2nd C.M.R.,² and a platoon of the 42nd Battalion in Zillebeke Switch and Zillebeke Street. Other units of the Canadian Corps, however, were now in motion towards the front, including two companies of the Canadian Motor Machine Gun Brigade, which Lieut.-Colonel R. Brutinel had moved up on a hint from the 1st Canadian Division that all was not well.

At 4.25 P.M. preliminary orders were issued by General Byng to the 3rd Canadian Division for a counter-attack to take place during the ensuing night or in the early morning of the 3rd. After a visit to the headquarters of the 3rd and

¹ By the *22nd Reserve Regiment*, apparently, as the history of the *157th Regiment*, the remaining regiment of the *117th Division*, mentions no attack.

² The remainder of the battalion reached Maple Copse between 6 and 8 P.M.

1st Canadian Divisions and speaking to some of the brigadiers on the telephone, he finally ordered that a brigade of the 1st Division should counter-attack in the southern sector, and one of the 3rd in the northern. Later, following on a discussion between Br.-General Hoare Nairne (3rd Division), after he had visited his brigadiers, and Major-General Currie (1st Division), it was settled, with General Byng's approval, that only troops of the 1st Division should take part, Br.-General Lipsett (2nd Canadian Brigade) attacking against Mount Sorrel, and Br.-General Tuxford (3rd Canadian Brigade) against Tor Top.

In order to keep touch, Br.-Generals Tuxford and Lipsett (who had often worked together before, notably when commanding adjacent battalions during the first gas attack at Ypres in April 1915) made their headquarters together in "Railway Dug-Outs" south-west of Zillebeke Lake, where they at once set about making the preliminary preparations. At 6.30 P.M. Br.-General Hoare Nairne reported to corps headquarters the proposed arrangements, and they were embodied in a corps operation order, he being placed in charge of the operation. The 2nd and 3rd Brigades of the 1st Canadian Division were put at his disposal, the place of the 3rd in corps reserve—the 2nd was already in the line—being taken by the 6th (Br.-General H. D. B. Ketchen) of the 2nd Canadian Division. The 3rd Canadian Division operation order (issued at 9.45 P.M.) directed that three attacks should be made from the temporary front line :—

2nd Canadian Brigade ¹ against Mount Sorrel ;
 3rd " " ² " Tor Top Hill ;
 7th " " (with two battalions of the 9th
 Brigade attached) ³ against the front between Tor Top
 Hill and the Appendix.

The corps and divisional artillery, some of the XIV. Corps heavy artillery on the north assisting in the counter-battery work, were directed to begin and keep up a steady fire, with occasional rapid bursts.

It was intended that the attack should be made at 2 A.M. on the 3rd, but the usual difficulties occurred in

¹ 5th, 7th, 8th and 10th Battalions.

² 13th, 14th, 15th and 16th Battalions.

³ The 52nd (Lieut.-Colonel A. W. Hay) and 60th (Lieut.-Colonel F. A. Gascoigne), were detailed, and of the 7th Brigade only the 49th Battalion was employed. These three battalions were placed under the command of Lieut.-Colonel W. A. Griesbach of the 49th.

June. assembling the troops for carrying out a dawn attack at such short notice, and the result was almost a repetition of the disastrous attack of Hull's force at the Second Battle of Ypres on the 25th April 1915.¹ Time was required to ascertain and communicate the exact situation to the artillery. The 3rd Canadian Brigade, coming from the vicinity of Poperinghe, arrived late, reaching Railway Dug-Outs only at 1.45 A.M. It had then to negotiate a well-maintained barrage to reach its starting line, so that it was already 3.30 A.M. when this brigade came up in line with the 2nd. The 2nd C.M.R. had been ordered forward at 7 P.M. to secure the line Rudkin House (on Observatory Ridge)—Maple Copse in the weakly held 600 yards of the defence line from which the 3rd Canadian Brigade attack was to be launched. But the Germans were in occupation of Rudkin House and it took time to dislodge them. Further, they attacked Maple Copse, and, although they were repelled by the 5th C.M.R., whose commanding officer, Lieut.-Colonel C. H. Baker, died of wounds, the troops there suffered heavily from shelling. Of the three battalions detailed for the left of the attack under the orders of the 7th Brigade, the 49th reached its place of assembly at 2.10 A.M.; but the 52nd and 60th (9th Brigade), following it, were caught in barrages, lost many officers, and although the 60th and one company of the 52nd eventually arrived, the rest of the 52nd, originally leading, lagged behind in echelon on the left.² Further delays took place owing to enemy artillery fire and the difficulty of communicating to all units the necessary postponement of zero hour. Thus, it was not until 7.10 A.M. on the 3rd, after half-an-hour's intense artillery bombardment, that the attack could be launched, which meant that it had to be carried out over bare ground in broad daylight. Nor was this serious delay in the time of starting the end of the Canadian misfortunes.

The signal for the assault was to be six green rockets, sent up simultaneously from the edge of Zillebeke Lake by order of the 3rd Canadian Division when it had been ascertained that the attacking troops were ready and in place; but several rockets proved defective, and fourteen were fired before six ignited, and these were discharged not simultaneously but successively, so doubts arose as to whether they were intended to be the signal or not. In con-

¹ See "1915" Vol. I. p. 240.

² Lieut.-Colonel A. W. Hay (52nd) was wounded and missing, whilst on reconnaissance ahead of his battalion, and is presumed to have died.

sequence, the attacks carried out on the right by the 7th Canadian Battalion, supported by the 10th; in the centre by the 15th and 14th; and on the left by the 49th (a platoon of the 60th with it),¹ were launched at different times. Though they were resolutely pushed home the enemy was able to concentrate rifle and machine-gun fire on them to an extent which would have been impossible had the whole line moved forward together. The machine-gun fire from Hill 60 was particularly deadly. Nevertheless, all three attacks reached the German position, where grenade and hand-to-hand fighting took place. Parties even penetrated into it; but they were too weak in numbers to maintain themselves and were mostly killed or made prisoners. Between 12 noon and 1 P.M. the survivors fell back to the line from which they had started, except on the left where the 49th Battalion hung on to the trenches leading into the old line.²

The general result of the action was to fill the 600-yard gap in the line between Square Wood and Maple Copse, recover Rudkin House on Observatory Ridge, and establish a definite line 1,500 to 1,700 yards forward of the indefinite one taken up after the German attack; these as it proved were important steps towards the operation of the 13th June. A line of trench was at once begun on either side of Rudkin House to connect with Square Wood on the south and Maple Copse on the north, and thus form a new complete line to Hooge. This was held by the 2nd, 3rd, 8th, and 7th Brigades, the last-named still clinging to the greater part of its old front line, as well as the reserve line in rear.

The position gained by the Germans was not only highly important from the point of view of observation, but lay little more than two miles from the gates of Ypres, and General Plumer was naturally anxious to recover it. As there had been no special concentration of enemy infantry opposite the Canadians, Sir Douglas Haig felt that the enemy's object in attacking was to disarrange his plans; and, his own object being to fight on ground of his own choosing with the largest number of divisions possible, he was still averse, as he had been after the loss of ground at Vimy, to any operation which might embarrass his preparations for the battle of the Somme. He agreed, never-

¹ The rest of the 60th was delayed and unable to get up in time to participate in the attack.

² From the trench "star" just north of Strongpoint 15 on Sketch 14.

June. theless, to furnish additional heavy guns¹ and to lend to the Second Army, as reserve to the Canadian Corps, an infantry brigade (9th) of the 3rd Division (Major-General J. A. L. Haldane), then in G.H.Q. reserve, and all the 3rd Division artillery; he sent his Deputy Chief of the General Staff, Major-General R. H. K. Butler, to General Plumer, however, to request that the counter-attacks should be made with as few infantry as possible, but well supported by artillery. Arrangements were made for the V. and XIV. Corps heavy artillery, on either flank, to co-operate.

Preparations were now made to carry out the attack on the 6th June, but the continuance of bad weather prevented any aeroplane work, without which heavy artillery registration could not be effected. A first postponement was therefore made until the 7th June.²

Meanwhile, between 8 P.M. and 10 P.M. on the 3rd, the enemy gave signs of meditating a further attack. Reliefs were therefore suspended, and the reserves ordered to stand to arms. But such efforts as the Germans made were stopped by fire, and during the night of the 3rd/4th the battalions which had participated in the unsuccessful counter-attack were relieved, and the 9th Canadian Brigade took the place of the 8th³ and of part of the 7th. With the assistance of the engineers and pioneers, the work of consolidating the temporary line was taken in hand. This was rendered very difficult by the clayey nature of the ground, the surface of which had turned to the consistency of cream cheese after the heavy rain that had fallen during the 3rd. Active patrolling was begun to ascertain the exact location of the enemy's new line.

During the 4th and 5th the general situation remained unchanged, although on the 5th about 7.30 P.M. the enemy made an abortive attempt to advance near Maple Copse; but both sides sought by artillery fire to interfere with each other's work of consolidation and possible preparations for attack.

In view of the losses of the Canadian Corps, the 9th Brigade (Br.-General H. A. Potter) of the 3rd Division, in

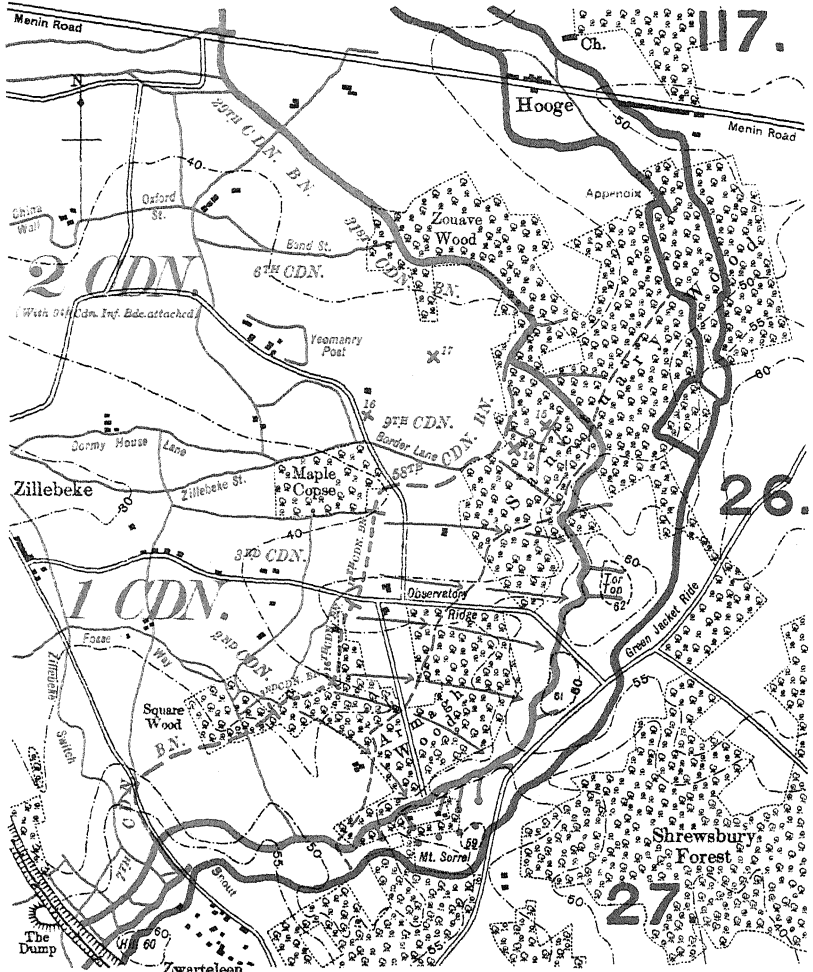
¹ The 89th Siege Battery (two 12-inch howitzers) and three 6-inch howitzer batteries (51st, 71st and 72nd, the last two South African, all recently arrived in France).

² At this time Br.-General C. H. Harington was selected to be Major-General, General Staff of the Second Army. General Plumer, however, allowed him to remain a few days longer with the Canadian Corps, saying, "You had better look sharp and get Mount Sorrel back, or I shan't have you at all".

³ The 8th Brigade had lost 67 officers and 1,789 other ranks.

MOUNT SORREL

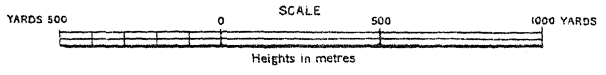
13TH JUNE, 1916.



BRITISH
 Line from which the attack started on the 13th June
 Line established after the attack

GERMANS
 Line before the attack, 13th June ..
 Line established after the attack

Strong Points X 16 X 16



reserve, was ordered to take over the St. Eloi sector, thus relieving the 5th Canadian Brigade.¹ This allowed the 6th Canadian Brigade, in reserve, to relieve on the night of the 5th/6th June the remainder of the 7th Canadian Brigade, and the companies of the 12/K.R.R.C. on loan from the 60th Brigade.² June.

The 6th Canadian Brigade (temporarily under Lieut.-Colonel J. F. L. Embury in the absence of Br.-General H. D. B. Ketchen), had hardly taken over the Hooge sector before it was attacked. At 12 noon on the 6th the Germans opened a heavy bombardment of the whole sector, but particularly concentrated it on the 31st and 28th Battalions holding the front system. Then, at 3 P.M., after firing four mines under the front trenches at Hooge, they attacked and obtained possession of the 28th's front and support trenches, but were repelled on the right by the fire of the 31st. An attack at the same hour near Hill 60 failed before the defence of the 18th Battalion.

For a time it was thought that another general enemy assault was imminent, but the fear of this soon passed away. The question of recovering the Hooge trenches was discussed, but it seemed to General Byng inadvisable to interfere with the preparations for the attack to recapture Mount Sorrel and Tor Top, or to weaken other portions of the front for the purpose by withdrawing units in reserve, especially as the Hooge trenches were always costly to maintain. It was therefore decided to leave the old front line at Hooge in the enemy's hands, and make the reserve line, which was intact, the new front line. The work of constructing a new support line to it was at once taken in hand.

Sir Douglas Haig gave his approval to General Byng's decision, there being much less reason here than at Vimy to waste lives and ammunition in trying to recover every scrap of trench of which the enemy might gain chance possession. As a precaution, however, on the 7th, he sent up the 2nd Dismounted Cavalry Brigade (under Br.-General L. K. Campbell of the 5th Cavalry Brigade), organized in three battalions from men of the 2nd Cavalry Division, as reserve to the Canadian Corps, to be used as a striking force to counter-attack at once in case of a further hostile advance. This brigade remained with the Canadians, giving

¹ On the night of the 11th/12th, the 9th Brigade was relieved by the 8th, which remained with the Canadians until the 20th/21st.

² The two battalions of the 7th Canadian Brigade most heavily engaged had lost: the Patricia's, 407 (leaving only 4 officers out of 23, and 210 other ranks); and the 49th Battalion, 16 officers and 284 other ranks.

June. help in improving defences and garrisoning G.H.Q. 2nd Line, until the 21st June, when the situation permitted of its withdrawal.

The attack against Mount Sorrel had been subject to further postponement. On the 7th and 8th the weather improved and good air photographs of the German defences were obtained by No. 6 Squadron; but it then became vile, with almost continuous rain, and air observation was only possible for an hour or two each day. Nevertheless, between the 9th and 12th four intense bombardments were carried out, lasting about twenty minutes to half an hour each, mainly in order to delude the enemy as to the hour of attack.

Sketch 15. At 8 A.M. on the 11th, in spite of the weather, orders were issued for the recapture of Mount Sorrel and Tor Top. Zero hour was subsequently fixed at 1.30 A.M. on the 13th. In consequence of the heavy losses sustained by some of the battalions in the earlier fighting, it was arranged to form two composite brigades from the 1st Canadian Division:—

One, under Br.-General Lipsett, composed of the 3rd, 1st and 8th Canadian Battalions, with the 7th in front line near Hill 60, for the right attack against Mount Sorrel;

One, under Br.-General Tuxford, composed of the 16th, 13th, 2nd and 4th Canadian Battalions, for the centre and left attack against Tor Top.

On the extreme left was assembled part of the 9th Brigade (the 58th Battalion, under Lieut.-Colonel H. A. Genet, with one company, 2 Lewis guns and bombers of the 52nd).

A reserve of the 5th, 10th, 14th and 15th Canadian Battalions was formed under Br.-General Garnet Hughes.

The whole of the artillery (this included the 3rd Division) in the Canadian Corps area was put under the direct command of Br.-General Burstall, and the field companies and pioneers of the 1st and 3rd Canadian Divisions were to be employed with the attacks for consolidation purposes.

During the 12th June a deliberate 10-hour bombardment of all the German works between Hill 60 and Sanctuary Wood was carried out, particular attention being paid to Hill 60 and "The Snout", a salient of the German line near the hill, from which two positions machine guns could enfilade the right of the proposed attack. From 8 to 8.30 P.M. there was an intense, and, as it turned out, very

accurate bombardment, and at its close the attacking June. battalions moved up into their places. From 12.45 to 1.30 A.M. there was a final intense bombardment, and then the heavy artillery lifted, doing so again at 1.50 A.M. To protect the right flank of the attack, the 7th Battalion fired 200 smoke bombs from its Stokes mortars against Hill 60 with complete success; but a raid under cover of the smoke, planned to take place, proved out of the question owing to a heavy barrage. On the left of the attack, Stokes mortars were used during the final bombardment to enfilade the enemy's communication trenches, and bombing parties were sent out by the detachment of the 9th Canadian Brigade. Opposite Sanctuary Wood and Hooge a smoke screen was formed along the front, with simultaneous rapid rifle and machine-gun fire. The 20th Division (XIV. Corps), next to the Canadians on the north, in order to create a diversion, bombarded the German front opposite in accordance with the Canadian artillery programme, cut lanes in the German wire, and at the zero hour of the assault discharged gas and smoke in the 60th Brigade area near Railway Wood, and in the 59th Brigade area further north. Under cover of the smoke, four successful raids were made.

The accuracy of the Canadian artillery fire permitted the two leading waves of the 16th Battalion to move out previously and lie down in No Man's Land, inside the enemy barrage. When at 1.30 A.M., in a storm of rain, the 3rd, 16th, 13th and 58th Battalions assaulted, the German front line was easily taken, and the garrison found cowed by the bombardment. After overcoming resistance, all three attacks reached their final objectives between 2 and 2.30 A.M. The first Canadian deliberately planned attack in any force had resulted in an unqualified success, and the Germans had been driven from the Canadian position on Mount Sorrel and Tor Top which they had gained on the 2nd June. Five enemy officers and 186 other ranks were taken prisoners, other survivors withdrawing to the original German position of the 2nd June.

The engineers and pioneers were now ordered up—although unfortunately those allotted to the centre were dispersed by a barrage—and the work of consolidation was at once begun, under terrible conditions, particularly for units unacquainted with the area. The intense bombardments before the German and the Canadian assaults, combined with continuous rain, had made the ground a sea of mud

June. and obliterated all landmarks, especially near Mount Sorrel, where the mines had been fired on the 2nd June. Nor did the enemy remain quiet. As soon as he recognized that the Canadians were in occupation of their old line, he opened a heavy bombardment which continued for the remainder of the day and during the night of the 13th/14th. At 6.45 A.M. he attempted a counter-attack on Mount Sorrel, and artillery assistance had to be called for; but, by a piece of good fortune—air work being impossible owing to the bad weather—a concentrated bombardment of the front opposite Mount Sorrel, to last a quarter of an hour, had been ordered for that very moment, in anticipation of such an attack, and the enemy must have suffered heavily. At any rate, he was quiet until 9 A.M. when he made another attempt on Mount Sorrel, which likewise came to nothing.

On account of the deep mud and shell craters filled with water, it was found impossible to locate exactly where the original front line had been, and, as it turned out, about four hundred yards of the new line at Mount Sorrel was ultimately established some fifty to one hundred and twenty yards inside the former position. It was impracticable to make a continuous trench, and bombing posts were therefore formed in shell holes, connected by saps to the support line. The Germans on discovering the new line at Mount Sorrel, pushed forward by night and dug in about a hundred and fifty yards from it; but beyond continuing bombardment on the night of the 13th/14th, they made no further effort to gain ground or to renew active hostilities.¹

Dec. 1915.- Haig's command before the Battles of the Somme, it may
May 1916. be stated that between the 19th December 1915 and the 30th May 1916, there were 63 British raids of from ten to two hundred men, of which 47 were successful, and 33 German raids on the British front of which 20 were successful. The battle casualties month by month to the end of June² were:—

¹ During the relief of the 1st by the 8th Battalion on the evening of the 13th July, both officers commanding, Lieut.-Colonels F. A. Creighton and H. H. Matthews, were severely wounded, the former dying of wounds.

The total casualties of the Canadian Corps from the 2nd to 14th June, inclusive, had been:—

	Killed.	Wounded.	Missing.	Total.
Officers	73	257	57	8,430
Other ranks	1,053	5,010	1,980	

² The raids in June are dealt with in connexion with the preliminaries of the Somme.

	Officers.	Other Ranks.	June.
19th-31st Dec.	300	5,375	
January	530	9,424	
February	583	11,599	
March	683	17,131	
April	987	18,899	
May	984	21,434	
June	1,778	35,434	
	<hr/>	<hr/>	
	5,845	119,296	
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NOTE

THE GERMAN ACCOUNT OF MOUNT SORREL¹

The orders of the 20th May 1916 of the *XIII. Corps* (General Freiherr von Watter) made the object of the attack "to wrest from the enemy his last dominating observation posts over considerable areas immediately behind the chief fighting ground". The question of whether the Mount Sorrel—Tor Top ridge, if captured, could be held was discussed, and the commander of the *26th Division* (Major-General von Pfeil und Klein Ellgutt) gave it as his opinion that it could not be retained, recalling the similar operation at the Bluff. But General von Watter considered that conditions were different, "because the new line would be safe from enveloping attacks, was far from the main groups of enemy heavy artillery, and could not be well observed or flanked from Kemmel".²

No special troops were brought up for the operation, which was carried out by the divisions in the line. The preparations lasted six weeks, during which the greatest precautions were taken as to secrecy; the troops were told that they would shortly be shifted to another theatre, and that before they left the position must be strengthened. Thus "an outpost position was gradually built into an assault position, with an exceptional number of dug-outs. . . . Quite a considerable quantity of heavy artillery" was borrowed from the *XXIII. Reserve* and *XXVI. Reserve* (on either flank of the *XIII.*) and *Marine Corps* on the coast, and a considerable number of trench mortars, light, medium and heavy, were also obtained for the occasion. Not until the afternoon of the 1st June were the units informed of the coming assault, when they were also told of "a great naval victory" at Jutland.

The assaulting troops were moved up during the night of the 1st/2nd June, and remained hidden, crowded together in the trenches and dug-outs all the morning without discovery. In the front line from north to south were two battalions of the *121st*

¹ A fairly complete narrative of the Mount Sorrel operations is to be found in the Württemberg Official Account, and in the histories of the *26th* and *27th Divisions* and of the *120th Regiment*.

² For having been right and his corps commander wrong, General von Pfeil was removed from his command. Württemberg Official Account, p. 54.

June. *Regiment* and two of the *125th Regiment*, of different brigades of the *26th Division*, and one battalion of the *120th Regiment* of the *27th Division*. The *119th Grenadier Regiment* of the *26th Division*, and the *127th Regiment* of the *27th*, were in reserve, the *11th Reserve Regiment* of the *117th Division*, on the other flank of the *XIII. Corps*, being lent to take the latter's place in the front line south of the attack front. On the north of the attack, the *117th Division*,¹ with its remaining two regiments, the *22nd Reserve* and the *157th*, was to make a diversion, and, if possible, capture Hooge.

The attack was to be a strictly limited one, to reach first the "Iron Line", and then the "Golden Line", a total advance of about five hundred yards.²

Everything went according to plan on the German left, but on the right there was failure. In the assault the *II. Battalion* of the *121st Regiment* on the right (north) suffered heavily from enfilade fire from the north. It is claimed that it reached the Golden Line,³ where it became involved in hand-to-hand fighting and made use of *Flammenwerfer*. Its *I. Battalion* struck obstacles in the shape of marshy ground and thorn thickets, and hung back. Between it and the *II. Battalion* of the *125th*, to the south, there arose a gap which the *III. Battalion* of the *121st* was not able to fill. On the left, the left of the *II. Battalion* of the *125th Regiment* got through to its objective, and captured a forward battery⁴ on Observatory Ridge, after it had fired point-blank. Its right was at first stopped by machine-gun fire; but, after hand-grenade and bayonet fighting, it also reached the Golden Line. It then had to bend back its right flank on account of the *121st* not being up. The other battalion, the *III. of the 125th* "dashed right through" "the Canadian position, and reached the Golden Line at 1.15 P.M.". The *120th Regiment* also, aided by the mines, captured Mount Sorrel at once. Supports and a part of the reserve regiment, *119th Grenadier*, were put in, and the whole of the *120th's* objective was secured. The *125th* and *120th Regiments* went on beyond the Golden Line, but were recalled at dusk.

The German assaulting regiments were left in the line; but on the 3rd June, the *119th Grenadier Regiment*, from the reserve, was pushed in between the *121st* and *125th*, which then had only one battalion left in the front line.

After the Canadian "hurried partial counter-attacks" had failed, the Germans suffered severely from continual small combats and "drum-fire" day and night; on the 11th and 12th June British artillery activity was particularly acute, and, combined with the bad weather, demoralized the troops in the trenches.

Sketch
15.

"It can never be stated with mathematical certitude at which place on the front the Canadians made the first break-in on the 13th, which led to the retirement of the whole line."

¹ A reconstituted division of the new three infantry regiments type, which had fought at Loos.

² On Sketch 14, the southern part of the "Golden Line" is marked by the "line established after the attack", but from Strongpoint 13, it continued northward to Strongpoint 15 before turning towards the German front. The German secret orders for the attack were captured on the 13th June.

³ If it did it was driven back.

⁴ Actually a section.

It is claimed that Mount Sorrel was regained by a counter-attack during the 13th.¹ "Double Hill 60, however, remained lost, in spite of many attempts to restore the old situation." The failure of the Germans to hold what they had gained is ascribed to "not being in a position to take effective counter-measures; for the enemy was very superior in aeroplanes, and had at his disposal a greatly superior artillery, with unlimited ammunition, whilst part of the artillery specially brought up for the attack had to be returned, and the ammunition situation permitted only a small expenditure. Even the weather favoured the enemy. Continuous rain assisted to wear down the troops exposed to heavy hostile fire night and day."

A simpler explanation perhaps is that, in a straight fight between Canadians and Württembergers, the better soldiers won. The number of batteries was actually in favour of the enemy, for on the 13th June 40 German batteries were located in action against 28 British and Canadian.²

¹ This was not the case.

² The German losses given are as follows :—

	Officers.			Other Ranks.		
	Killed.	Wounded.	Missing.	Killed.	Wounded.	Missing.
26th Div. (regtl. history) :	22	45	4	751	2,257	357
27th Div., +11th Res. Regt. (supplied by <i>Reichs-</i> <i>archiv</i>) :	7	19	1	279	954	129
117th Div. (supplied by <i>Reichsarchiv</i>) :	3	7	1	161	700	68
Total	32	71	6	1,191	3,911	554
	109			5,656		

Allowing for the different methods of counting wounded, the losses of the two sides were probably much the same.

CHAPTER IX

THE PLANS FOR THE ALLIED OFFENSIVE ON THE SOMME

(Maps 1, 2; Sketches A, 16)

Jan.- It has already been mentioned that soon after Sir Douglas
Feb. Haig had taken over command of the British Expeditionary Force he directed General Allenby to begin the study of an attack north of the Somme in the Third Army area, one of the operations he had in mind. A few days later he had defined the scope of this offensive more precisely as either an isolated attack with 15 divisions on a 24,000-yard front, to be ready about the 20th April, or an attack on a later date in co-operation with the French astride the Somme, with about 25 divisions, on such length of front as was possible. On the 4th February he sent General Rawlinson, who was on the 1st March to take command of the new Fourth Army about to be formed, to collaborate with General Allenby in the study of the offensive. He instructed General Rawlinson to consider (1) the various directions in which the British reserves might be required to act in case of a German offensive; (2) an offensive in the Third Army area; and, as already mentioned, (3) an offensive in the Ypres area towards the Forest of Houthulst and Roulers.

Map 1. In its westerly course between Péronne and Amiens
Sketch A. the Somme cuts a valley into the great plain of northern France, its course being some two hundred feet below the general level of the plain. The slopes of the valley on the left (south) bank are gentle, whilst those on the right are very steep; the bottom between them is flat, half a mile to three-quarters of a mile wide, edged by meadows, submerged in winter, but mainly marshes dotted with holes from which peat had been cut, now full of water. This bottom is for all practical purposes passable only at

the occasional causeways, and is, even without the river, a very serious military obstacle. The river itself is unfordable, and has many windings and generally more than one branch: near Frise, for instance, there were five, the five bridges at this point being, respectively, 28, 13, 13, 16 and 17 feet wide; and it is doubled by a canal 58 feet wide at water level, and 6·6 feet deep.

The slopes on the northern bank are broken by many small valleys, the spurs between them seeming to be buttresses to the plain, and one considerable valley, that of the Ancre river. This tributary of the Somme passes through Albert, and is twenty to thirty feet wide, and three or four feet deep. The valley of the Ancre is a miniature of that of the Somme, equally deep and equally marshy, two or three hundred yards wide at bottom, and its sides are likewise broken by numerous minor valleys, some with little streams in them, notably those in which lie Fricourt and Beaumont Hamel.

South of the Somme the great plain is literally flat; but on the north it has large undulations, rising beyond the Frise valley to a ridge, more than 300 feet above the Somme flats, and marked by Guillemont—Longueval—Bazentin le Petit—Pozières—Thiepval. At the last-named place it reaches the Ancre, to be continued on the other side by the line of nearly equally high ground marked by Beaucourt—Hébuterne—Gommecourt—Fonquevillers. Northward of this ridge the ground falls, to rise again to another swell of ground running south-east and north-west through Bapaume.

There were in the area a few large woods, and, although hardly any isolated farms, a number of large villages: for instance, Montauban, 274 houses; Longueval, 138; Mametz, 120; Thiepval, 93; Fricourt, 176; Contalmaison, 72; Beaumont Hamel, 162; but many of the buildings were of poor construction. The town of Albert contained 1,105 houses, with 6,742 inhabitants. The subsoil was chalk, and the area recalled Salisbury Plain on a larger scale with the difference that the whole of it was richly cultivated. Troops of all arms could move everywhere over it, except in the woods (which outside the rides had thick undergrowth) and across the Somme and the Ancre flats, where no causeways and bridges existed. A great main road ran from Amiens through Albert to Bapaume. There was a double line railway through Albert up the Ancre valley towards Arras, with a light branch from

Albert up the Fricourt valley towards Combles, and others radiating from Bapaume.¹

The German front defence system, running generally northwards, crossed the Somme west of Frise and Curlu, and then, passing east of Maricourt, turned westwards round the spur on which that village stands to Mametz and Fricourt, in the valley already mentioned, and then continued a little west of north, across the spurs of the Ancre valley trending towards Albert, on to Thiepval and St. Pierre Divion. Crossing the Ancre and passing west of the Beaumont Hamel valley, it continued north over gently undulating ground to Gommecourt.

Behind the front system a 2nd Position had been constructed 2,000 to 5,000 yards from it, sited generally on the Guillemont—Pozières ridge. It crossed the Ancre near Grandcourt, and then ran northwards past Puisieux.²

Between the two positions a number of localities like Montauban, Mametz Wood, Contalmaison, Pozières and Serre had been placed in a state of defence. Both positions were well wired, and the chalk soil allowed of dug-outs of great depth being excavated. Observation of the German front system and the defensive localities immediately behind it was good almost all along the British front line, but the 2nd Position, although not actually out of range of the British heavy guns, could only be observed from the air, a condition which made wire-cutting very difficult. The enemy's artillery positions were also outside ground-observation, for the many valleys and depressions offered excellent concealed sites for batteries—to the Allies as well as to the Germans.

March. On the 6th March, five days after taking over command of the Fourth Army front,³ General Rawlinson—the preparations for the offensive on the Somme had been transferred to him, and those in the Ypres area to General Plumer—held a conference of his corps commanders.⁴ At

¹ For the further information as to the railway system which fed the battlefield, see Chapter X.

² The ground and enemy defences are dealt with in greater detail in describing the various sectors of attack on the 1st July.

The German defence lines, of which the 3rd was not constructed at this time, are usually marked on the map as "lines", but are better described as "positions", for each included several lines, e.g. front, support and reserve. The elaborate nature of the German defences will be seen by reference to Map 7 or Sketch 18.

³ From the Somme to Fonquevillers, see page 38.

⁴ Lieut.-Generals W. N. Congreve, Sir T. L. N. Morland, and Sir A. G. Hunter-Weston. Sir Henry Rawlinson prepared for these conferences

this meeting he informed them of the general nature, as March. confided to him by the Commander-in-Chief, of the operations in prospect, stating that the Fourth Army would probably be reinforced by another corps, and by heavy artillery so as to have one heavy howitzer per 100 yards of the front to be attacked.¹ Subject to modification, the order of the corps, each brought up to the strength of four divisions, would be, from south to north, XIII., new corps, X. and VIII.; the first phase would be the capture of the enemy's 1st Position; the date would probably be June or July, although an offensive of some kind might have to be undertaken in April in order to relieve pressure on the French at Verdun. He directed the corps commanders, the X. Corps acting for the new corps, to prepare their plans and get on with all the preliminary preparations, such as the selection of sites for batteries, the construction of observation posts, and the laying of telephone cables, so that there might be no loss of time. Estimates for cable, smoke and gas required were to be sent in as soon as possible. In view of the weather and the wide front involved, he told them he was fully aware that it would be difficult to do much actual work on the ground beyond the upkeep of defences; but by making use of the personnel of the ammunition columns and of the three divisions in reserve, he thought that at least much of the preliminary artillery work on battery emplacements and observation posts, and in laying wires could be done; whilst the labour already being expended on roads, railways and defences by the engineers would be all to the good.

On the 24th March the headquarters of the III. Corps (Lieut.-General Sir W. P. Pulteney) arrived in the Fourth Army, and shortly after, although only its 8th Division was available, took over the front near Oivillers la Boisselle, between the XIII. and X. Corps. The 19th and 34th Divisions, assigned to the corps, did not arrive until early in May.

On the 26th March the C.G.S. informed General Rawlinson in writing of the minimum resources in troops, heavy artillery and ammunition which would be placed at his disposal for an offensive to be opened on or about the 1st May or the 1st June. On the former date he might expect

with the greatest care. His notes for them in his own handwriting were preserved by his staff.

¹ Nearly double this number was provided.

March. 15 divisions, and on the latter, 17; and in each case one cavalry division. In addition, three divisions and one or more cavalry divisions would be held in G.H.Q. reserve. He asked the Fourth Army to submit a plan of operations for the forces which would be available on the 1st June, and to suggest what modifications would be necessary should it be decided to begin operations on the 1st May.

April. A plan was forwarded to G.H.Q. on the 3rd April.¹ With the comparatively small resources enumerated in the letter from the C.G.S., Sir Henry Rawlinson considered that he could not deal effectively with an objective having a width greater than 20,000 yards,² and a depth of from 2,000 to 5,000 yards. In view of protection being required for his flanks, he selected the front between the Maricourt salient and Serre (10 miles north-west of Maricourt). Two principal matters were discussed in the plan. First, should an attempt be made to rush the whole of the German defences in one assault, as at Loos, or should the advance be carried out by stages? Secondly, should there be a short intense bombardment or a longer methodical one of 48 to 72 hours? In view of the strength of the enemy's 2nd Position, particularly of its wire, and of the difficulty of getting observation and fire on to it, General Rawlinson recommended an attack in two parts, with an interval between them. In the first, the enemy's front position between Mametz and Serre, both inclusive, to an average depth of roughly 2,000 yards, should be captured. This would include Fricourt, La Boisselle, Ovillers la Boisselle,³ Thiepval and Beaumont Hamel. In the second, a further zone of about a thousand yards' depth between Fricourt and Serre was to be gained. This would include the German 2nd Position from near Pozières to Grandcourt only, and Contalmaison and Pozières villages and Mouquet Farm. The front on either flank of the attack in both stages must remain on the defensive. Whether there should be a short or a lengthy bombardment was more difficult to decide. On the one hand there was the moral effect of a prolonged bombardment; on the other the value of surprise. In the case of a short intense bombardment, however, General Rawlinson thought there would be difficulties in cutting the wire (which even in the

¹ Appendix 8.

² The front on which the Fourth Army attacked on the 1st July was about 25,000 yards.

³ This village will henceforth be referred to as Ovillers.

seven days' bombardment as eventually carried out was April. not cut in many places), and in assembling the troops.

"The intense bombardment", he wrote, "must take place by daylight; ¹ therefore the whole of the assaulting troops would have to be at or near their assembly trenches during the whole time and would undoubtedly suffer casualties and lose morale. This would be avoided in a more prolonged bombardment, as the attack could take place in the early morning, and the attacking troops get into position under cover of darkness." He therefore recommended a long bombardment, which he knew was favoured by General Foch, a bombardment which must aim at destroying both the wire obstacles and the machine guns which guarded the approaches to the German trenches. If the artillery did its work well, said General Rawlinson, the rest would be easy.

Two days later, on the 5th, Sir Douglas Haig summoned General Rawlinson and his Chief General Staff Officer, Major-General Montgomery, to G.H.Q. to discuss the plan they had put forward. He expressed the opinion that there was in it no thought of reasoned distribution of troops, of strategy or of surprise: merely a direct advance of the same strength all along the front was suggested. His detailed criticisms and constructive proposals were subsequently committed to paper. In these he directed that further consideration should be given to the possibility of pushing the first advance beyond the German front position, on the right towards Montauban and the Briqueterie (Brickworks) south-east of the village, and on the left to the spur between Miraumont and Serre. He did not, however, foresee any prospect of being able to find more troops for this increase in the width and depth of the objective. The Staff of the Fourth Army had made their scheme in accordance with the men and guns allotted, and at once expressed the fear that what was now proposed would be asking too much of the forces at their disposal. Major-General J. F. N. Birch, the Artillery Adviser at G.H.Q., also told Sir Douglas Haig that he was "stretching" his artillery too much. The Commander-in-Chief, in view of the ample ammunition

¹ This was the general belief at the time and before gas shelling came in. General Foch for this reason fixed the hour for the French assault on the day of Loos at 10 A.M., as "the light must be favourable for observation" (see "1915" Vol. II. p. 156). The Germans did exactly the same on 2nd May 1915 at Gorlice-Tarnow ("Gorlice" p. 44), and at Verdun the intensive bombardment began at 8.12 A.M. and lasted until 5 P.M. ("Tragödie von Verdun", i. pp. 53-4).

April. which had been promised, considered that this was immaterial and proceeded to point out that the possession of the Montauban spur, parallel to the main Guillemont—Pozières ridge, should be of considerable value in preparing for the attack on that ridge, and would probably be easier to gain on the first day of the attack than later on. It, moreover, would furnish a strong position on the right; this flank would certainly have to be continued towards the Somme by the capture of Hardecourt knoll and the Maricourt—Curlu spur, though there was every reason to believe that the French would undertake to secure these features.

The possession of the Serre—Miraumont spur on the left flank would, he thought, similarly guard a further advance against counter-attack on that side, and be of assistance in an attack on the high ground between Pozières and Grandcourt.

It was also suggested by Sir Douglas Haig that there should be simultaneous activity, as far as could be arranged, against the Gommecourt salient, then in the Fourth Army sector, for the purpose of attracting the attention of the enemy's artillery and reserves to that side.

He also invited further consideration of the artillery bombardment, being of opinion that the moral effect of a short sharp bombardment was likely to be greater than one spread over a long period. He did not, however, refer to the length of time required for wire-cutting.

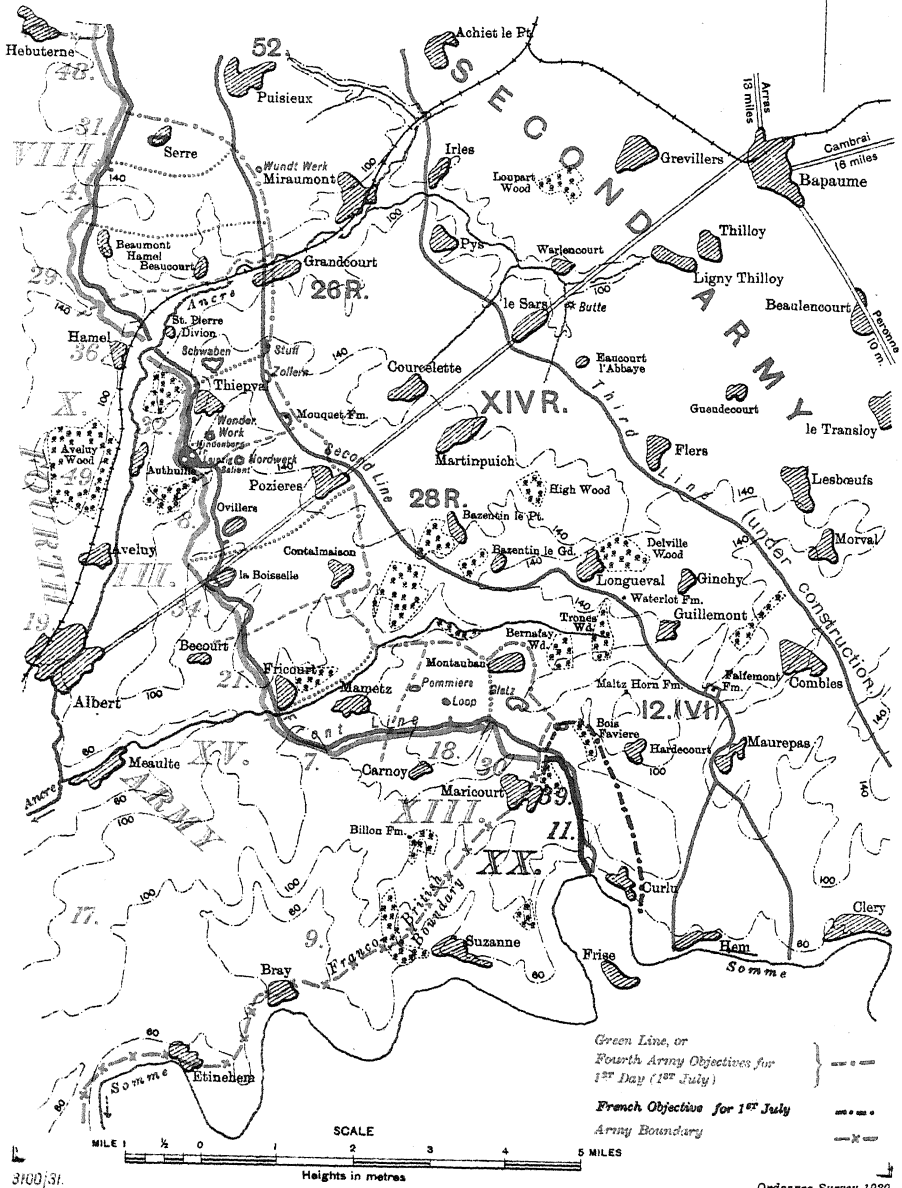
The correspondence between G.H.Q. and General Joffre as to the combined plan contained in G.H.Q. letter of the 10th April¹ was communicated to General Rawlinson. He was at the same time instructed to arrange a meeting with General Foch, commanding the Groupe d'Armées du Nord (G.A.N.), to settle the dividing line between the Allied Armies should the French insist on taking over the sector immediately north of the Somme. On the 12th, definite instructions, in the sense of the criticisms offered by Sir Douglas Haig, were sent by G.H.Q. to General Rawlinson,² who assured the Commander-in-Chief that he would loyally carry them out. But privately he was convinced that they were based on false premises, and on too great optimism, for there was no sign that German morale was in any way broken or weakening, and until that happened anything in the nature of a decisive success was out of the question.

The G.H.Q. instructions sent to the Fourth Army stated that its attack would form part of a general offensive in

¹ See page 41.

² Appendix 9.

THE SOMME, 1916 THE BATTLE OF ALBERT 1ST JULY THE FOURTH ARMY OBJECTIVES



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close co-operation with the French, the point of junction April. of the Allied forces being about Maricourt, and the front of the Fourth Army would extend on the left to about Hébuterne. They continued :

“ Your principal effort in the first instance will be directed to establishing a strong defensive flank on the spur from Serre (inclusive) to Miraumont and to capturing and securing the high ground above Pozières and the spurs running thence towards Beaucourt sur Ancre and Grandcourt and towards Fricourt. A simultaneous attack should be made on the enemy’s trenches from Fricourt eastwards to the point of junction with the French. In this area Montauban and the ridge running thence to Mametz, as well as the Briqueterie south-east of Montauban, are very important features, which should be captured as early in the operation as you find possible with the means at your disposal.¹ Their possession will be of considerable tactical value to us in the second stage of the operations.

“ After gaining the ground described above, your next efforts must be directed to capturing, by attacks from the west and south, the Ginchy—Bazentin le Grand ridge, and then pushing eastward along the high ground towards Combles, in order to co-operate with and assist the French army on your right in effecting the passage of the river Somme.

“ Operations subsequent to those outlined above must depend on the degree of success gained and on developments which cannot be foreseen. But the object will be to continue to prevent the enemy from re-establishing his line of defence and to exploit to the full all opportunities opened up for defeating his forces within reach, always, however, with due regard to the need to assist the French Army.”

Put into the fewest possible words, this meant a general advance of about a mile and a half on a 25,000 yards’ front. Owing, however, to the difference in the distance between the German 1st and 2nd Positions—it was nearly 4,000 yards on the British right and under 2,000 at Thiepval, though it widened again north of the Ancre—the objectives to be obtained varied. On the left it was the German 2nd

Map 2.
Sketch
16.

¹ To this extent General Rawlinson’s arguments had had effect. The arrival of the XV. Corps enabled him to do what was required on this side.

April. Position on the high ground from Pozières to Grandcourt which was to be captured—an ambitious proposition—as well as the line across the Ancre up the spur west of Miramont, a flank being formed through Serre to the British front line. On the right, the Montauban spur, midway between the German 1st and 2nd Positions was to be taken—a reasonable objective—and a right flank formed from Montauban to the Somme, partly by the British and partly by the French. In the centre an advance was to be made over the German 1st Position to connect the right and left attacks—which was also within the bounds of possibility. The Bazentin ridge was then to be gained by a simultaneous attack from south and west. Although there were further discussions, the objectives thus outlined were those aimed at in the battle of the 1st July.

The Fourth Army was now told that a XV. Corps was about to be formed in France and allotted to it, and that its headquarters would be assembled on the 22nd under Lieut.-General H. S. Horne.¹

The difference between the two schemes put forward may be well illustrated by concrete examples. General Rawlinson had in his mind a limited offensive like that carried out so successfully a year later at Messines by General Plumer; Sir Douglas Haig, more optimistically and in deference to General Joffre's ideas,² contemplated a complete break-through like that carried out in May 1915 at Gorlice-Tarnow by the Germans and Austrians, and then a wheel and a sweep behind the German front.³

¹ On the 29th April the XV. Corps took over the left of the XIII. Corps front and the 7th and 21st Divisions which were holding it; its third division, the 17th, did not join until the 11th June. After this handing over of the 7th and 21st there remained with the XIII. Corps only the 30th and 18th Divisions, until the 9th joined on the 14th June. It has already been mentioned that in the III. Corps, the 8th Division was joined by the 34th and 19th in May. The X. Corps at this time consisted of the 32nd, 36th and 49th, taken over from the Third Army; and the VIII. of the 4th and 48th, taken over from the VII. Corps of the Third Army, the 31st Division joining it early in March and the 29th early in April.

The dates of arrival in France of new divisions has already been recorded in Chapter II.; further details of the divisions are given in the Chapters dealing with their entry into the battle of the Somme.

² General Joffre was quite convinced, as at Loos (see "1915" Vol. II. p. 137), and as was General Nivelle in 1917, that both the German front and 2nd positions could be broken through by the first assault.

³ The Austro-Germans broke through the Russian position on a 33,000 yard front, at a salient, in the foothills between the Carpathian mountains and the Vistula; then, wheeling slightly to the right, thus threatening the communications of the Armies holding a front in the mountains eastward of the break-through, they pushed on and forced the Russians to withdraw in order to avoid being cut off.

The difference between the views of the Commander-in-Chief and the commander of the Fourth Army as regards actual tactical method of attack was equally fundamental. The latter wished to proceed by deliberate stages resembling siege warfare, slow and sure—as the Germans had done in the later stages of “Second Ypres”—making a belt of defences 2,000 yards deep untenable by gun-fire and then occupying it.

As time went on Sir Douglas Haig became more and more affected by the optimism of Generals Joffre and Foch, which was supported by the accounts given by the French General Staff of the tremendous effect of the German artillery at Verdun. Remembering that at Loos some troops had passed over the whole 1st Position in the first rush, he wished to take advantage of the confusion, which was bound to occur in the enemy's ranks on the capture of his 1st Position, to push on far enough to capture the enemy's heavy artillery before it could be withdrawn to new emplacements. The cessation of the enemy's artillery fire prior to and during the retirement of his guns (after the attackers had penetrated far enough to bring about this retirement) offered a favourable chance to get on further and capture a good many of them.

Such an advance, however, involved cutting wire beyond the 1st Position; also there was little but field artillery in front of the 2nd Position, and this was covered by intermediate lines; indeed, General Rawlinson pointed out that the wire of the 2nd Position was too distant to be properly cut before the battle. As commander responsible for the conduct of the attack, he was also opposed to going further than would enable his guns (without being shifted forward) to cover the line gained against counter-attacks. Sir Douglas Haig therefore finally decided that it was inadvisable to demand more than General Rawlinson was willing to attempt. The latter's reluctance, founded on experience gained at the battle of Loos, was shared by many subordinate commanders.

In the open warfare of old days it was unnecessary to make beforehand a decision of the nature now called for; a commander-in-chief, after the opening phase of a battle or assault, would have seen the progress of events with his own eyes, or learnt of them in a few minutes through the reports of his gallopers, and shaped his further course accordingly. But with masses of men engaged on a wide front under modern conditions, with the communication

April. of news and orders rendered unreliable and slow by shell fire, a commander-in-chief cannot take advantage of fleeting opportunities—he does not hear of them until reports arrive, too late. Accordingly he leaves initiative in such a case, and in many other matters, to the decision of subordinate commanders, and can only influence the battle by sending them reserves. He must to a great extent therefore commit himself beforehand, confide in his subordinates and trust to their doing their best to carry out the general plan he has in mind: Sir Douglas Haig's course of fixing a distant object and saying, "get it if you can", was therefore based on good reason, although it may be held doubtful whether with his wide front of attack he had sufficient divisions for a break-through action unless he were prepared to expend his last reserves, and consequently leave himself without fresh troops to face a heavy counter-attack.

At a meeting of his corps commanders on the 16th April, General Rawlinson explained to them the Commander-in-Chief's scheme. The objective of the III., X. and VIII. Corps would be the Pozières—Grandcourt—Serre line, which was to be gained, not necessarily in one bound, but on the first day, and not in two operations, as he had previously indicated. The task of the XIII. and XV. Corps on the right having been amplified, would require further consideration (it received a preliminary discussion, later, on the 29th). He pointed out, as instructed, that past experience showed that a certain demoralization took place in the enemy's ranks after the front line was captured, and that the Commander-in-Chief wished full advantage to be taken of this period of panic, and of the cessation of intense fire which usually ensued for several hours after a successful assault, to gain possession of and consolidate ground to the front which would be far more costly to take later on.¹

On the 19th April General Rawlinson replied to the G.H.Q. letter of the 12th, which had embodied the definite plan.² He dealt with the matters raised under five headings. First, he considered that an attempt to make part of the German 2nd Position the first objective, not necessarily to be reached in one bound, but on the first day, was something of a gamble. He based this view on a number

¹ At the conference of the 16th April the words "The Tanks" in the body of Sir H. Rawlinson's notes are struck out in green pencil, and "Tanks, speak to corps commanders alone" are made almost illegible by red ink hatching over them. Whether he decided of himself not to speak or received instructions not to do so is not known.

² Appendix 10.

of factors : the distance to be traversed by the infantry ; April. the strength of the 2nd Position ; the difficulties in the way of cutting the wire of this position at 4,000 to 5,000 yards' range ; the probability of the German reserves fully manning the 2nd Position before the British reached it ; the difficulty of supporting the infantry with artillery fire—a very important factor—if it did gain a footing in the 2nd Position ; and the comparative rawness of the troops, who might easily be disorganized by a long advance. The situation, which only the Commander-in-Chief could fully appreciate, might be such as to require the risk to be taken, and he would make preparations and issue orders for the attack of the distant objective, and it would only be necessary to modify the orders to a small extent if at the last moment it was decided to carry out the attack in two distinct stages as he had originally proposed.

The second point which he raised was the inclusion of Montauban in the first objective, and the formation of the flank on the Hardecourt—La Briqueterie line, instead of east of Mametz as he had proposed. The extension of front which this occasioned would require still another division and an increased number of heavy howitzers to deal with it. These additions would, moreover, cause complications, as the crowding of the troops in the Maricourt salient was considerable, even without them. The handing over of half of the ground to the French when they sent troops north of the Somme, as they were about to do, would involve further congestion. An inviting target would be presented to the enemy, who might bring a powerful concentration of guns on to the salient from north-east and north. The formation of the new flank was not simplified by its being a co-operative movement with the French. It was therefore very difficult to decide whether it would be better to take Montauban simultaneously with the main advance or subsequently after the high ground near Pozières had been captured. In the event General Rawlinson's fears proved mistaken, as Montauban was taken at the first attempt, and the French on his right were very successful.

The third point in his reply dealt with the inclusion of an attack on Gommecourt among the first objectives ; this, he said, was beyond what the Fourth Army could accomplish with the resources allotted to it. Sir Douglas Haig, therefore, transferred the task to the Third Army.

On the fourth point, the length of the preliminary

April. bombardment, General Rawlinson said he would report after further consideration. It must depend on the action of the French, the amount of ammunition available, and the length of time that the gun detachments could work at high pressure.

Under the fifth heading, he discussed what further action should be taken if the initial attack was successful; and he pointed out that before any advance to the Bazentin ridge and the high ground towards Combles could be made a considerable number of fresh troops would be required.

May. At an interview with General Rawlinson on the 6th May, Sir Douglas Haig informed him verbally—the decision was not confirmed in writing until the 16th May¹—that, after most serious examination, the attacks outlined in the G.H.Q. Instructions of the 12th April, involving the over-running of part of the German 2nd Position in the first phase, should be prepared, and that the bombardment would be a prolonged one, depending on the amount of ammunition available.

In the early discussions he had said that corps were not to attack until their commanders were satisfied that the enemy's defences had been sufficiently destroyed; but this condition seems to have been dropped as time passed. Departing from the old rule of siege warfare that a breach was not to be assaulted until reported "practicable", and regardless of whether there were "retrenchments" behind the places selected for the breaches, it was directed that the bombardment should become one of a fixed number of days, at the end of which the troops would assault.

The Commander-in-Chief made it clear that he had no intention of attacking in force until the Armies were as strong as possible, the divisions adequately trained and the ammunition supply ample; but if the pressure on Verdun grew too severe it might be necessary to help the French by attacking, so that the work in preparation for an attack should be completed without delay. From the point of view of these preparations, he deemed it desirable that all five corps engaged therein should be under one commander; he would therefore leave them under General Rawlinson until the operations had begun. But when it came to movement, it would be difficult for him to control so wide a front, and Lieut.-General Gough was to stand by ready to command, under the Fourth Army, the two corps

¹ Appendix 11.

on the right wing, so as to combine their efforts with the May. special object of driving home the attacks on that flank as quickly as possible if a favourable opportunity offered : nevertheless as the situation developed it might become necessary to make Gough's force an independent one, directly under the orders of G.H.Q.¹

Montauban, Contalmaison, Pozières, Miraumont spur and Serre were to be the objectives aimed at in the first day's operations, whilst a simultaneous attack on Gommecourt salient was to be carried out by the Third Army, and wire-cutting on their fronts by the First, Second and Third Armies. The G.H.Q. letter which confirmed the Commander-in-Chief's remarks concluded by impressing on the Fourth Army the necessity for the closest supervision of the training and instruction of the troops, on which depended to a great extent the degree of success likely to be attained.

The decision to make part of the German 2nd Position the objective for the three corps on the left was based, as already mentioned, by the Commander-in-Chief on his experience at Loos. To have fixed the 1st Position as the objective, he thought, would have meant that any advance in the opening operation would have been limited by it, even in the case of outstanding success, and that no attempt would be made to destroy the wire of the 2nd Position. By laying down a more distant objective, he felt some assurance that the troops would push on in case of an initial success, and gain as much as was possible in one day, whilst the enemy was still shaken. It was obvious that the objectives must be so far forward that the enemy field artillery must go back or leave its gunners to be killed by rifle fire ; otherwise no infantry attack could hold its ground and by no other means could a lull be obtained during which reinforcements or reliefs, and ammunition and food might be got up. As will be seen, some, only some, parties of the 36th Division actually reached the 2nd Position and entered it, and they, owing to lack of numbers and the failure of the divisions on either side, were unable to retain what they had won. The weakness of the plan lay in the great distance which the infantry north of the Ancre would have to advance—over 4,000 yards near Beaumont Hamel—in order to reach the 2nd Position on the Miraumont spur ; in the expenditure on the 2nd Position of ammunition badly wanted to

¹ This was put into writing on the 14th May.

May. demolish the 1st;¹ and in the assumption that the Germans would be demoralized by the bombardment and yield to the assault of the British infantry. Two years had still to elapse before this stage was reached. Nor was the British Expeditionary Force, strung out as it was on a wide front by French desire, strong enough to exploit even an outstanding success. The operations were siege warfare in the field, not open warfare, and the problem was to deal with a labyrinth of trenches, with excellent accessories in the form of wire, machine-gun posts and deep dug-outs elaborated by German industry in the course of nearly two years. A success such as Sir Douglas Haig hoped for would probably have created a salient vulnerable on both sides, as the German victories did in 1918, or an ulcer, as Ypres had proved to the British.² It would have been better to rest content at first with something short of the 2nd Position, to have formed a flank on the reverse slope of the valley Beaucourt—Serre, and planned to take the 2nd Position at the same time as an advance was made on the right from Montauban to the 2nd Position, as General Rawlinson desired.

It must be admitted that the problems of semi-siege warfare and the large concentration of guns necessary for the attack of great field defences had never been studied in peace time by the General Staff. Under the influence of General H. H. Wilson it had been content to follow French ideas as to the nature of the next war, and ignored and almost resented being told of the information obtained by its Intelligence branch as to the preparations being made and methods practised at manœuvres by the Germans. Now G.H.Q. was unwillingly but unavoidably tied to French theories. The experience gained in the war as a result of French and British attacks, and of the methods used to meet German attacks, had been chiefly negative. So far the only successful break-through had been the Austro-German victory at Gorlice-Tarnow, accomplished against a thinly held sector of a very long line, which was difficult to reinforce and manned by troops of low intelligence, ill supplied even with essential munitions. The attacks of

¹ 60-pdrs. had to be used to cut the wire of the 2nd Position.

² The compiler was asked by Sir William Robertson at the end of 1915 what he would do to move the Germans. He replied: "If you will give me 20 divisions as a striking force, I will break the German line: 5 divisions to break in, 5 on each side to expand the gap, and 5 to complete the break-through and deal with counter-attacks". General Robertson merely said, "You can't have 20 divisions". "Well, then," was the reply, "there is nothing for it but steady siege warfare".

the Allies in 1915 had failed : the German attack at Verdun, May, intended to be decisive, at any rate as regards the capture of the fortress, had degenerated into a slow and deliberate process of gaining ground bit by bit, probably all that was possible in 1916 with the two belligerents still unbeaten. A strategic surprise could hardly be hoped for, but a tactical one might be possible if the hour of the attack could be kept from the enemy and the assault delivered with great rapidity under favourable conditions of light which would conceal its start.¹ After Neuve Chapelle, however, the enemy had taken every precaution to strengthen his defences in depth, and particularly to improve his wire both in quantity and quality. There were acres and acres of wire to cut, and, even had instantaneous fuzes been available in June 1916, its destruction in a certain area was to advertise where the assault would strike and "give the show away". To feint by cutting an equal amount of wire at two or three other places in the line was impossible, neither guns nor ammunition being available, and the so-called feints were clearly recognizable as such. Besides, to deceive the enemy, there must be more than wire-cutting. All the signs of the mounting of an attack, concentration of troops and guns, and countless material preparations, must at least be simulated. The development of the British heavy artillery and its attendant services of sound ranging, flash spotting and meteorology, was still in its infancy ; the personnel were new to the work, and not a few of them went, in 1916, into battle for the first time. The number of guns was insufficient for the front of attack and the ammunition available proved inadequate, and much of it of inferior quality.² Gas shelling and the creeping barrage, the factors on which later successes grew to be so dependent, were to all intents and purposes lacking: the few gas shells fired by the French 75-mm. produced no noticeable effect, and are not mentioned by the enemy ; the creeping barrage, tried in a tentative sort of way for the first time in a few divisions,³ was composed entirely of field-gun shrapnel (instead of high-explosive, shrapnel and gas as later), and it started from the enemy's front line (that is, gave no

¹ The Germans had achieved a surprise attack at Gorlice by having only a 4-hour bombardment. But the mere fact that a large German force had been interpolated in the line should have warned the Russians ; whilst the way the Germans worked their way forward over a wide No Man's Land to within assaulting distance on the night preceding the attack should have left no doubt as to the probable time.

² See page 122.

³ See Chapter XI.

May. assistance in crossing No Man's Land) and moved too fast. Thus the elements of later successes were absent.

The precise objectives allotted to each corps of the Fourth Army, which were announced by General Rawlinson to his corps commanders at a conference on the 17th May, the day after the receipt in writing of the final decision of G.H.Q., and the "bounds" by which they were to be reached, are recorded in the description of the operations of the corps on the 1st July, later on in this volume. In his general remarks, the G.O.C. Fourth Army pointed out that the main idea was to gain possession of the line Montauban—Pozières—Serre, and for the three corps on the left to establish a defensive flank and keep the enemy fully employed, whilst the rest of the Army was to push on, in order eventually to gain the high ground in the neighbourhood of Guillemont and Ginchy towards Combles: the attack was going to be made on a front rather more than twice as wide as that of Loos, but the Commander-in-Chief had many more reserves at his disposal, and twice as many guns for the bombardment, with, it was hoped, practically unlimited ammunition: the wire-cutting problem was not easy in some cases, the more distant wire could only be dealt with by 60-pdrs.: the artillery timetables had on former occasions been too rapid for the infantry, and time must be allowed for the guns really to cover the advance: success in the later phases of the operations would depend on the rapidity with which the artillery, light and heavy, could be moved forward to support the infantry: the questions of the provision and economy of water would be all important, and might be decisive as to whether the troops could stay in the positions gained or not: as regards training, it was specially directed that the brigades should be constantly practised in passing through others for the attack, and that troops should be trained over the same kind of ground as that over which they would have to advance, the distance of the various objectives being marked out, although it might not be necessary to reproduce all the German trenches.¹ At this

¹ The rehearsals were duly carried out, in back areas, the rear side of the artillery barrage being marked by a line of mounted men or men with flags. In some cases the enemy trenches were represented by tapes, in others they were actually dug, a proceeding which infuriated many French "cultivateurs", causing them to apostrophize the British as "les autres Boches", and was really of little service, as the German trenches, when reached, had generally been rendered unrecognizable by the bombardment. The dug-out entrances in particular were very hard to find.

conference, General Rawlinson issued to his corps commanders a printed pamphlet, "Tactical Notes", which will be discussed later on. May.

About this time it became so doubtful whether the French would be able to take any part in the Somme offensive that on the 27th May G.H.Q. warned General Rawlinson it was uncertain whether the Fourth Army attack or that in preparation by the Second Army (Messines—Wyttschaete) would be launched first.¹ Instructions were at the same time issued that the Armies not engaged in the offensive to be selected should take steps to mislead the enemy as to where it would take place, both three days prior to and during the assault, and continue feints during the subsequent operations. The means suggested were preliminary preparations such as making advanced trenches and saps; constructing dummy assembly trenches and gun emplacements; wire-cutting, gas discharges, artillery barrages on important communications, bombardment of rest billets; intermittent smoke discharges by day accompanied by shrapnel fire; and raids by night by parties of the strength of a company and upwards, prepared by intense artillery and trench-mortar fire.

On the 29th May Sir Douglas Haig told General Rawlinson, also referring to the matter in a letter to the C.I.G.S., that, in the circumstances of the reduction of French assistance, the first object to be aimed at was the wearing out of the enemy, and that he was to keep in view the necessity for getting troops into favourable positions for the spring campaign in 1917, so as to make sure of success next year.

In the midst of these discussions came news of the battle of Jutland (31st May), which, from the Army point of view, merely left the Navy, as before, in command of the sea. Of this truth soldiers of all ranks in France had the clearest proof: they had crossed the Channel on their first journey to the theatre of war in crowded transports, and recrossed it in the still more crowded leave boats,² or in hospital ships, untroubled by sight or sign of German vessels of war;³ only in the distant Black Sea had a Russian hospital ship been torpedoed (30th March). Of the dangers from which the watchfulness of their sailor brethren guarded

¹ Appendix 12.

² The period of leave to England which on the 20th November 1914 had been fixed at 7 days, was in November 1915 increased to 10 days. In November 1917 it was to become 14 days.

³ On 17th November 1915 a hospital ship, *Anglia*, had struck a mine off Dover.

April.—them there were indeed constant reminders: the variation in the times of sailing, the lifebelts ordered to be worn during the passage, and the zig-zag course. Nothing had interrupted the leave boats but a stoppage from the 18th to the 25th April—that the population at home might have its Easter holidays as usual!

May.

On the 30th April, and again on the 8th May, after a postponement from the 1st, General Rawlinson had meetings with Generals Foch and Fayolle, in order to settle the dividing line between the French Sixth and British Fourth Armies, the allotment of roads, and other matters connected with the handing over of the sector just north of the Somme to the French, which took place on the

June. nights of the 1st/2nd and 2nd/3rd June. It was necessary to give the French access to Bray as a railhead, and the dividing line as finally agreed upon passed through the centre of both Maricourt and Bray, a most awkward arrangement for both parties, but the only possible solution in the circumstances. The Maricourt salient was too small, as the Fourth Army had pointed out, to be shared by two corps, particularly corps belonging to two different Armies of two different nations, with different ammunition and equipment, and with separate communications. The inconvenience of the arrangement increased as the battle developed and the apex of the salient was advanced to Montauban. There seems no good reason why General Foch should have insisted on having French troops north of the Somme. In theory, a waterway or causeway should not form a boundary between two commands and should be allotted to one or other of them; the trouble caused by adherence to this theory has already been seen in reference to a small canal in the account of the operations of the Bluff;¹ moreover the Somme was no ordinary waterway, but formed a wide belt in which operations were impossible. Text-book principles might have been satisfied by making the French responsible for both sides of the Somme valley up to the northern edge of the river meadows. This line was clearly marked both on the map and on the ground by the road running through Vaux, Curlu and Hem. The supporting French artillery could have been on the heights of the southern bank.²

¹ See page 165.

² On the 8th August 1918, in the victorious attack of the Fourth Army, the main course of the Somme was the boundary between the Australian and III. Corps of that Army.

On the 5th June the Fourth Army was warned that June. the divisions in G.H.Q. reserve might be sent to the Second Army, and that General Gough might not take command of the right wing (XIII. and XV. Corps) as arranged; he was, nevertheless, to continue to watch events and be prepared to take over command in the area in which these corps would be engaged on the Somme. But on the same day the Commander-in-Chief ordered a rough draft of instructions to be prepared for the transfer of General Gough with certain divisions and a number of heavy batteries to the Second Army should the attack of the Fourth Army, if carried out, "meet with very considerable opposition and involve it in hard fighting before it got to the first objectives". In this event, as he told General Rawlinson, he might decide to go no further on the Somme, but carry out the offensive against Messines: he hoped, however, that this would not occur, and the Fourth Army must be prepared to go on. It was a case of Somme or Messines: unfortunately the resources of men and material, particularly of ammunition, did not admit of both operations simultaneously.

On the 11th June came General Joffre's request that the assault (formally fixed on the 3rd June for the 1st July) might be ante-dated to the 25th, the wire-cutting beginning on the 20th. General Rawlinson, after consulting his corps commanders, thought it might be done, although all the additional heavy batteries and five of the divisions for the battle had not yet arrived, the last of the guns not being due until the 16th, and the last division not until the 19th. A provisional programme based on the new date was issued, and the dumping of ammunition hurried up, which greatly upset the railway, road transport and labour arrangements. Finally it was settled that the assault should be on the 29th June (the bombardment beginning on the 24th). On the 20th and 23rd General Foch made requests that there should be a two days' postponement, but these were resisted. The time of attacks also led to discussion. General Foch wished it to be 9 A.M., General Rawlinson suggested 7 A.M.; as a compromise 7.30 A.M. was adopted and approved by Sir Douglas Haig, although the French twice made appeals to have the hour made later. On the 12th a conference was held at Fourth Army headquarters, at which General Rawlinson discussed final details and drew attention to the fact that the new "Summer Time" would begin at 11 P.M. on the 14th, when clocks

June. would be advanced one hour. He then announced the further stages of the attack after the line Montauban—Pozières—Serre, the first objective, should have been secured by the simultaneous attack of all five corps. The first would be to extend the left defensive flank from Miraumont to Martinpuich (3 miles north of Montauban), and at the same time advance the new line eastwards from the line Montauban—Martinpuich. The next task would be to attack eastwards from this line and secure the Ginchy—Bazentin le Grand plateau. An operation order embodying these decisions was issued on the 14th June,¹ the artillery programme having been sent out earlier.²

On the 16th the Commander-in-Chief in a General Staff letter³ definitely put on paper his views as to the further course of the battle after the capture of the whole or part of the first objective. These may have been the result of increasing optimism, but in any case it was proper for the commander of large forces under modern conditions to make them known to his subordinates. Should the enemy's resistance break down, the advance was to be "pressed eastwards far enough to enable our cavalry to push through into the open country beyond the enemy's prepared lines of defence. Our object then will be to turn northwards,⁴ taking the enemy's lines in flank and reverse, the bulk of the cavalry operating on the outer flank of this movement, whilst suitable detachments [of all arms] should be detailed to cover the movement from any offensive of the enemy from the east. For the latter purpose, the line Bapaume—high ground east of Mory—high ground west of Croisilles—Monchy le Preux is of tactical importance."

Should the proposed advance eastwards by the cavalry prove inadvisable, Sir Douglas Haig considered that it would be most profitable to transfer the main effort rapidly to the Second Army front, leaving sufficient force on the Fourth Army front to secure any ground gained, beat off counter-attacks, and keep the enemy fully employed.

On the 20th June the Commander-in-Chief addressed a letter to General Rawlinson⁵ on the desirability of shortening the bombardment to three days, as he was afraid that

¹ This operation order is given in Chapter XII.

² See Chapter XII.

³ Appendix 13.

⁴ In which the Third Army, according to an order issued on this day, was to assist by an attack of two divisions from Fичеux—Blairville, about 5 miles south of Arras.

⁵ Appendix 14.

neither guns nor ammunition would hold out ; but nothing came of this, and on the 21st, discussing the matter verbally, he amplified the instructions contained in his letter of the 16th, recording his views in a written Note.¹ Premising that, according to Intelligence information, which proved very nearly accurate, there were only 32 German battalions on the main front of attack of the Fourth Army, and during the first six days only some 65 additional battalions could be made available,² there was, he said, good prospect that prompt development of success might give great results. Dropping the idea of placing General Gough in charge of the right wing, he put the 1st and 3rd Cavalry Divisions which were in G.H.Q. reserve, with General Gough to command them, at the disposal of the G.O.C. Fourth Army, and directed that every effort should be made to push the cavalry through to seize Bapaume and establish itself in good positions in that neighbourhood. Supporting troops should follow and relieve the cavalry for co-operation in the movement northward, which the Fourth Army was to organize, under General Gough's command : the Third Army would probably be reinforced to co-operate.

Accordingly, the 1st and 3rd Cavalry and 2nd Indian Cavalry Divisions were ordered to be assembled by zero hour, with their front five miles west of Albert, around Buire, Bresle and Bonny—La Neuville ; the 12th and 25th Divisions of G.H.Q. reserve, 10 and 7 miles behind the fronts of the III. and X. Corps respectively ; and the II. Corps (23rd and 38th Divisions) behind them again, with headquarters at Villers Bocage, 14 miles west of Albert. The cavalry divisions were at the same time warned that they might be required either to move forward or remain in their position of assembly and later return to their earlier billets behind Amiens. If the cavalry advanced, the 12th and 25th Divisions were to follow, and the II. Corps should move up to the area vacated by them.

General Rawlinson made known the Commander-in-Chief's instructions to his corps commanders at his final conference on the 22nd June. Having done so he proceeded to discuss what action the Germans might take, suggesting that should their local reserves not have been used up during the first advance of the Fourth Army, they

¹ Appendix 15.

² The actual numbers appear to have been 34 battalions on the front of attack, whilst 54 were brought up 1st to 6th July. (Somme-Nord, i.)

June. might be employed to counter-attack, when it would be best to hold on and defeat the counter-attacks, and then proceed without delay to the second objective; each corps would have a division to relieve tired troops, but he hoped that it would not be necessary to use them. He then touched on the many things to be done in case of success: such as getting up ammunition and supplies; moving forward guns; joining up the British roads and railways to the German communications; reorganizing existing railheads should it be possible to use Albert as one; pulling out divisions to support the cavalry and make the movement northwards, during which the two right corps would be on the defensive. Finally, he reminded his commanders they would be working with New Army troops lacking the discipline, training and traditions of the men they had led at the beginning of the war, and it was of the highest importance to impress on all that reorganization of units must take place directly a position was gained.

NOTE

THE ROYAL FLYING CORPS¹

For the purposes of strategical reconnaissance, organized offensive against the enemy air service, and distant bombing of communications, G.H.Q. brought into the battle area the 9th (Headquarter) Wing (Nos. 21, 27, and 60 Squadrons and two flights of No. 70) of the Royal Flying Corps. The units placed at the disposal of the Fourth Army for the battle were two squadrons of the 14th (Army) Wing, with Army headquarters, and four squadrons of the 3rd Wing and No. 1 Kite Balloon Squadron, comprising five balloon sections, divided among the five corps. Both these wings belonged to the IV. Brigade (Br.-General E. B. Ashmore). Three additional balloon sections, with observers specially trained in tactical duties, were allotted to the XV., X. and VIII. Corps.

The squadrons (Nos. 3, 4, 9 and 15) allotted to corps were assigned to the duties of counter-battery work (30 aeroplanes); contact patrols (13 aeroplanes); trench flights (close reconnaissance) and destructive bombardment (16 aeroplanes); and special missions (destruction of kite balloons, close photography, etc.), and reserve (9 aeroplanes).

For similar purposes, to the VII. Corps of the Third Army, which was to attack Gommecourt, were allotted No. 8 Squadron (18 aeroplanes) and No. 5 Kite Balloon Section. Including these, the total concentration of the R.F.C. for the battle was 185 aeroplanes. The total air strength of the German Second Army astride the Somme was 129 aeroplanes, and some of these were opposed to the French

¹ Full details of the order of battle of the R.F.C. and its work at the Somme will be found in the official history, "The War in the Air" Vol. II. p. 195, *et seq.*

south of the Somme. In the opening phase of the battle therefore June. the German air service was considerably outnumbered, and remained so until the middle of July.

Immediate protection of the corps aeroplanes in the battle was to be afforded by continuous line patrolling by pairs of aeroplanes and periodic offensive sweeps by formations of the two Army squadrons, the 19 de Havillands of No. 24 Squadron being used for the latter duty.

A bombing offensive was to be carried out against the rear lines of rail communication, the main bombing to begin on the day of the infantry assault, as it was expected that no enemy reinforcements would be moved by rail until after that date and that any earlier destruction of lines might be made good in time. There were, in addition, to be widespread attacks on troops, transport columns, dumps and headquarters in the immediate battle area, and special raids against the great ammunition depots at Mons, Namur, and the St. Sauveur Station at Lille.

On the 27th June, Major-General Trenchard, commanding the Royal Flying Corps, established his advanced headquarters at Fienvillers (20 miles W.N.W. of Albert).

CHAPTER X

THE SOMME

ADMINISTRATIVE AND MATERIAL PREPARATIONS

(Map 2 ; Sketch 17)

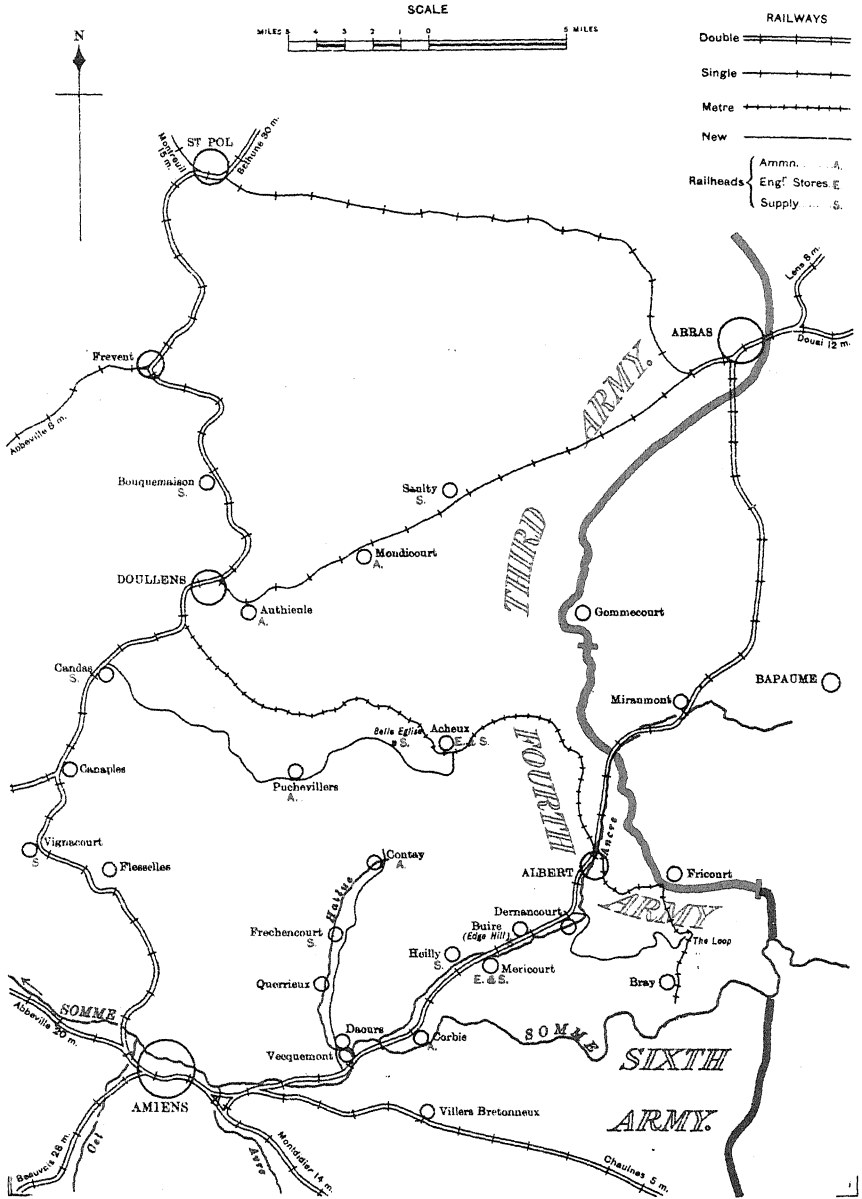
ON the 2nd February 1916 there had been issued from G.H.Q., over the signature of Lieut.-General L. E. Kiggell, the Chief of the General Staff, a lengthy memorandum entitled "Preparatory Measures to be taken in Armies and Corps "before undertaking Offensive Operations on a Large "Scale".¹ No longer could the Armies be launched to the attack by simple instructions of a couple of pages as they had been at Loos in 1915,² still less by an order of six paragraphs which engaged the British Expeditionary Force at the Marne in 1914.³ The memorandum comprised 32 sections and 57 pages, with appendices on "The use of gas", "Bridging preparations", and "Divisional preparations", and contained a mixture of general principles and detailed instructions. The section headings give a good idea of some of the more important items which required attention in mounting an attack. They were: Reconnaissance, Intelligence, Organization of Trenches for Attack, Artillery Preparation, Gas, Observing Posts, Command Posts, Signal Service, Machine Guns, Infantry, Cavalry, R.E. Arrangements, Employment of Aircraft and Anti-Aircraft Guns, Forming-up Places for Reserves, Ammunition Supplies, Water, Advanced Depots of Stores, Depots in Trenches, Communications (roads, railways, canals), Road Control, Police Arrangements, Transport, Railway Arrangements, Medical Arrangements, Veterinary Arrangements, Remounts, Collection of Stores, Casualties, Billeting, Schemes for Reinforcement, Clearing Battlefield, and Re-equipping after Fighting.

¹ Appendix 16.

² "1915" Vol. II. pp. 448-50.

³ "1914" Vol. I. p. 406.

THE SOMME, 1916. THE RAILWAYS BEHIND THE BRITISH FRONT.



When the front and general nature of the attack had been fixed, the preparations, the memorandum said, fell into three grand divisions. First, Administrative: the improvement of the communications; the provision of huts and water; the formation of dumps of ammunition, supplies and stores; medical, veterinary and police matters. Secondly, General Staff: the construction of battery positions, observation and command posts; general improvement of the trenches and their appurtenances for the battle, including signal communications; and the training and instruction of the troops. Thirdly, Measures for reorganization after the fighting.

The preparations required were of the same character as those undertaken in earlier wars for the siege of a fortress, *e.g.* Paris in 1870, from the moment that the investment had been completed and the enemy driven into his lines. There was, however, this important difference: in a siege, unless one part of the defences offered an obvious objective on account of its weakness, the front of attack was usually selected by reason of the facilities afforded by railways and roads for communications, and by villages for the accommodation of the troops; in 1916 the front was settled beforehand, and, although almost any part of the Arras—Ypres front was better furnished with villages, railways and roads, the Somme area of agricultural downland was, as we have seen, forced on the British by the action of General Joffre. The front having thus been arbitrarily settled, the communications had to be extended and improved and measures taken to provide facilities, including water, for at least seven weeks' lodging of over 400,000 men and 100,000 horses. The railways were inadequate; the roads in the area behind the front where the troops would have to be concentrated, were few and indifferent, and owing to enemy observation there was practically only one near the front (the Contay — Hedauville — Englebelmer — Martinsart — Aveluy road) which could be used both by day and by night. The accommodation in the scattered villages had to be supplemented by bunks put up in barns and larger rooms and huts; although, if the weather was good, the troops could, if necessary, bivouac. Except for a small length of stream between Vadencourt and Contay (the upper waters of the Hallue), and on the right the Somme and the Ancre, there was no surface water and no other water readily available in the area, except the few village wells. To obtain more in this chalk country meant sinking deep

bore-holes, although in the valleys water could be obtained by relatively shallow bores.

An administrative conference¹ was held at Fourth Army headquarters early in March, and followed by many others, at which the officers of the A. and Q. Staffs and the Royal Engineers Staff of the Army² and of the administrative services and departments of the various corps were present. The corps in their turn had conferences which divisional staff officers attended. At the first conference the railway situation and its possible improvement were described by the Assistant Director of Railway Transport, and railheads suggested. It was agreed that the most important matters to be taken in hand were water supply and roads, both R.E. responsibilities. Labour, as ever, was the first difficulty, and it had to be provided mainly by the troops, G.H.Q. being able to allot to the Fourth Army only two R.E. labour battalions—originally intended for defence works—and three infantry labour battalions, practically all of whose men were employed on roads.³

*Railways*⁴

Sketch The railways serving the Somme front had from the first
17. been insufficient, and in view of the battle required much improvement and extension. Between the river and Arras, a distance of 25 miles, only two lines approached the front, converging on Albert, which lay within easy range of the enemy's guns. These were the double line from Amiens, which beyond Albert crossed into the German position, and the single metre-gauge line Doullens—Albert. At the northern end two single lines from Doullens and St. Pol converged on Arras. Lateral communication was

¹ The D.A.Q.M.G. of the Fourth Army was Major-General H. C. Sutton; A.A.G., Lieut.-Colonel J. Whitehead; A.Q.M.G., Lieut.-Colonel R. S. May; D.D. of Signals, Colonel R. G. Earle; D.D. Supplies and Transport, Colonel F. M. Wilson; D.M.S. Surgeon-General M. W. O'Keeffe; D.D. Ordnance Services, Colonel H. S. Bush.

² The Chief Engineer of the Fourth Army was Major-General R. U. H. Buckland. The C.E.'s of the five corps, III., VIII., X., XIII., XV., were Br.-Generals A. L. Schreiber, G. S. Cartwright, J. A. S. Tulloch, S. H. Powell, and P. G. Grant.

³ In addition to the three field companies R.E. with each division, and the field squadron R.E. with each cavalry division, there were, before the 1st July 1916, in the Fourth Army, 16 Army Troops companies R.E., and the 2nd Siege Company (Royal Anglesey, Special Reserve) equal to two A.T. Companies, all except one allotted to corps; and 4 tunnelling companies R.E. These last required infantry working parties to assist them, and could provide no labour for general purposes until the fighting began.

⁴ A special Railway volume is in course of compilation, so only an outline of the arrangements is given here.

provided by the great main line Amiens—Abbeville—Calais and the line Amiens—Doullens—St. Pol—Béthune, single beyond St. Pol ; but this last had two disadvantages : it was hilly in some sections and only twenty miles behind the front. Besides having to supply military requirements these lateral lines had to carry heavy traffic of coal from the north for the railways, munition factories and city of Paris, amounting to 50 trains a day.¹ It was calculated that the Fourth Army would need 11 trains daily to carry supplies ; 14 trains for ammunition, carrying a total of 5,250 tons ; 6 trains for reinforcements, remounts and stores : 31 trains in all, and the total requirements of the Third Army were reckoned at 28. These numbers might be expected to rise in times of stress, when there were many wounded, to 70 and 58 trains respectively. To reach these latter figures it was agreed to cut out the carrying of stone for roads, a decision which was to have dire consequences in the later stages of the battle.

The necessity of better north and south communication had been realised as early as October 1914, when the Allied troops reached Flanders, and during 1915 the Amiens—Béthune line, originally single, had been doubled as far as St. Pol. It had been proposed to convert the Doullens—Albert metre-gauge to standard, but it was eventually decided on 1st April 1916 to build a new 17-mile standard gauge line from Candas (on the railway about 4 miles south of Doullens) to Acheux. This provided four or five new railheads for the battle front. Another new standard gauge 10-mile line, completed towards the end of May, was constructed from Daours, on the Amiens—Albert line, northward up the valley of the Hallue to Contay (8 miles west of Albert) where a large ammunition dump was formed. This line gave three more railheads. A “spur” line (siding for a special purpose such as guns on railway trucks or ammunition supply of batteries) which left the main line at Dernancourt, one station short of Albert, constructed in November 1915, was at the request

¹ The number of trains per day required by the British depended on the strength of the Fourth Army, not only in divisions, but Army and corps troops (particularly corps artillery), the reinforcements arriving, the number of casualties, and the amount of railway and road construction in hand. The estimate was based, counting all in, on a minimum of between $1\frac{1}{2}$ and $1\frac{3}{4}$ trains a day per division, and a maximum of over 4 ; but of this the purely divisional part amounted only to one-half a train, which hardly varied throughout the war. The figures for the trains actually run during the battle were : 1st week, $1\frac{3}{4}$, next period, 2, and later in the battle, $2\frac{1}{4}$ per day per division.

of the Fourth Army extended eastward, with gradients up to 1 in 45, to serve gun positions on the high ground south-east of Albert. A number of additional sidings and improvements to stations were also undertaken. Vignacourt, on the Amiens—St. Pol line, was enlarged to deal with the supply of two divisions instead of one, with an ammunition depot east of it at Flesselles; a supply siding (“Edge Hill”) was laid out near Buire (2 stations short of Albert on the Amiens line), and the Dernancourt line was further extended to “The Loop” east of the Bray—Fricourt road. When these works had been completed there remained only 10 miles of railway track in store.

The French undertook, should the first assault prove successful, to put Albert station in order, and repair the main line Albert—Miraucourt and the metre-gauge line Albert—Fricourt—Bray.

The distribution of rail-carried material was based on the assumption that M.T. columns could work to a distance of 25 miles from railhead, and horse transport 7 miles further. On this supposition the same railheads should serve until the fighting troops were 32 miles or thereabouts ahead of them.¹ On the 1st July the railheads in use for the Fourth Army were :

Supplies : Mericourt, Heilly (both on the Amiens—Albert line), Frehencourt (on the Hallue line), Edge Hill, Belle Eglise, and Acheux.

Ammunition : Puchevillers, Corbie, Authuille and Contay. (Mericourt, Heilly and others were also used in the preparatory period.)

Engineer Stores : Mericourt and Acheux.

Ambulance Trains : Vecquemont (6 miles east of Amiens).

Third Army (for the VII. Corps engaged in the battle) :

Supplies : Bouquemaision and Saulty.

Ammunition : Mondicourt.

Engineer Stores : Acheux.

Ambulance Trains : Doullens.

Tramways

There were in June 1916 no light railway or “foreway” tramway systems, as there were later. Before the Somme the definite policy of the Q.M.G. was to concentrate all

¹ On the 11th November 1918, the “Armistice Line” was from 20 to 30 miles in front of railheads.

efforts on standard gauge railways, and to push the rail-heads forward within reach of divisional horse transport, thus eliminating mechanical transport and saving petrol. Only in cases where their necessity could be clearly demonstrated were 60-cm. lines to be laid. Use was made, however, during the dumping period, of the existing light railway from Acheux to Albert and its spurs and of a field 60-cm. system taken over from the French when they were relieved. Stock was ordered for the latter and for a strictly limited extension of it.¹

In anticipation that the war would soon again become one of movement and the zone devastated by trench warfare would be rapidly passed over, it was considered wasteful to embark on an extensive system of light railways which might soon be left far in the rear.

Demands, however, were made for metre-gauge track and rolling-stock for use later in Belgium; but the Ministry of Munitions was unable to lay hands on suitable engines and trucks or to manufacture any before the battle.² The lack of a reserve of metre and of 60-cm. stock, when the wear and tear of intensive traffic without metal to make it good had destroyed the roads in the Somme area, and the weather became bad and made traffic off the roads impossible, led to the gravest difficulties in supplying the troops, and hindered, if it did not actually prevent, the further advance of the Allies.

Water Supply

Not only had the existing water supply arrangements—for drinking purposes, washing, baths and laundry work—to be improved, but provision had to be made for the large number of divisions and other troops, including cavalry divisions, which would soon be arriving.³ In

¹ One line ran from Martinsart through Aveluy Wood to the north-east corner of Thiepvall Wood; it was extended a thousand yards (see Map 2). Another ran through the same wood to Authuille, and a branch was constructed westward from Martinsart through the wood of that name. Spurs were also made to battery positions from the Acheux—Albert and the Dernancourt—The Loop lines.

² There was metre-gauge stock in India and East Africa and some being made in England for the Siamese railways; but it was too heavy for the light French and Belgian lines, which had sharp curves, and were laid on pavé road with special grooved rails.

³ On the staff of the Chief Engineer of the Fourth Army was a "Water Supply Officer", with three assistants, and each corps had a "Water Officer". For technical details of water supply, see "Work of the R.E. in the European War 1914-19: Water Supply—France", and Major-General Sir Reginald Buckland's "Experiences at Fourth Army Headquarters, Organization and Work of the R.E."

anticipation of the operations, special measures had been taken by the Engineer-in-Chief for the collection of a very large quantity of water-supply plant and equipment by purchase of what was available and by order of more from the manufactories in England. It included pumping sets of every description—even powerful steam fire engines obtained from the London County Council, which on occasions proved of exceptional value. A few boring plants were also successfully employed. Two water-supply barges, equipped with purification plant and large pumps for forcing the filtered water through pipes, were sent to the Somme. These and other sources supplied large systems of water distribution during concentration. A shop for the repair of pumps was established at Varennes near Acheux. Elaborate arrangements were made for the extension during the advance of the systems of 4-inch and 6-inch piping, which were laid, either on the ground or in trenches, close up to the front line, and for the provision of “water-points”;¹ also for the establishment, as new areas were conquered, of similar pipe lines based on the Somme, on existing wells, and on new bore holes. Mobile pumping sets, on lorries, were prepared to aid in the supply of water.

For the distribution of water to the troops, the normal regimental equipment of units was largely augmented by the allotment to each corps of 80 watercarts or G.S. wagons carrying 200-gallon tanks, and the provision of a water tank column, consisting of 192 three-ton and 111 one-ton lorries, carrying 550- and 135-gallon tanks, and equipped with apparatus for the purification of surface water or water in shallow wells.

Before the beginning of the operations the efficiency of the water tank column was thoroughly tested, and the water-supply personnel trained in the laying and maintenance of pipe-lines; whilst steel “bandages” were prepared for the rapid repair of pipes damaged by gun-fire.

Roads

The roads in the area were nominally in charge of the French “Ingénieur en chef des Ponts et Chaussées, Amiens”, but for war purposes under an Anglo-French “Sous Commandement d’Armée du réseau routier”, of which the

¹ A normal water-point consisted in the first instance of 2,000-gallon waterproof canvas tanks on the ground; and later of galvanized iron tanks raised 12 feet above the ground on scaffolding. Hose was provided for filling vehicles, and pipes, with taps, for the simultaneous filling of water bottles.

Ingénieur en Chef and the Chief Engineer of the Fourth Army were members, with a British officer and a French officer as joint secretaries. The main roads were not constructed or suited for heavy or intensive traffic; the thickness of metal was only about three inches on a foundation of chalk, and broke up if the surface was cut and water reached the chalk. The side roads were little better than tracks. To define responsibility, a line was drawn running approximately through corps headquarters, in front of which corps carried out repairs, and in rear, the "Sous Commission", which had at its disposal two companies of an R.E. labour battalion, one infantry labour company, and two companies of French "cantonniers". Each corps had two companies of an infantry labour battalion. The lack of stone for repairs was the great problem. In the whole Fourth Army area there was only one quarry, north-east of Corbie, and this yielded poor metal with a lot of clay intermixed. Other stone was supplied by a joint "Commission Centrale" at G.H.Q.; but the supply for the British was always behind requirements, as neither sufficient stone¹ nor trucks to carry it were available, and the roads could not be "used less, or closed", as an eminent civilian road-expert from home suggested. Repairs had therefore to be carried out as traffic permitted, the road gangs, which worked amidst the vehicles and horses, mending the worst places during halts and blocks.² Special attention had to be paid to the roads leading to the dumps and railheads; but, owing to the lack of stone, little more could be done than "darn" the worst portions, fill pot-holes and improve drainage. To make roads fit for continuous military traffic was quite beyond the available labour, metal and plant—there was a shortage of steam-rollers. In addition to upkeep, a great deal of work had also to be done in repairing and widening bridges, and widening

¹ The stone for roads in the north of France was in peace time obtained from Belgium; in 1916 it had to be brought from areas south of the Somme, supplemented by small amounts of granite from Jersey and Cornwall; but large demands on the railways for other services, and the shortage of ships, made it necessary at the end of 1916 to develop the quarries in the North, Marquise, near Boulogne, being the most important.

² Log and sleeper roads over bad places were not in general use until September 1916; plank roads, for which 2½-inch and 3-inch planks were required, from lack of timber did not become general until October, although one was made through Fricourt by the 74th Field Company R.E. and the 7/York & Lancaster (Pioneers) 4th-6th July. Planks practically solved the problem of forward roads, as they could be laid at a great pace, and if the road suffered from bombardment repairs could be easily and quickly executed.

roads, or at any rate in providing passing places ; in constructing causeways over the Ancre, laying out tracks, and marking and preparing fords ; in making approaches to the new camps, and metalling halting places at the rail-heads, in the station yards, and alongside the new sidings (which were run parallel to roads with the space between the two metalled).

It was intended to form forward dumps of road metal, but the shortage prevented this from being done, and only a few small heaps for repairs on the worst stretches in use could be provided. During the preliminary period, although the condition of the roads gave great anxiety, there was no actual breakdown, and it was hoped that the success of the Allies in the offensive would soon carry them out of the zone devastated by artillery fire and cut up by battle traffic on to roads kept in good repair by the enemy. During the first fortnight of the battle the roads just managed to hold out, but after that the consignments of stone received were a very small fraction of the essential minimum, and, both transport and labour being difficult to obtain, the thin crust of road metal was cut through by the heavy traffic, the rain penetrated to the chalk, the surface became a mass of liquid mud without bottom, and a "night-mare" situation arose.

Huts

Extra accommodation for the troops was provided by tents and by erecting huts of wooden framework covered by tarpaulin, enough to "close-billet"¹ at least 15,000 men per division being required. In some cases the shelter provided was no more than tarpaulin spread over S.A. ammunition boxes. The huts were grouped round villages and woods, six or seven of these localities being allotted to each division.² Each of these little settlements had to be given a water supply, either led to it, or pumped from springs, wells and streams. A permanent "town major", with a small staff, was allotted to each divisional or other area.

Divisions were made responsible for sanitation and

¹ This means to provide the men with just space enough to lie down, 6 feet by 2 feet.

² Thus for one division the accommodation in five villages, with populations of 516, 418, 566, 101 and 519, was increased by hutting to take respectively 200 officers and 5,000 other ranks ; 200 and 5,000 ; 160 and 4,000 ; 20 and 500 ; and 80 and 2,000 ; and huts for one brigade were put up in and near some woods.

“cleaning up” in their areas, but, as in the course of operations troops were constantly passing through, often arriving and departing in the night, billets were not always left clean, and it became necessary to put some men permanently at the disposal of the town major for the purpose of tidying up. For the first time “cages” for prisoners were prepared.

Timber

The timber required for so many purposes was obtained partly by purchase from French firms in Amiens and partly by the troops felling what was required in the local woods and in the Forest of Ailly, west of Amiens. There were plenty of saws and small workshops in the area; these were purchased or requisitioned, and from a single shed with one circular saw a great workshop would quickly arise. A good deal of timber cut in the Somme valley was sent up by canal to the neighbourhood of Bray.

*Ammunition Dumps*¹

By an order dated 1st January 1916 the Armies were given control of ammunition when it reached the railheads. The first measure taken therefore was the installation of dumps at these places. They had to be near to, but off, the metalled roads, and this necessitated log roads for the approaches and standings, as otherwise ammunition wagons would have stuck in the mud. At this period “boxed ammunition”, that is to say ammunition packed in boxes for field guns and howitzers, S.A.A., grenades, Very lights and fireworks (for signalling), was stored in the open, with tarpaulins over it, whilst heavy ammunition was, when possible, placed in low sheds, on the roofs of which filled sandbags were laid as protection and covered with branches or other simple camouflage material. The accident at the L. of C. Ammunition Depot at Quévilly, near Rouen, demonstrated the danger of having large accumulations of ammunition near railway centres, and it was early decided to push ammunition further forward, keeping only a small quantity in the railhead dumps, unless there was no transport to get it away or the forward dumps were full.

The distribution of the ammunition was organized as follows: in addition to the established number of rounds with a battery and in the various ammunition columns

¹ For the organization of ammunition supply on the Lines of Communication, see page 114.

(this was, to give specimen figures, in the case of 18-pdr., 354 per gun, the 6-inch howitzer, 200, and the 8-inch howitzer, 90) there were to be dumps near the guns (1,000 rounds per 18-pdr., 650 per 6-inch howitzer, 500 per 8-inch) and behind them divisional and corps dumps (the former with 250 rounds per 18-pdr., the latter with 200 per 6-inch howitzer, but none for 8-inch and higher calibres).

The first ammunition trains, seven a day,¹ for filling the dumps began to arrive on the 8th June; on the 15th, in view of the bombardment possibly beginning on the 20th, the number of trains per day was increased to ten. Nearly all the batteries being in position, the gun teams were handed over to the divisional ammunition columns, which thus had unlimited horses for work. By the 20th the removal of the ammunition and the forward dumping had been practically completed and stocks arriving were retained at the railheads. In the case of the dumps fed by the Dernancourt—The Loop line, there were 60-cm. lines from the railway to the dumps, but in most other cases the ammunition was carried forward by lorry or wagon.

Rations

The scale on which rations and similar supplies were accumulated was five days' rations with the unit and three in brigade or divisional dumps; but to save labour of distribution, six days' were dumped with gun detachments and ten with guards and small posts. Water was stored in tanks, barrels and petrol tins. Under the heading "Washing water", the instructions said, "This must be "reduced to a minimum".

Divisional Dumps

From the point of view of a division, one of the great difficulties of an attack lay in passing up the many requirements of the troops before and during the fighting. The heavy enemy shelling of communication trenches which it was certain would be the response to the beginning of the assault rendered it necessary for the troops to carry with them as many stores as they could. These included S.A.A., grenades and sandbags, in addition to reserve rations and water.

¹ Consigned to Authuille, 1 train, Puchevillers, 2, Contay, 1, Corbie, 1 and Mericourt, 2; but the trucks for the last were divided there and sent on to Edgehill, Méaulte, and the Dernancourt—The Loop line. In the "ten-train-a-day" period the extra trains went to Puchevillers, Contay and Heilly.

To place entire reliance on the carrying parties, which were to follow the fighting waves, to replenish the first supply was too hazardous; for every individual casualty in these parties meant the loss in the mud of an appreciable amount of valuable war material. Hence, to ensure maintenance in spite of losses, in every divisional area advanced and reserve dumps of stores of all natures were accumulated, concealed by any means then possible in the forward zones. The position of these dumps was clearly notified in divisional orders.

Advanced dumps were formed by and allotted to infantry brigades, and the organization of the despatch of stores from them to the front line rested with the brigade staffs. For instance by the 1st July, in one division, a main divisional dump of trench-mortar ammunition, Very lights, grenades and S.A.A., and a reserve of smoke helmets, rations and water tins, was formed in a valley $2\frac{1}{4}$ miles behind the front; and a forward dump three-quarters of a mile nearer the line in a farm building. Two dumps of R.E. stores were organized 500 yards behind the front, one in a wood, the other in the ruins of a chateau. From the divisional dumps the stores were moved, as required, by horse transport of the divisional train as far forward as possible, and thence carried up to the advanced dumps of the line by parties specially detailed.

The categories of war material most trying from the point of view of the troops to carry up to the front were the Ordnance and R.E. stores necessary for consolidation (iron pickets, barbed wire, sandbags in bales and tools); but their importance also ranked high and no efforts were spared to get them up.

Private effects of value to the troops, and packs and greatcoats, were stored well behind the line in charge of one man per battalion.

*Medical*¹

In the battle area of the Third and Fourth Armies were formed eight groups each of two casualty clearing stations (C.C.S.).² They were mostly in tents, but the R.E. provided

¹ The medical organization is given at length in the official history, "Medical Services. General History" Vol. III.

² The duties of a C.C.S. were:

- (a) To retain all serious cases unfit to travel or requiring operation before being evacuated;
- (b) to retain all slight cases likely to be fit for duty in a short period;
- (c) to evacuate all others.

a certain number of huts and the R.A.M.C. turned to and erected others themselves. The C.C.S. were situated at Heilly, Corbie, Contay, Puchevillers, Vecquemont and Doullens for the Fourth Army, and Doullens and Warlin-court for the Third Army; and, in addition, the Fourth Army had single C.C.S. at Gezaincourt, Beauval, St. Ouen and Amiens. All except Doullens, Beauval and Amiens cleared direct to ambulance trains, sometimes using wooden trolley lines, but not motor ambulance wagons. During the first week of the battle the groups at Heilly and Vecquemont were increased from two to three C.C.S. There were two advanced operating centres at Warloy and Authie, some six miles behind the front, and the Heilly station also dealt with urgent operations (abdominal wounds). "Severely wounded", and "lightly wounded" were separated and carried to specified stations. Motor ambulances and convoys were chiefly employed for carrying the severely wounded to the clearing stations; lorries, charabancs and buses were used for the lightly wounded. For "walking wounded", special trenches, tracks and roads were assigned and duly signboarded.

The field ambulances of the divisions organized on the front 19 main dressing stations in houses, ruins of houses, and such cover as could be found, reinforced by sandbags; 39 advanced dressing stations, usually in dug-outs; and 9 walking wounded collecting stations. In the period 6 A.M. 1st July to 6 A.M. 2nd July, 26,675 wounded were collected by the field ambulances.¹ Ahead of the field ambulance stations worked the regimental aid posts with their own stretcher-bearers, reinforced by the bearer subdivisions of the field ambulances.

Traffic Control

All the establishments which have been mentioned and other minor organizations such as brigade and divisional ammunition dumps and refilling points were provided with signboards and direction posts; maps, supplemented by indicators on the roads, were issued giving the direction which traffic must take. The policy was laid down and the arrangements were made by the Quartermaster-General's branch of the Staff, but the control was carried out by the military police under the A.P.M.'s. In the villages and

¹ Of the wounds throughout the war there were inflicted by shell or trench mortar 58·51 per cent; by rifle or machine-gun bullet 38·98; by bombs or grenades 2·19; and by bayonet ·82.

towns control posts were established at the entrances and exits, and also at cross roads, while mounted men constantly patrolled the roads. A forward examining line was fixed and inhabitants living east of this were warned through the "maires" that if they wished to leave their homes, they must do so within 48 hours after the beginning of the bombardment, and move by daylight; if they remained, they must have food supplies for ten days; if subsequently they wished to leave they would not be permitted to use transport; and after the second day of the bombardment no civilian traffic would be allowed to circulate.

Such precautions were absolutely necessary. The duties thrown on the traffic control staff were far heavier than those in a great city. During June, and especially as the 20th approached, the area behind the front was a scene of frantic endeavour to be ready; on every road were "caterpillars" dragging big guns and howitzers; convoys of motor lorries and horsed wagons carrying ammunition, engineer stores and supplies; pontoon wagons loaded with timber; and carts filled with every imaginable kind of article used for warfare: sandbags, barbed wire, pickets, picks and shovels, grenades, flares. Around the railway stations vehicles swarmed like flies. The traffic arrangements were so good that, although there were often blocks owing to breakdowns, and delays due to the bad state of the roads, the general circulation was never seriously impeded; but it was sometimes slowed down, and transport was long hours on the road. The immense traffic did not grow less as the battle proceeded.¹

¹ A census of traffic, the only one which can be found, taken by the Traffic Control at Fricourt cemetery between 9.15 A.M. 21st July and 9 A.M. 22nd July, showed:

Troops	26,536
Guns	63
Gun carriages	13
Motor cars, light	568
Buses and light tenders	95
Motor cycles	617
Motor lorries	813
6-horse wagons	1,458
4-horse wagons	568
2-horse wagons	1,215
1-horse carts	515
Horses, riding	5,404
Motor ambulances	330
Cycles	1,043
Caterpillars	10
Machine guns	8

From 10 P.M. to 4 A.M. goggles had to be worn on account of "tear gas", and this, combined with darkness, prevented the complete counting of infantry transport and ammunition columns.

Field Works, Mining and Signals

As the divisions took over from the French, or arrived later to augment the British forces, their engineers and the pioneer battalions were at first fully employed in getting the defences in a satisfactory state in case the enemy should try to forestall the Allied offensive by attacking. The divisions were made responsible for the front system, the corps for the second line and for a third line which formed an arc round Amiens. The few working parties which could be obtained—the infantry out of the line were busy training—were mostly employed in shifting stores, repairing roads, felling trees in the local woods, and handling tree trunks (“pit-props”) for dug-outs, for the supply of timber was never sufficient. Very soon, however, all available labour had to be diverted to assist the infantry in the line in the work of preparation both for defence and attack, and the heavy artillery in the construction of emplacements. No deep (mined) dug-outs were constructed at this period in the front system, although the galleries of some of the mines were specially widened and heightened to accommodate troops before the assault. A few deep dug-outs were, however, made in the second line, or excavated in the chalk in the sides of hills by ordinary working parties under engineer supervision. The dug-outs required for divisional and brigade battle headquarters, observation posts, reserves, signals, forward magazines and stores, aid-posts and dressing stations, where not burrowed in the hill or cliff side, were still of the “cut and cover” description—an excavation was made and a roof supported on pit-props put over it. By this time the thickness of cover which heavy shell would penetrate was pretty well known.¹ From 2 feet 8 inches to three feet of the best reinforced concrete was considered shell-proof, and, at the other end of the scale, 24 feet of clay or loam. Between these limits cover could be obtained by use of a combination of materials. Those available were steel girders, rails, timber, fascines, stone, bricks, and concrete. The best arrangement evolved was to place on top a “bursting course” of some hard material (stone, concrete in bags, or bricks) in order to set the fuze in action and burst the shell; under it a shock absorber or “distributing

¹ In July 1916 the General Staff issued a pamphlet prepared by the Engineer-in-Chief on “Notes on Cover against Shell Fire”. Experiments had been made before the war at the Curragh, but the results had not been made known to the Army.

“course” of timber, rails or fascines; and, under all, strong supports. For this inner structure the so-called “elephant shelter” or a smaller pattern known as the “baby elephant”—both rather more than a semi-cylinder of corrugated steel—was found very effective, although as often as not it was used with only a layer of sandbags over it which merely gave shelter from shrapnel and pieces of shell. A typical roof, just sufficient proof against 5-9-inch shell, was six inches of earth and six inches of bricks or, better still, pavé blocks (bursting course); two feet of earth in sandbags, corrugated iron sheets, and a layer of rails or 10-inch timbers touching each other (distributing course); well supported on stout timber frames, strutted and “dogged” together.

Over observation posts and machine-gun emplacements such a thickness of cover could not be put, as it would have made them too conspicuous,—unless they were sheltered behind the ruins of a building. When this was not the case they were sometimes constructed of concrete. Usually they consisted of a frame of stout timbers, clamped together by steel “dogs”, with a roof of steel girders (a pattern six feet long was supplied from store) or rails, covered with sandbags and earth, leaving a narrow slit for observation. A certain number of steel domes, with loopholes, were available and used to cover the observation posts, and were, of course, far less conspicuous than built-up roofs. In order to avoid having the entrances—always a weak point—too near, tunnels to these posts were often dug from some convenient natural cover. Many of the field-gun emplacements, easily dug in the chalk, had overhead cover, proof against fragments and shrapnel, resting either on elephant shelters or on timber frames; but the heavier natures of guns stood mostly in the open, shelter for the detachments and cartridges being provided in dug-outs close by. To induce the enemy to scatter his fire numbers of dummy emplacements were made.

The construction of “jumping-off” and “assembly” trenches was as a rule carried out by the infantry. These were rows of deep trenches, covered over until the last moment with wire-netting and grass that they might escape aerial observation.

The tunnelling companies, besides mining as mentioned below, constructed a number of “Russian saps”, shallow tunnels, under No Man’s Land, and the field companies made a few more. Some were to be used merely for communication purposes, either as tunnels, or, by removing the

earth over them, as trenches ; others, after going a certain distance, were widened to form emplacements, to be opened out at the last moment for machine guns and trench mortars.¹

Map 2. The mining programme included eight large and eleven small mines : two large mines on the Mametz front, with nine small ones ; three at "The Tambour", opposite Fricourt ; two near La Boisselle, with two small ones ; and one near Beaumont Hamel. Lack of man-power prevented more being undertaken.

The signal preparations² involved an amount of work hitherto unheard of, as, on the 1st April, instructions were issued that every important cable line forward of divisional headquarters should be buried six feet deep, which ensured safety from 5·9-inch shell, whereas five feet did not. Over 7,000 wire miles of cable were buried besides large quantities laid over ground, and 43,000 miles of airline erected. In addition the aid of runners, wireless, pigeons and dogs, and every imaginable means for visual signalling (lamps, flags, discs, shutters, fans) were enlisted, and arrangements for communication with aeroplanes settled, so that the position of the most advanced infantry could be reported. The normal way was for the aviator to give a long blast on a Klaxon horn, which meant, "Where are 'you?' " and reply would be given by means of coloured flares.

It was not amid the comfort and safety of peace surroundings, with limited hours of labour under Trade Union rules, that all this immense amount of preliminary work was executed and the elaborate measures devised for carrying everything forward should the attack result in success. The work went on, harassed by occasional fire,³ which fell even beyond divisional headquarters, in all weathers, by night as well as by day, Sundays as well as weekdays ; no time was allowed for rest by day, and repose at night was only obtained in crowded billets. But there was never a complaint, for all were buoyed up by the hope that what they were doing brought the day of victory and peace nearer. From one form of danger the workers were protected by the 3rd Wing of the Royal Flying Corps ; for not

¹ They will be referred to again in the narrative of the operations.

² See "Work of the R.E. in the European War 1914-1919 : Signal Service, France".

³ The 12th Brigade (headquarters in Bertrancourt), over 5 miles behind the line, suffered specially : the battalions could not stay in their billets, and went each night into the fields to sleep.

an enemy aeroplane came over the Fourth Army zone either to bomb the billets, direct enemy fire, or observe or photograph the preparations : the only bombs which fell in the area were dropped in mistake by a machine of the Naval Air Service.

CHAPTER XI

THE SOMME

THE TACTICAL PREPARATIONS

THE main feature of the theory of the assault, the co-operation of infantry and artillery, was well understood by corps and divisional staffs, and no special instructions on the subject were issued by G.H.Q. To summarize it: towards the close of the bombardment, shortly before zero, the artillery would put down an intense barrage on the enemy front trenches; at zero this barrage would be lifted and dropped on the next trench, from which it would be lifted at a fixed time; and so on. Before each lift the infantry, under cover of the barrage, was to creep to within as close assaulting distance as the barrage permitted (put roughly at about one hundred yards from the enemy's front parapet) and, as soon as the barrage lifted, was to assault. Some regimental officers suggested that the infantry might creep even nearer to the barrage, as was done later on and in one instance on the 1st July. Forty yards was suggested instead of a hundred, but this did not receive official approval. It was, however, impressed on all, at conferences and other times, both by Sir Douglas Haig and General Rawlinson—to use the words of the latter at a conference of corps commanders—that “nothing could exist at the conclusion of the bombardment in the “area covered by it”, and the infantry would only have to walk over and take possession. Much the same had been said by the commander of the German Fifth Army before the assault on Verdun.

It was owing to this optimism that the problem of ousting the Germans from their labyrinth of trenches was regarded as one of assault only; and that this assault, if properly prepared was not a race for the parapet between the attackers crossing the last lap of No Man's Land and

the defenders clambering out of their dug-outs, but something which could be done at leisure.

In the General Staff Memorandum, "Preparatory Measures to be taken in Armies and Corps before undertaking Operations on a Large Scale", mentioned in the previous chapter, reference was made to only a few matters of tactical interest. It was suggested that artillery registration should be spread over a long period; that the Royal Engineers should be carefully husbanded, the field companies kept in hand for special work and not attached to brigades or frittered away by pushing sections forward with assaulting columns; that not more than twenty officers per battalion should go into action, the rest being held back; ¹ that some specially selected officers to replace casualties among the brigadiers should be assembled at each corps headquarters; and that the front line trenches from which the attack was to be delivered should be within two hundred yards of the enemy's front line.

Against this last suggestion considerable opposition was manifested by some divisional commanders, who protested that the digging of new trenches so close to the enemy's line would reveal too clearly that an assault was meditated. This particular objection could have been overcome by ordering trenches to be dug nearer the enemy where no assault would take place; but it would be too obvious that these were dummy trenches unless other signs of impending attack were simulated. G.H.Q., therefore, did not insist on the measure, and the Third and Fourth Army commanders left it to corps decision, with the result that some divisions did make advanced trenches, although not as close as two hundred yards to the enemy; but the majority trusted to being able to push out into No Man's Land just before zero, under cover of the barrage. These took no account of the probability that where No Man's Land was wide it might be impossible to dig communication trenches to any troops who did manage to get across.

On the 8th May, again over the signature of the Chief of the General Staff, G.H.Q. issued another memorandum on "Training of Divisions for Offensive Action".² It recalled that "officers and troops generally do not now possess that military knowledge arising from a long and high

¹ The second-in-command of the battalion, and of each company, was usually kept back, with 10 per cent of the other ranks, as a nucleus on which to rebuild the unit in case of severe casualties.

² Appendix 17.

“state of training which enables them to act promptly on
“sound lines in unexpected situations. They have become
“accustomed to deliberate action based on precise and
“detailed orders. Officers and men in action will usually
“do what they have been practised to do, or have been
“told to do in certain situations, and it is therefore the
“more necessary to ensure that a close understanding
“should exist among all ranks as to what action is to
“be taken in different situations that may arise in battle.”
In particular, leaders were to be given special exercises
in dealing with unexpected obstacles to further advance,
and in repelling and delivering local counter-attacks.
Such training, however, can only be given thoroughly
when there are sufficient qualified instructors and ample
leisure to prepare the schemes and carry them out on the
ground. Both these essential conditions were lacking.

It was definitely laid down that the attack was to be
carried out “in successive waves or lines, each line adding
“fresh impetus to the preceding one when this is checked,
“and carrying the whole forward to the objective”. It
was added that “a single line of men has usually failed,
“two lines have generally failed, but sometimes succeeded,
“three lines have generally succeeded, but sometimes
“failed, and four or more lines have generally succeeded”.
The procedure of pushing forward patrols in the first place,
instead of a more or less rigid line, was of course known :
it had been used in the earlier part of the war, and was
reported to have been used by the Germans at Verdun.
Such patrols can utilize cover for their advance, gain
ground and report on localities where machine-gun posts
exist and resistance is still being offered, so that they can
be subjected to further bombardment by guns specially
detailed for such purposes. At the conference of Army
commanders on the 15th June, Sir Douglas Haig, who as
a cavalryman was in doubt on the matter, raised the
question of advance by small detachments instead of waves.
He found the three Army commanders who were infantry
men opposed to the idea, and after some discussion, it was
recorded that “the advance of isolated detachments, except
“for reconnoitring purposes, should be avoided. They lead
“to the loss of the boldest and best without result. The
“enemy can concentrate on these detachments. Advance
“should be uniform.” The value of “infiltration” had yet
to be learnt. It was, however, agreed that the length of each
forward bound by the infantry during an attack depended

on the extent of the area which had been prepared by artillery.

The decision of the conference must have referred only to the main assaults; the objection raised by the Army commanders cannot have applied to a battalion or lesser body pushing up in small parties under the barrage, using shell holes and any available cover, so as to gain a position within assaulting distance from which further advance would be in line. This, however, was not stated, and nothing but the line was used until circumstances forced some battalions to get forward as best they could. The question soon became of no importance; for when the "creeping barrage"—which advanced gradually instead of by timed lifts—was introduced, the line formation alone was the suitable one. Until the end of the war the line or wave formation was used whenever a barrage was fired, which was usually the case; but the lines became thinner—that is the men composing them were further apart—than in the period under consideration.

As regards security after a success, the memorandum laid down: "The clearing up and consolidation of a position passed over by the assaulting columns in their advance,¹ and the formation of protective flanks, and the preparation of strong supporting points in the captured area will be carried out by other troops of the attacking forces, following the assaulting columns, and specially told off for the purpose".

Divisions were to practise passing a fresh body of attacking troops through the troops which had carried out the first assault and reached their objective, a process later called "leap-frogging" and frequently employed, even whole divisions thus passing through others. The manœuvre was now described, even when applied to bodies within a division, as "an extremely difficult operation".

The memorandum attributed ill-success in the past to failure in mutual support, failure in passing on information, failure to organize and consolidate ground won, unnecessary crowding of the assaulting columns, and premature

¹ This appears to be the first official mention of "mopping up", but it had been evolved in the raids in the preceding months. It failed on the 1st July because the troops thought that the throwing of a few hand-grenades with $2\frac{1}{2}$ ounces of explosives in them—a complete Mills' grenade weighed only $1\frac{1}{2}$ lbs.—would settle with the inmates of a dug-out. It was subsequently shown by experiment that charges of 20 to 30 lbs. of high explosive were required to do the necessary damage. Such charges were carried in the operations of 1917.

using up of reserves. Finally, it laid down that "troops "once launched to the attack must push on at all costs "till the final objective is reached", and "all must be "prepared for heavy casualties".

The possibility of using night or dawn attacks in the course of the battle received no mention.

The two G.H.Q. memoranda on preparation and training were intended for the guidance of higher commanders, down to the G.O.C.'s of divisions only. Something fuller, going into greater detail, was required for the regimental officer. Nothing of the kind had been prepared by the training branch of the General Staff in London for the instruction of the New Armies, and what the officers and men of these Armies had learnt at home was of the most elementary nature, much time being devoted to physical training and the cult of "the bomb and the bayonet". There was not in 1916 any training section of the General Staff at G.H.Q. whose business it was to prepare manuals or notes for general issue¹ and the Operations Section had no time for it. The task, if it was to be done, had to be undertaken by the different Armies, as there was no guidance from above.

On the 17th May, therefore, General Rawlinson issued a printed pamphlet of 31 pages amplifying the G.H.Q. memoranda and marked on the cover, "Fourth Army "Tactical Notes", to be issued down to captains.² These Notes were diligently read by the officers of the New Army, and accepted as the last word on the subject. The formation of attacking infantry in lines was the only one mentioned; it was laid down that "as a general guide, the "leading lines should not be more than 100 yards apart" with "the men in each line extended at two or three paces' "interval", the number of lines, that is the depth of the attack, depending on the distance and nature of the objective.³ The control of reserves, protection of flanks, keeping direction, the attack of defended localities—either by direct assault or by overlapping and surrounding them—consolidation of trenches and localities, including

¹ This was provided in 1917.

² Appendix 18.

³ The order that the "four or more" successive lines were not to be more than 100 yards apart, where No Man's Land was several hundred yards wide, necessarily resulted in several successive lines being in the open together exposed to fire (see the case of the 8th Division, Chapter XV). Two or three waves should have sufficed to rush trenches, if "nothing could exist at the conclusion of the bombardment". No number of waves, as it proved, were of any avail against the actual unshaken defence.

woods, after capture, were among the subjects treated. The final sections dealt with the employment of machine and Lewis guns and Stokes mortars, the position of brigade headquarters, intercommunication, and co-operation of artillery with infantry. Under this last heading it was said:

“The ideal is for the artillery to keep their fire immediately in front of the infantry as the latter advances, “battering down all opposition with a hurricane of projectiles.” This seems to be the first definite official mention of anything of the nature of a creeping barrage; but the pamphlet stated that the technical difficulties of timing such a barrage stood in the way of the attainment of this ideal,¹ and “experience has shown that the only safe “method of artillery support during an advance is a fixed “time-table of lifts to which both the infantry and artillery “must rigidly conform”. Nevertheless, corps were left a free hand, and, as will be seen, a creeping barrage was tried on the 1st July in the XIII., XV. and VIII. Corps, but it was of 18-pdr. shrapnel only, and did not help the infantry to cross No Man’s Land, being only of assistance after the assault had gained the enemy’s parapet.

It may be thought that these instructions were not sufficiently exhaustive and that there were important omissions: for instance, rifle and machine-gun covering fire. This, however, had been the essential feature of the pre-war training, and the use of it was perhaps taken for granted. The necessity of crossing No Man’s Land at a good pace, so as to reach the parapet before the enemy could man it, was not mentioned; but the infantryman was so heavily laden that he could not move faster than a walk over broken ground. The most serious omission was the failure to point out the obligation of every unit—without delaying the general forward movement—to co-operate with and assist others which might be held up, either by immediate action to a flank or by pushing on further to come down on the rear of the opposition. It could hardly be hoped that there would be uniform success all along a front of 14 miles. Moreover, there was no suggestion that, where the opposition was so strong as to hold up the attack, further attacks should be stopped and reinforcements sent elsewhere, where resistance was weak or non-existent.²

¹ The shortage of ammunition for two years had precluded practice and experiments.

² As a matter of interest, the instructions issued before the Austro-German break-through at Gorlice-Tarnow, 2nd May 1915, are given in Note at end of Chapter.

In general the tactical plan of the battle was too rigid ; there was to be practically uniform strength all along the front, although parts of it were obviously more difficult to deal with than others. The battlefield in the early stages was crowded with infantry everywhere, without reference to tasks or the possibility of substituting at certain points fire for men.¹ Principles were involved in a mass of details which prevented elasticity and tended to destroy individual initiative. This perhaps is bound to be the case with instructions for troops which have had only a short training ; and similar criticism was made of the instructions and orders of the Swiss Army before 1914, as compared with those of the British and German armies.

Instructions and guidance were not, however, limited to the written word of G.H.Q. and of the Fourth Army ; corps and divisions issued instructions of their own, some of them of exceedingly great length, and the Commander-in-Chief and the G.O.C. Fourth Army, either singly or together, made constant visits to the corps, division and brigade commanders to enquire if they were encountering difficulties, and to discuss with them their schemes of operations and training. They saw with their own eyes the progress in their training of the troops out of the line, and the state of the preparations. The Fourth Army, the corps and the divisions had conferences from time to time, attended by all staff officers and representatives of the artillery, engineers and services, by which means not only were the programme of work and its progress discussed, but co-operation between the various branches was secured.

Artillery Tactics and Methods

No change of importance in artillery tactics took place before the Battles of the Somme. The co-operation of aircraft and heavy artillery, referred to in connection with the Royal Flying Corps,² had, however, made great progress under corps direction. The co-operation between infantry and the divisional artillery was maintained by the normal method of forward observing officers (F.O.O.'s) with the assaulting infantry, and battery commanders' observation posts (O.P.'s) ; by liaison officers from artillery brigades sent to infantry brigade headquarters ; and by parties of signallers from supporting batteries sent with the leading brigades. Flash spotting and sound ranging were still in

¹ See page 28, f.n. 2.

² See page 85.

the experimental stage;¹ but there was a good deal of firing by the 1/10,000 map, with correction for atmospheric and other conditions, though this scientific mode of procedure, also, was still in its infancy. Artillery defence schemes were thoroughly worked out, and "alternative" and "re-inforcing" positions prepared. Observation posts were carefully strengthened, the establishment and use of artillery telephone exchanges generally adopted.

Counter-battery work—that is fighting and overcoming the enemy's batteries—had, primarily as a consequence of the Battle of Loos, begun to be systematically developed during the winter of 1915–16; daily artillery reports on the subject were issued by corps, and the first "Active Hostile Battery Lists" prepared by Armies. By a General Staff pamphlet, issued in January 1916, it was laid down that counter-battery work "is in many ways the most important, as it is the most difficult task of the artillery under present conditions". It was the re-introduction of the "artillery duel" which had fallen into disfavour with the pre-war advocates of the academic doctrine of the offensive at all costs.² It inevitably had to be adopted; for in trench warfare, at any rate, before artillery can help infantry, it must at least try to settle with the enemy's guns.

No further instructions as to artillery tactics were issued at this period by G.H.Q. or by Armies, except as regards co-operation with infantry already mentioned, and the progress made—including the creeping barrage—is traceable for the most part to the initiative of corps and divisions. A series of "Artillery Notes" was prepared in the office of the Artillery Adviser at G.H.Q. during the winter of 1915–1916, but, to quote an official report, "their tone was indecisive and their character was reminiscent rather than doctrinal". Nothing whatever was said in them with regard to the "creeping barrage".

The general preparations and drawing up of the artillery plan of the Fourth Army were in the hands of the Major-General R.A.,³ under General Rawlinson's supervision,

¹ See "1915" Vol. II. p. 19, f.n. 2.

² The pre-war French doctrine had been averse to the massing of artillery. It was held that batteries should go into action successively according to the needs of the moment, and that a battery should not open fire except to reply to a battery which had shown itself. In order to obtain close liaison, batteries were distributed among the infantry brigades and regiments, and put under the infantry commanders. General Rouquerol in "La Bataille de Guise", pp. 16-18.

³ He was until June 1916 Major-General J. F. N. Birch, who at that date was promoted to be Artillery Adviser G.H.Q., and was succeeded by

and for the first time operation orders dealing solely with artillery matters were issued from Army headquarters. In these the foundation of the artillery plan was laid down, and on it the corps built up their programmes. By this time the Heavy Artillery Group organization¹ was in working order, and corps were made responsible for the execution of their artillery plans. Corps allotted batteries to H.A. Groups as seemed best, "mixed groups"² almost invariably being formed. As a rule, corps detailed their H.A. Groups to a single task, either counter-battery work or bombardment: to make them responsible for both was found unsatisfactory. But no hard and fast rule was observed, and artillery fire was concentrated for either purpose at any time, using the number of batteries required, without regard to their grouping.³ Advantage was taken of the salients and re-entrants of the German position to use enfilade fire, but batteries well placed for such fire were generally ill placed to support a deep advance, on account of the complications of communications and ammunition supply; and all batteries could not be sited for both purposes. In many cases, however, batteries directly supporting one divisional front were in a position to enfilade another. Measures were taken to secure the advantage of fire-surprise by suddenly bringing back a concentration of batteries on to a target which after normal shelling had been left in peace; and after destructive shelling by heavy artillery, field guns would, after a suitable period, open fire to catch the parties repairing damage. Short intensive barrages also were fired as if preludes to raid or assault, so as to draw the enemy from his shelters, when he was similarly caught with shrapnel.

The orders for the barrages were very rigid: each battery was given a definite "lane" and on no account was it to depart from this, or its time-table, without orders from higher artillery authority, not even at the most urgent request of the infantry to deal with a particular target; but this prohibition was occasionally disobeyed.

Major-General C. E. D. Budworth (died in India in 1921), who, as far as can be ascertained, was the first to advocate, unofficially, the use of a creeping barrage. General Birch took with him to G.H.Q. one of his Staff officers, Lieut.-Colonel S. W. H. Rawlins (succeeded by Major the Hon. G. E. Boscawen), but left the other, Captain J. W. Hare, with the Fourth Army.

¹ See page 60.

² That is containing batteries of different calibres.

³ The general distribution of fire is given in the artillery programme in the next Chapter.

In order, however, to ensure that there was as little delay as possible in transmitting the requests of the infantry to the heavy artillery, the headquarters of heavy artillery groups were ordered to be "sufficiently close" to divisional headquarters, to which of course divisional artillery headquarters were always in close proximity.

Re-bombardments, if ordered, were to be of half an hour's duration; but from the brief notice usually given, the impossibility of ranging, and the fear of shooting short and hitting the infantry, few re-bombardments were very effective.

Cavalry

No special instructions were issued as regards the cavalry, but the divisions to be employed in the battle were placed under General Gough for training. He carried out exercises on the ground, both with and without troops, on the lines of action which would be necessary should the German front be broken and the cavalry used in combination with other arms to widen the gap.

Royal Flying Corps

In each corps, two aeroplanes, specially marked, were to be employed on contact patrol, one using wireless, the other returning from time to time to drop messages at corps headquarters. Two other aeroplanes were to assist the counter-batteries, and a third was to observe the fire of the heavy howitzers on the intermediate lines and 2nd Position. One kite balloon was also to be available for observation.

NOTE

THE GERMAN BREAK-THROUGH AT GORLICE-TARNOW, MAY 1915¹

After every preparation for the move had been made, eight German divisions were brought suddenly from the French to the Eastern Front. They took over the line from the Austrians between the 23rd and 28th April, reconnaissances having been begun on the 19th. During the night of the 1st/2nd May, harassing fire was directed on the Russian lines, with pauses from 10 to 11 P.M.

¹ Derived from the German official monograph, "Gorlice". The conditions of the German assault in Russia in May 1915 were not realised in France until August 1918. The Russian line was a mere field position of a few trenches without deep dug-outs, and Russian morale at the place attacked had been broken by the previous fighting, especially that which took place during the winter months; the strength of units was low and munitions were lacking. Further, the Russians seem to have kept no look out. They were surprised, and fled almost at the sight of the Germans.

and 1 to 3 A.M., to enable patrols to push forward over a wide No Man's Land to mark and hold the assault position, and for the engineers to cut the enemy wire. There was only a four-hour bombardment, from 6 to 10 A.M., during which the infantry crept forward and dug in. Certain field batteries did not take part in the bombardment, but were detailed to deal with new targets which might arise during and after the assault. The assault was made in lines at a rapid pace, and was entirely successful.

The "General Instructions" issued by the German Eleventh Army (commander, Colonel-General von Mackensen; Chief of the Staff, Colonel von Seeckt) laid down:

"The attack, if it is to succeed, must be pushed forward at a rapid pace, as the nature of the operation demands. But in rapidity of attack lies also security, for it will prevent the foe from making renewed resistance in the rearward position and from employing strong reserves according to plan. All staffs must therefore strive to keep the advance continuously moving within the limits of the side boundaries prescribed. Two measures will assist this: the disposition in depth of the attacking infantry, and the rapid following up of any effect which the artillery may produce. Thus the Army cannot assign to the attacking corps and divisions definite objectives for each day, lest by fixing them the possibility of further progress may be stopped.

"On the other hand, it is necessary that the unity of the attack of the Army should always be maintained. It is not to be expected that the attack will make equal progress on the whole front. The necessity of wheeling the front to the east, after being first directed north-eastwards, gives the left wing further to go. The rapid advance of one part of the front will ease the situation at other points where there may be more resistance, and where perhaps temporary stoppages may take place, and it will get troops thus checked on the move again. The disposition in depth should permit the success attained in one sector to be extended to a neighbouring sector. On the other hand, any portion of the attacking troops which is successful in pushing on, will expose itself to the danger of envelopment. Thus the troops which least deserve it may meet with disaster as the result of their own rapid advance. Consideration of this possibility makes it necessary for the Army to fix certain lines, which should be reached by the force as a whole, and if possible simultaneously. Any progress beyond these lines will be thankfully welcomed by the Army and made use of. It results from the same consideration that corps and divisions should keep up constant communication with neighbouring formations . . . and also with Army headquarters, so that the latter will be in a position to co-ordinate the different parts of the battle front and bring up and engage its reserves in accordance with the situation."

CHAPTER XII

THE SOMME

THE PRELIMINARY BOMBARDMENT AND FINAL PREPARATIONS

(Maps 1, 2, 3 ; Sketches A, 2, 16, B)

IN accordance with the artillery programme issued on the **June**. 5th June,¹ the preliminary bombardment was to be spread over five days, U, V, W, X and Y, previous to Z Day on which the infantry assault was to take place. The work to be done was divided into a number of stages. To state these shortly: the first two days would be devoted wholly to wire-cutting and registration, and the following three to the destruction of defences and the continuation of wire-cutting. In detail, the work included: wire-cutting, in which the 2-inch mortars were to assist; bombardment of trenches, fortified localities, strongpoints, observation posts, machine-gun emplacements and such like; bombardment of billets; shelling of communications every night (but lacrymatory shell was not to be used until midnight on Y/Z Day); counter-battery work, which was to be very active; bombardment of villages and strongpoints by heavy trench mortars, and of the front trenches by 2-inch and Stokes mortars; the establishment of smoke barrages (Z Day only); finally the discharge of phosphorus bombs and candles, and, before Z Day, of gas for the purpose of deceiving the enemy, and leading him to man his parapets and expose himself to fire.

In order to accustom the enemy to bombardments of a definite length of time at varying hours of the day, there were to be concentrated bombardments lasting eighty minutes, during which he would no doubt take cover, on each of the five days; but on Zero Day this bombardment

¹ Appendix 19.

June. was to be a quarter of an hour shorter, and the assault delivered immediately afterwards in the hope that it would find the enemy, accustomed to eighty minutes' fire, unprepared to man the parapet.

In allotting the tasks, the bulk of those for destructive effect fell to the heavy artillery. To the 18-pdrs. were assigned wire-cutting, searching trenches, villages, woods and hollows; to the 4·5-inch howitzers, destruction of communication trenches, assistance in bombardment of villages and woods, completion of destruction of machine-gun emplacements; and to both 18-pdrs. and 4·5-inch howitzers, interruption of communications, especially by night, and preventing the enemy from repairing damage.

The late arrival of many of the heavy batteries at first affected the accuracy of the fire; for the observation officers had not sufficient time to study the country and make themselves thoroughly acquainted with their targets. The R.F.C., however, took excellent photographs daily, which were in the hands of the artillery commanders the same night, and greatly helped them to judge results, although the art of reading air photographs was in its infancy. When it was impossible for the aeroplanes to work, unobserved fire was turned on to every known battery.

The bombardment was a most strenuous time for the artillery and the daily programme was divided into 2-hour periods, so as to enable detachments to be rested and observing officers changed, and to allow the guns to cool; but it was so arranged that, as long as the ammunition ration allowed, the whole front was kept under some kind of fire or other, without pause.

The total number of field and heavy guns in the five corps of the Fourth Army, excluding those of the two divisions in Army reserve and of the three divisions in G.H.Q. reserve, although nearly three times the number of those engaged in the bombardment preceding the Battle of Loos was considerably less than that available in later battles; for instance, at Messines, where the front of attack was only 17,000 yards instead of 25,000 yards. The totals were the following, those for Messines being given in brackets. Field artillery: 18-pdr., 808 (1,314); 4·5-inch howitzer, 202 (438). Heavy guns: 4·7-inch, 32 (0); 60-pdr., 128 (198); 6-inch, 20 (24); 9·2-inch, 1 (1); 12-inch, 1 (1). Heavy howitzers: 6-inch, 104 (348); 8-inch, 64 (108); 9·2-inch, 60 (116); 12-inch, 11 (20); 15-inch, 6 (3); with 16 French

220-mm. howitzers and 60 French 75-mm. guns (for firing June. gas shell), and 24 French 120-mm. (long) guns.¹

Thus at Messines there were more than twice as many field guns per yard as in the preliminary bombardment at the Somme (roughly 1 per 10 yards as against 1 per 21), and nearly three times as many heavy guns (roughly one per 20 yards as against one per 57). Further, amongst the weapons of 1916 were the obsolete 4·7-inch guns, and many 6-inch howitzers of the 1895 pattern of 30 cwt., firing from a platform, with an extreme range of 6,500 yards: the 25 cwt. pattern, with hydraulic recuperation, and a range of 10,000 yards, was only in course of introduction. Similarly, the 8-inch howitzer of 1916 was an extemporized weapon, with a range of 10,000 yards, manufactured by cutting off part of the muzzle-end of the 6-inch coast defence gun and enlarging the bore. Its recoil was checked by enormous wooden wedges. It was gradually replaced by a new weapon of less weight, greater range, and with hydraulic recuperation.

Besides the guns, the Fourth Army had 288 medium and 28 heavy trench-mortars, and there were assigned to it one battalion (3 gas-cylinder companies), 3 smoke companies and one flame-projector company of the Special Brigade R.E.²

As regards ammunition, there was much the same disproportion as with the guns. At Messines, 3rd-10th June 1917, 3,258,000 rounds were fired, and in the first eight days at the Somme in the Fourth Army (omitting 34,000 fired during the night of the 23rd/24th June), 1,732,873.

The total amount of ammunition allotted to the Fourth Army for the attack was: 18-pdr., 2,600,000 rounds (at Loos, only 371,700); 4·5-inch howitzer, 260,000 (at Loos, 56,400); 6-inch howitzer, 100,000 (at Loos, 19,900), the quantities decreasing with the rise in calibre down to 15-inch howitzer, 3,000. For the mortars there were 800,000 rounds and 35,000 smoke bombs, besides 100,000 smoke grenades and 100,000 candles.

¹ Chef d'Escadron P. Hering was attached to the Staff of the G.O.C. R.A. Fourth Army as artillery liaison officer. The French units were (220-mm.) the 71st and 72nd Batteries ("Groupe de Menthon") of the 1st Regiment of Colonial Artillery, and the 12th "Groupe" (41st and 42nd Batteries) of the 1st Regiment of Foot Artillery; (75-mm.) "groupes" of the 9th, 13th, 18th, 20th and 37th Field Artillery Regiments; and (120-mm. long) the 8th and 9th "Groupes" (29th, 30th, 31st, 32nd, 33rd and 34th Batteries) of the 1st Regiment of Foot Artillery.

² A battalion of the Special Brigade was allotted to each of the other three Armies, and to the Third Army a smoke company as well.

June. The estimate of ammunition expenditure was 18-pdr., 6 days at 200 rounds per gun; 4·5-inch howitzer, 2 days at 40 and 4 days at 180; 6-inch howitzers, 2 days at 60 and 4 days at 170, the total for the larger natures gradually decreasing to 2 days at 15 and 4 days at 50 for the 15-inch howitzers. Actually there were fired on the seven days, to which the bombardment was extended, from 6 A.M. to 6 A.M., 138,118; 188,881; 211,886; 235,887; 168,363; 189,757; 375,760 rounds; and 224,221 on the 1st July.

Map 2.
Sketch
16.

On the 24th June, the day finally fixed for the opening of the great bombardment, the weather, following on a thunderstorm on the afternoon of the 23rd, was dull, with low clouds and heavy rainstorms. Wire-cutting was begun and continued satisfactorily; but very little counter-battery work in conjunction with aircraft was possible until the weather cleared in the evening, pilots even then being compelled to fly low. There was some bombardment of the enemy's trenches and fortified localities, but no other increase of artillery fire during the day beyond the normal, except for registration. At night the systematic shelling of communications was begun. The enemy's retaliation was generally feeble and very few of his aeroplanes were seen. When he did reply fire was intensified, he was given four shells for every one of his, and if that did not stop him, larger guns and howitzers were turned on. At night his artillery and trench mortars were active only north of the Ancre. Orders were issued for a general discharge of gas to take place at 10 P.M. as the weather forecast indicated a suitable wind—west or south-west—but after sunset the wind dropped, and at the hour fixed the air was practically still. Discretion had been given to the gas officers, and all except those in the 4th Division decided not to release the gas. On the front of that division the wind appeared sufficient, and when the taps were turned on the cloud moved slowly over to the enemy's trenches, and continued to do so satisfactorily for an hour, when the discharge was stopped. The enemy artillery fire on the front line during the flow was very heavy.

On the 25th the weather was bright, warm and clear; the artillery programme was continued, with wire-cutting all day, occasional concentrations of fire on billets, and registration; and at night intermittent fire on defences and continuous fire on communications. Good practice was made on enemy batteries. Blazing dumps and explosions of ammunition (particularly large explosions at

Longueval, Montauban, Mametz Wood and Pozières) June. were reported from the air. During the enemy retaliation fire the positions of 102 hostile batteries, principally in front of the VIII. and X. Corps, were spotted by observers of the IV. Brigade R.F.C., enemy airmen doing little to interrupt their work. In the afternoon a concerted attempt was made to destroy the German observation balloons opposite the front of all four British Armies. Fifteen out of twenty-three were attacked, and five brought down, three of them on the Fourth Army front. On the Second Army front three more were shot down next day.

During the night of the 25th/26th four raids were made by the Fourth Army, with varying results. North-east of Carnoy, the 18th Division found the enemy trenches empty and much damaged; north of Maricourt the 30th Division found them lightly held, but captured only one prisoner; south of La Boisselle, the 34th Division found them strongly held and failed to get in; opposite Owillers, too, the 8th Division reported the trenches full of men, but managed to capture one prisoner.

On the 26th the weather became unsettled; bright intervals alternated with heavy showers, and clouds were low for the greater part of the day. The bombardment programme for destructive effect was begun, the concentrated shelling taking place from 9 A.M. to 10.20 A.M., and more fires and explosions were occasioned. Gas was discharged by the 4th Division of the VIII. Corps at 2.30 A.M., smoke by the III. Corps at 10 A.M., gas by the 29th Division of the VIII. Corps at 10.15 A.M., the XV. Corps at 10.30 A.M., and the X. Corps from its left and right wings at 2.30 P.M. and 4 P.M. respectively. The enemy in each case retaliated with artillery fire, but without serious effect.

At 3.30 P.M. the bombardment was stopped in order to allow the Flying Corps to photograph the area and obtain an exact record of fire for the artillery. The aeroplane photographs showed not only how the heavy shells had fallen, but the state of the wire entanglements, and the results of fire appeared to be satisfactory. Still it was decided that the howitzers and trench mortars were not making sufficiently good progress, and the 18-pdrs. were called upon to carry out the work, and henceforward in some divisions expended as much as 400-500 shells per gun every 24 hours on wire-cutting and night firing. Again the enemy air activity was slight. During the night ten raids were made, and two parties of prisoners (from Fricourt

June. and Thiepval Wood) brought back; many patrols went up to the enemy's wire and trenches; but no general deductions could be drawn from these affairs, for although the prisoners were cowed and glad to surrender, at many places the resistance was stout. The interrogation of prisoners, however, seemed to show that only local attacks were expected. On the 27th Sir Douglas Haig moved to his advanced headquarters for the battle, at Chateau Valvion, Beauquesne, 12 miles E.N.E. of Albert and 10 miles north of the Fourth Army headquarters at Querrieu. Toutencourt, General Gough's headquarters, lay between them.

Both on the 27th and on the 28th thick mist in the early morning was followed by heavy showers. Although the weather improved towards evening, low clouds continued, and the work of the R.F.C. was seriously interrupted: the pilots, however, flew in and out of the clouds and made use of every bright interval. Every hour of bad weather, however, which made aeroplane work impossible was in the enemy's favour; it may not have brought respite to the Germans, since when aeroplane observation could not be carried out the number of rounds fired was usually increased, but it prevented accurate fire, and from the nature of the German *Feste*,¹ with its semi-permanent fortifications and scattered strongpoints, with its solid machine-gun emplacements and observing stations, accurate fire, such as at any rate fell within "the rectangle of error" of the gun, was indispensable. On the 27th there was no hostile air activity, and on the 28th very little, with only two indecisive combats. The full programme of the bombardment was continued, resulting in a large explosion at Montauban and a large fire in Miraumont, on the 27th, on which day the III., X. and VIII. Corps discharged what gas they had left. Raids and patrolling on the night of the 27th/28th brought the usual conflicting reports: for instance, two parties of the 30th Division (XIII. Corps) found the German front line empty and without sign of life, whilst another of the same division reported the enemy more numerous in the trenches than on the previous night. The accounts of the damage to the enemy wire were equally varying. At 11 A.M. on the 28th, in consequence of the bad weather, by unanimous agreement between the French and British leaders—and much to the contentment of General Foch, who had desired a two-day postponement before the rain set in—Zero Day, as already mentioned,

¹ A super-fortress, in contradistinction to a *Festung*, a mere fortress.

was postponed 48 hours, from the 29th June to the 1st July. **June.** News of the postponement was shouted in many a village where the troops were quartered, regardless of what listening ears there might be. The two extra days were called Y_1 and Y_2 , and interpolated between X and Y; and the programme of Y, one of the days devoted to the destruction of defences, was fired on each with such economies of heavy gun and heavy howitzer ammunition as were necessary; but the daily 80-minute concentrated bombardment was not omitted. Judging from the German accounts of the sufferings and suspense of the men in the front defences, the delay in one way was not to the disadvantage of the Allies; but the bombardment on the two extra days was weaker than on the others,¹ and, on account of the extra expenditure, the barrages on the 1st July were thinner than they would have been. The British infantry too suffered by the postponement, as some battalions which had to take part in the assault had been marched up on the 28th and were either left in the flooded trenches or brought back to miserable bivouacs. But although many men felt ill, very few reported themselves "sick" for fear that they might miss the great day.

The special instructions issued to the artillery as regards the two extra days directed that every effort must be made (1) to prevent all hostile movements and work both by day and by night, night bombardments being fully maintained; (2) to complete wire-cutting; (3) to take advantage of all favourable weather to destroy hostile batteries; (4) to deceive the enemy by a steady continuance of concentrated bombardments and night raids. Subject to the above, heavy howitzer and heavy gun ammunition was to be economized.

At noon on the 28th, in accordance with instructions from the Commander-in-Chief, an order amending the plan of action after the objectives should be reached was issued by the Fourth Army.² The main change introduced was to the effect that should the enemy's resistance break down during the first phase of the battle, the nearest available infantry was to be pushed forward at once without waiting for the cavalry, so that no time might be lost. No alteration in the disposition of the troops was involved; but should occasion arise the reserve divisions (19th and 49th) of the III. and X. Corps were now to be ready to

¹ See ammunition expenditure, page 302.

² Appendix 20.

June. push forward on Le Sars, and on Irlès and Pys respectively, under command of General Gough. Arrangements were to be made by the neighbouring corps to guard their flanks, and General Gough was not to order the cavalry divisions forward until the roads allotted to the latter up to the original objectives were practicable.

Raiding parties sent out on the night of the 28th/29th found the enemy more vigilant and the trenches more strongly held than previously. On the 29th the weather brightened and there was a drying breeze. Flying conditions greatly improved, but, owing to cloud and bad light, were not perfect. The bombardment programme was continued, aeroplanes observing for counter-battery work, and the ground in the German position seemed almost alive with the spurts of earth where the shells were bursting. Fires were seen in Martinpuich, Miraumont and Gommecourt, and 57 batteries in action spotted. In the early morning of the 29th the enemy apparently became nervous and stood to, firing machine guns and putting down barrages. He did so again when some smoke was emitted at 5.10 P.M., and a third time, when a little gas was released by a division at 10.30 P.M. On the night of the 29th/30th raiding parties entered the enemy trenches with difficulty, but one of the 12/Middlesex (54th Brigade, 18th Division), four officers and a hundred men strong, penetrated to the German support trench (Emden) opposite the left of the XIII. Corps front and spent two hours there. Neither raiders nor patrols brought back any prisoners; in general they reported that the wire no longer presented any obstacle, the VIII. Corps stating that on the front of the 29th and 4th Divisions it was passable anywhere. A deserter from the *109th Reserve Regiment* stationed near Mametz stated that no warning of an impending attack had been received, but that the men expected one and wished it would come and be over: no supplies had reached them for three days, and contrary to orders they had eaten their iron rations.

On the 30th in spite of cloud and high wind some counter-battery work was done with air observation, and several direct hits and 171 enemy batteries in action were reported. Explosions and fires were observed in Hardecourt, Longueval, Bazentin le Petit and Contalmaison. The enemy's retaliation varied in strength, but was never important. Albert, however, received a light shelling.

On the night of the 30th June/1st July, the eve of the

assault, the usual patrols were sent out and raids were made in order that there should be no difference from the routine of the previous nights. Patrols were specially to examine the state of the enemy's wire; all carried wire-cutters and some took Bangalore torpedoes¹ to clear further gaps where considered necessary. The reports on the wire varied and were sometimes conflicting—for instance, near Hawthorn Redoubt two patrols of the 29th Division (VIII. Corps) reported it "very much damaged", and two others, "not much damaged". In general, it appeared that the wire had been better cut on the right, on the fronts of the XIII. and XV. Corps, than further north. It was clear that there it had not been altogether swept away; in fact, to observers in the front trenches it still seemed to be nearly intact and very thick in front of Thiépval and Gomme-court; but it was considered by the divisional commanders to be passable, at any rate through gaps, though many of the gaps had been filled by concertina wire and chevaux de frise. Some of the reports, however, were ominous. Thus the 8th Division (III. Corps) stated that the wire opposite was "not properly cut"; in the 31st Division (VIII. Corps) two battalions said that on their front there was at no point a clear gap; a third reported that the wire was still there, but not a serious obstacle; a fourth that there were gaps about every twenty yards but only three to ten yards broad. It could not be overlooked that the attempt of lines of troops to pass through gaps—even if they could find them in the smoke of battle—would lead to bunching and crowding, and that if this took place under fire, it would entail heavy losses. Both patrols and raiding parties reported the German line as a whole to be strongly held; in fact, on this night only one raid seems to have succeeded. A party of the 97th Brigade (32nd Division, X. Corps) north of the Leipzig Salient, not only failed to get in, but was held up by the intact wire and shot there; the patrols of the 46th Division, on the extreme left, reported that enemy machine guns were active and made their work difficult. The reports of this division, in particular, were not reassuring, one of them mentioning a great deal of wire, hidden by a dip in No Man's Land in front of one of its brigades, which had not been touched, and others stating that there were only a few gaps in the part of the line which had been reconnoitred.

¹ Explosive charges in a 2-inch iron cylinder, 30 feet long or more. See "1915" Vol. II. p. 263, f.n. 4.

June. There was, too, an ominous fact, on which Sir Douglas Haig commented: that during the bombardment period no raid from the VIII. Corps front (Beaumont Hamel—Serre) had succeeded in breaking into the German position. He sent for the corps commander on the 29th June, and seems to have been only partly reassured; he expressed himself dissatisfied with the corps staff and with the 29th and 31st Divisions, and the last words he wrote on the very eve of the battle, the night of the 30th June, were, "the only doubt I have is with regard to the VIII. Corps Staff, which has had no experience of the fighting in France and has not carried out one successful raid".

**Map 1.
Sketch A.**

At a meeting with the commander of the Third Army on this day, Sir Douglas Haig very clearly outlined his general intentions for the forthcoming operations. Subsequently recorded in writing, they were summarized as follows:

"First, to capture the Montauban—Pozières—Serre heights; then to push on to the line Ginchy—Bapaume and establish a force on, approximately, that line; then (covered by the force established as above) to attack northward in order to gain the Arras—Bapaume—Serre area and thus obtain a base extending from Arras to the Somme for further operations.

"The Third Army will assist in the first and second stages of the operations by securing the Gommecourt salient, co-operating with artillery in the attack of the VIII. Corps as already arranged, and holding the enemy on the Third Army front by continuing a general activity on the same lines as have already proved so effective during the last few days.

"In the third stage of the operations (the attack on the enemy in the Arras—Bapaume—Serre area) the operations of the Third Army (in co-operation with the Fourth Army) are of the greatest importance. The first act in this stage will be the disposal of a force, drawn (if possible, entirely) from the Fourth Army, on the general front Bapaume—Miraumont, as quickly as possible after securing the line Ginchy—Bapaume. This force, which will be under General Gough, is to attack northward. It is not possible to say yet when it will be in position, as that depends on the time required to overcome the enemy's resistance in the first and second stages of the operations. This time may be as little as 24 hours or as much as a week or even more. In either case, after

“gaining the line Ginchy—Bapaume, time (probably some June. two days) will be required to get General Gough’s force into position to commence the third stage.

“When the third stage does commence the VIII. Corps will co-operate on the left of General Gough’s attack, and the right of the Third Army is to co-operate, towards Bucquoy on the left of the VIII. Corps. For this purpose it is intended to reinforce the right corps of the Third Army with one or two divisions, taken either from G.H.Q. reserve or from the First or Second Armies. The movement on Bucquoy will be timed so as to assist General Gough’s advance, the order for the movement to commence being given from G.H.Q. The whole of the northern attack will thus pivot on the right corps of the Third Army.

“Simultaneously with the activity of General Gough’s northward attack, it is intended that the attack of troops of the Third Army on the Blaireville front [mid-way between Bucquoy and Arras], as already arranged for, shall take place. The order for the commencement of the Blaireville attack will be given from G.H.Q. and it will be so timed that the retreat of the enemy from his trenches between Blaireville and Puisieux au Mont may be threatened simultaneously both from north and south.

“The 35th Division has been earmarked specially to be placed at General Allenby’s disposal to be used at his discretion in connection with the Blaireville operations. A reinforcement of heavy artillery will also be provided, from the Fourth Army; and possibly another division may be made available from G.H.Q. reserve or from the First or Second Armies.

“The above (‘third stage’) arrangements are all contingent on the success of the first and second stages of the operations, and until that success is considered to be assured the movements of reinforcements to the Third Army cannot be ordered to take place, nor can the strength of the reinforcements to be made available or the particular divisions to be detailed be finally determined. All necessary preparations by the Third Army should, however, be proceeded with, so that there may be no avoidable delay in carrying through the full scheme, if the situation develops favourably for it.”

In accordance with the instructions of the Commander-in-Chief, the Third, First and Second Armies had during the preparations of the Fourth Army for the battle, kept

Map 3.
Sketch B.

June. up a pretence of making ready for an offensive. They advanced trenches and saps and constructed dummy assembly trenches and gun emplacements. From the 24th June onwards, when the bombardment began, each of these Armies carried out a special programme of wire-cutting, with gas discharges, artillery barrages on important communications and bombardment of rest billets at night. In the Third Army next to the Fourth, in addition to the full preparations against the Gommecourt salient, General Allenby concentrated his resources on making preparations in detail for an attack on the Monchy salient; on a front of 1,500 yards north of Ficheux (one mile north-east of Blaireville); and on the salient north of Roclincourt, with a systematic bombardment corresponding generally to the artillery programme of the Fourth Army. In the First Army, similarly, special attention was given to a three-mile front near Hulluch and another just north of Neuve Chapelle. In the Second Army such preparations as could be made with the limited labour available were real, in view of a possible later offensive, and each of its five corps (I. and II. Anzac, V., Canadian, and XIV.) carried out the preliminaries of an assault.

In each of the three Armies, in addition to patrolling, a large number of raids were carried out on the nights preceding the battle. In the Third Army, twelve to the enemy's one; in the First, fourteen to the enemy's three; in the Second, seventeen (seven in the I. Anzac Corps) to the enemy's two: but the enemy was found to be very much on the alert. There has been much discussion as to the value of these raids, which cost many lives, and the simulation of attacks without severe artillery bombardment; but there remains the definite fact that the German Supreme Command, if not deceived, was left in doubt as to the Allied intentions.¹ When, after the middle of June, Falkenhayn came to the conclusion that there would be an Allied offensive in northern France, and not, as had been first anticipated, in Alsace-Lorraine, he was of opinion that it would fall upon the German *Sixth Army*, whose front extended from Monchy au Bois (just north of Gommecourt) to within a few miles of Ypres, facing the First Army and the greater part of the Third and Second Armies, which were on either side of it.²

¹ See Note at end of Chapter.

² It has been suggested that the signs of preparation on the Fourth Army front—including cutting lanes in its own wire and laying white timber bridges over the trenches—were so clamant and obvious to German

Further, he did not move a man to support the threatened German *Second Army* until after the assault had begun, and even then remained for several days in the belief that the real attack would come against the *Sixth Army*. June.

General Rawlinson's formal Operation Order (issued on the 14th June), which was to be put into execution was as follows¹ :

1. The Fourth Army will take part in a general offensive with a view to breaking up the enemy's defensive system, and of exploiting to the full all opportunities opened up for defeating his forces within reach. Map 2.
Sketches
2, 16.

2. The Third, First and Second Armies are undertaking offensive operations at various points along their fronts in conformity with the attack of the Fourth Army.

The objectives of the Third Army will include an attack on Gommecourt, which will be simultaneous with the attack of the Fourth Army.

3. The French will assume the offensive on both banks of the Somme. The French XX. Corps, in close touch with the right of the Fourth Army, is attacking at the same hour north of the Somme.

4. The three successive tasks of the Fourth Army are :—

- (i) To capture the enemy's defences on the line Montauban—Pozières—Serre, forming a strong defensive flank on the Grandcourt—Serre ridge.
- (ii) To extend the defensive flank from Grandcourt to Martinpuich (3 miles north of Montauban), and, at the same time, advance our line eastward to the line Montauban—Martinpuich.
- (iii) To attack eastward from the line Montauban—Martinpuich and secure the Bazentin le Grand (1½ miles north of Montauban)—Ginchy plateau.

The operations of the Fourth Army will be divided into phases as outlined above.

5. The first day's operations will include the capture and consolidation of Montauban, Contalmaison, Pozières and Serre.

As soon as this line has been gained and consolidated, preparations will immediately be undertaken to commence the second phase of the operations.

balloon observers that the Supreme Command must have concluded that they were meant to deceive and did not presage a genuine decisive attack.

¹ Map references are omitted here.

June. The Army commander wishes to impress on all commanders that the success of the operations as a whole largely depends on the consolidation of the definite objectives which have been allotted to each corps. Beyond these objectives no serious advance is to be made until preparations have been completed for entering on the next phase of the operations.

6. The programme of the preliminary bombardment has been issued (G.X.3/1 P, dated 5th June 1916).¹ This will not be departed from in its general outline without reference to Army headquarters.

The zero hour for the gas discharge will be notified to corps by 5 P.M. on the afternoon previous to the discharge taking place.

7. The five corps of the Fourth Army will attack simultaneously on the fronts shown on the map, at zero on "Z" day.

The date of "U" day and the actual time of zero will be notified later.

8. The following divisions will be in Army reserve.

They will be attached for administration as follows :—

12th Division to III. Corps.

25th Division to X. Corps.

Orders as to the positions in which these two divisions will be placed on the morning of "Z" day have been issued to III. and X. Corps.

9. The 2nd Indian Cavalry Division will be in Army reserve and on the night of "Y-Z" days will bivouac between Daours and Querrieu.

Separate instructions will be issued to the 2nd Indian Cavalry Division as to its employment.

10. Army headquarters will remain at Querrieu.

During the bombardment the line had been held—sometimes in the front and sometimes in the support trenches—by the machine-gun and trench-mortar companies, with one company per battalion or, sometimes, the 10 per cent of strength which was not to take part in the attack, the remainder of the battalion resting.

Rest, however, even when training was over, had only

¹ Appendix 19 dealt with in the text on page 299.

a comparative meaning for the officers. Nominal rolls of June. carrying and water parties and for other essential duties had to be prepared; equipment inspected and checked; maps examined and bearings worked out and explained to officers and N.C.O.'s responsible for maintaining direction; the plan of action expounded as far as necessary to N.C.O.'s, signallers and runners; the times of the artillery lifts and the meaning of the various Very light and rocket signals committed to memory or written on scraps of paper in a manner undecipherable to the enemy.

On the morning of the 30th June the infantry garrisons of the trenches were relieved by companies sent up for the purpose, and during the afternoon and evening the last preparations were made. Final messages of encouragement from commanders were read to the men. Some brigade commanders held ceremonial parades, with bands playing, and ending with a march past. As night approached, the battalions fell in, glad that they were released from their cramped billets, that the days of waiting were over at last and the decisive moment at hand. The provost police took post at the prisoners' cages provided in each divisional area, and formed a line of "battle-stops" to deal with stragglers, some $1\frac{1}{2}$ miles behind the front line.

Every infantryman—the officers in most units were dressed like the men—wore "fighting order", viz. the normal equipment, including steel helmet and entrenching tool, less the pack and greatcoat; with rolled groundsheet, water-bottle, and haversack in place of the pack on the back.¹ In the haversack were small things, mess tin, towel, shaving kit, extra socks, message book, "the unconsumed portion of the day's ration", extra cheese, one preserved ration, and one iron ration. Two gas helmets and tear goggles were carried, also wire-cutters, field dressing and iodine. Officers and N.C.O.'s carried 4 flares. Moving on from dump to dump, the men picked up, besides, 220 rounds of S.A.A. (partly in khaki cotton bandoliers), two sandbags and two Mills grenades, these last only to be thrown by trained bombers. Each leading company also took 10 picks and 50 shovels, and wire-cutters were distributed to the leading sections. Consolidating companies took additional tools and sandbags. The total weight carried per man was about 66 lbs., which made it difficult to get out of a trench, impossible

¹ Many of the new divisions had the makeshift leather equipment instead of the service web equipment.

June. to move much quicker than a slow walk, or to rise and lie down quickly.¹

Divisional signs on vehicles had been introduced in place of the peace-time lettering during 1915, and by July 1916 every battalion and unit had its distinguishing flash or mark sewn on the jacket, and sometimes a badge painted on the helmet.

In the clear light of a moonless summer night—there was a new moon at 10 A.M. that very day—the approach march to the battle positions was begun. Hundreds of columns began making their way forward by routes carefully reconnoitred and marked, sometimes by tapes or posts, sometimes by green and red lanterns. Gradually they filed into the trenches or sheltered places of assembly, any noise being drowned by the usual nightly bombardment. From the enemy there was little or no interference, and, although long communication trenches had been dug (in the III. Corps area, for instance, from near Albert up to the Tara—Usna line) the troops moved over the open, to save time. They had few casualties in so doing. Between 2 and 5.15 A.M. all reached their positions, and the greater part of the British wire had been cleared to allow of their passage.

The quiescence of the enemy batteries, except for some heavy shelling and, later, lacrymatory gas shelling of Thiepval Wood and the batteries of the 36th Division behind it, and the general immunity from enemy fire, for no harassing fire was opened on the troops moving to their assembly places, confirmed the hope that the seven days' bombardment had done its work. There were a few commanders who doubted, and desired that at least the assault should be made at the first streak of light, before the enemy machine gunners could see their prey. As events proved, their suggestion was justified. General Rawlinson himself accepted it and pressed his French colleagues to agree to an attack before sunrise. The latter were, however, definitely against the idea, insisting that the attack must be made in daylight, in order that the artillery might have opportunity for observation during the final bombardment.² Such was the general confidence, that the late hour of the assault

¹ This overloading of the men is by many infantry officers regarded as one of the principal reasons of the heavy losses and failure of their battalions; for their men could not get through the machine-gun zone with sufficient speed.

² At the Battle of Artois, Sept. 1915 (Loos), by General Foch's orders, the French infantry did not assault until four hours after observation of fire was possible. "1915" Vol. II. p. 268.

caused little misgiving. It may be accepted that the troops, **June.** as a whole, believed that the enemy's defences had been destroyed; his wire shot away, and all his efforts to repair it stopped by bursts of shrapnel and machine-gun fire; his trenches levelled or reduced to a chain of shell holes; his dug-outs knocked in; his machine-gun emplacements and observation posts smashed up; and life in his battery positions and communication trenches, on the roads, and in his billets rendered intolerable. It was not expected that there would be effective gun-fire or that his reserves would be able to come up. Great damage had certainly been done; but in every attack thus far the Germans had produced some surprise, and at the Somme it was to be deep mined dug-outs, with sometimes two storeys below ground, sheltering machine guns and their crews from harm during the bombardment. The garrisons of the first position remained below ground, close packed, uncomfortable, short of food, depressed, but still alive and ready on their officers' orders, when the barrage lifted, to issue forth with morale unbroken; if there were neither parapets nor trenches, then to man with machine guns and rifles any shell hole that came handy.

From 6.25 A.M. onwards there was an incessant roar of gun-fire, with the screaming, whistling and bursting of shells rising above it. Eight minutes before zero the Stokes mortars joined in with a hurricane bombardment of 30 rounds a minute. At 7.30 A.M. the crisis came. Under a cloudless blue sky which gave full promise of the hot mid-summer day which was ahead, wave after wave of British infantry rose and, with bayonets glistening, moved forward into a blanket of smoke and mist¹ as the barrage lifted from the enemy's front trench. Almost simultaneously the German gunners ceased their counter-battery work and concentrated their fire upon the assault.

No braver or more determined men ever faced an enemy than those sons of the British Empire who "went over the top" on the 1st July 1916. Never before had the ranks of a British Army on the field of battle contained the finest of all classes of the nation in physique, brains and education. And they were volunteers not conscripts. If ever a decisive victory was to be won it was to be expected now.

¹ The mist was heavy near the Somme and, although clearing on the uplands, was still too thick for the German trenches to be seen from the artillery O.P.'s before the assault had been delivered.

NOTE

GERMAN INTELLIGENCE AS REGARDS THE SOMME OFFENSIVE

The published diary of Crown Prince Rupprecht and Wendt's "Verdun" contain a number of items of intelligence and information which tend to show that, whilst the commanders at the front were fairly certain from the middle of June onwards that an Allied attack was in preparation against the German *Second Army* (front from near Noyon on the Oise, across the Somme, to 2 miles north of Gommecourt), the Supreme Command at first expected that the Allied offensive would be against the Alsace-Lorraine front, and later when the Picardy—Artois front seemed indicated, not against the *Second*, but the *Sixth Army* to the north of it (front from 2 miles north of Gommecourt to St. Eloi, south of Ypres), clear of the actual front of attack. In April Falkenhayn actually proposed that the *Sixth Army* (Crown Prince Rupprecht) should make a "preventive attack" to upset the offensive preparations of the British. This was not carried out, as the *Sixth Army* had neither the necessary troops nor sufficient heavy artillery, and O.H.L., with Verdun on its hands, could not supply them.¹

In response, however, to the *Second Army's* (General Fritz von Below) repeated reports of weakness, some labour battalions and 8-inch Russian howitzers were sent to it, but no infantry; for, although the *2nd Guard Reserve Division* was allotted to it, the *11th Bavarian Division*, which was in general reserve in the *Second Army* area, was taken away and sent to Galicia.

General von Below on the 25th May proposed a "preventive attack" astride the Somme, which he reduced on the 2nd June to one against Ovillers—St. Pierre Divion. The Supreme Command replied that he might make preparations for this, but sent him for the purpose only one regiment of artillery from general reserve.² He therefore took no action. On the 6th June the *Second Army* sent a very circumstantial report to O.H.L.³ "The preparations of the British in the area Serre—Gommecourt, as well as the increase of the artillery between Suzanne and Albert by 29 emplacements in the last few days, detected by air photographs, lead to the conclusion that the enemy thinks first and foremost of attacking the projecting angles of Fricourt and Gommecourt. In view of the ground and the run of the trenches, it is quite imaginable that he will only try to hold fast the front of the *26th Reserve Division* between these two points by artillery fire, but will not make a serious attack. This possibility is already provided for by the disposition of the forces of the *XIV. Corps*."

"South of the Somme also the enemy has been reinforced, actually by three French divisions. To oppose them the *XVII. Corps* is too weak, both in infantry and guns. Even against an enemy attack on a narrow front made only as a diversion the *Guard Corps* is also too thin: it is holding 36 kilometres with twelve regiments, and there are no reserves of any kind behind it."

¹ Wendt, pp. 121 and 134.

² Wendt, pp. 172-3.

³ Wendt, p. 173.

On the 15th June, during a visit of the Kaiser to Crown Prince Rupprecht's headquarters, Falkenhayn said that he could not understand why the *Second Army* should be attacked, for in case of success the further fighting would take place in Belgium, which would be devastated, and that a similar desire to spare Northern France made it certain that the Allied offensive would be against German territory, viz. Alsace-Lorraine. The Operations Section was of opinion that there would be a subsidiary attack near Lens.¹

Crown Prince Rupprecht gives the following further items, the dates being those of the entries in his journal :

On the 9th and 11th June increased railway traffic was noticed on the front of the *Second Army*, also activity in trench digging, an increase in the enemy camps near Albert and on both sides of the Roye—Montdidier railway (well to the south of the battlefield), and the beginning of assembly trenches. Agents' reports spoke of a British attack about Whitsuntide (Whit Sunday was on the 11th June).² By the 13th no further new signs had been observed, but as soon as the weather permitted the *Second Army* planned to make a reconnaissance in force. On the 14th : "According to a report of an agent at The Hague, the British attaché there has said that the offensive in the West will begin next week". On the 19th : "The British have been gradually shifting four divisions which were opposite the northern wing of the *Sixth Army* to the front of the *Second*". The arrival of the French XXX. Corps to reinforce the XX. south of the Somme is reported, and the Crown Prince notes : "There can no longer be any doubt that a great French offensive against the *Second Army* is imminent". On the 23rd : "A particularly reliable agent reports that a general offensive is imminent, and that the enemy will only demonstrate and use artillery fire against the *Sixth Army*".

On the 24th June : "A prisoner of the British 42nd [? 46th] Division, captured at Gommecourt, stated that a 5-days' bombardment will begin on the 26th, and an attack on a 30-mile front will follow. At some other spot there will be a subsidiary attack. . . .

¹ Falkenhayn, the reticence of whose book, written without access to documents after the war, is in marked contrast to Crown Prince Rupprecht's record written up day by day, says nothing about the Supreme Command's views except (p. 240) that a relief offensive in the West had been expected, but the French, owing to Verdun, "were left without the means to attempt anything decisive on other fronts". He begins his account of the battle of the Somme (p. 261) suddenly. "We left the French theatre of war at the point when before Verdun the great German success of the 23rd June against Thiaumont had been won. On the following day the long-expected and hoped-for enemy offensive was begun on the front of the *Second Army*."

² This puzzled the Germans until, soon after, they got a report of the speech of a British Minister "on the 2nd June" to a meeting of owners and workmen of munition factories. He said, "I am asked why the Whitsuntide holidays are to be postponed until the end of July. How inquisitive we all are! It should suffice that we ask for a postponement of the holidays and to the end of July. This fact should speak volumes." Says Crown Prince Rupprecht, "It certainly does so speak, it contains the surest proof that there will be a great British offensive in a few weeks".

This speech was reported in London morning newspapers of the 2nd June. That such valuable information reached the enemy would appear to be the fault of the Censor rather than that of the Minister or the Press.

"The enemy artillery has begun to register on the positions of the *Second Army*, and to some extent to shoot for destruction."

Under this date the history of the *91st Reserve Regiment* (p. 209) mentions that a wounded prisoner gave information which confirmed the supposition that an attack would take place in a few days. As the regiment was opposite the VII. Corps at Gommecourt, this was in accordance with the impression it was desired to create there. The prince's entry continues: "Some of the French newspapers [*La Victoire* is cited] write a good deal about the impending British offensive, in which at last the great British Army, the work of Kitchener, will make a decisive attack and show what it can do". As the "Great Push" was openly spoken of by civilians in England towards the end of June, it is hardly to be wondered that rumours of it got into the foreign press.

On the 25th Crown Prince Rupprecht entered: "by midday reports had multiplied from the *Second Army* that the left flank of the enemy attack is to be looked for at Gommecourt". In view of the breadth of the British attack thus disclosed, the prince thought that a subsidiary one was quite improbable; and there were no signs of one on the front of the *Sixth Army*. In spite of this intelligence Falkenhayn still persisted that the main attack would be against the *Sixth Army*, and not the *Second*, "behind which he kept scarcely three divisions in reserve".

On the 26th: "Reports of the German military attaché in Madrid and an agent agree that the enemy offensive will begin on the 1st July".

On the 27th, north of the Somme 14 captive balloons were counted, corresponding to the 14 British divisions in line there. "In the morning the British guns ceased. Will the British recognizing their lack of skill (*geringe Gewandheit*) yield precedence to the French?"

Thus it may be said that the *Second Army* was in full expectation of an attack, and had come to the conclusion it would fall on the Fricourt and Gommecourt salients, with possibly a connecting attack between them; but that further east, immediately astride the Somme and against Montauban, nothing was anticipated, and the attack there was a complete surprise. How the enemy obtained information of the exact day, almost the hour of the assault, will be told in the course of the narrative.

No step towards reinforcing the front either of the *Second* or *Sixth Army* was taken until the afternoon of the 1st July, when the Supreme Command placed at the disposal of the *Sixth Army* the three divisions (*3rd Guard*, at Valenciennes, and the *11th Reserve* and *12th Reserve Divisions*) in reserve behind it, when, as the Crown Prince says, "there was no necessity, as the offensive against the *Second Army* was in full swing".¹ Even on the 3rd July Major-General Tappen (Operations Section) telephoned to him that Falkenhayn "still believed in the imminence of an attack against the *Sixth Army*".²

¹ Wendt, p. 174, says that the *11th Reserve Division* was placed at the disposal of the *Second Army*, but the division was in the line south of the Somme opposite the French.

² A list of the German regiments holding the front attacked on the 1st July will be found at the end of the Volume.

The instructions sent by Falkenhayn to the German Crown Prince before Verdun are significant¹:

On the 24th June, the day of the opening of the Allied bombardment on the Somme, he telegraphed:

“The general situation makes it in the highest degree desirable to limit in a decisive way the expenditure of men, material and munitions in your Army Group. Please report how this object can be attained, now that a definite line has been reached by the capture of the armoured work Thiaucourt, Fleury and the ground in front of Fort Vaux.”

On the 1st July, the day of the Allied assault, a further limitation of the expenditure of ammunition was ordered, and the Crown Prince directed to place two divisions (*4th* and *21st Reserve*) at the disposal of the Supreme Command. From the 2nd July onward heavy batteries were withdrawn from Verdun for transfer to the Somme.

On the 11th July, Falkenhayn ordered “the strict defensive. The serious crisis in the Somme battle did not permit of the continuation of the attacks against Verdun.”

¹ Wendt, pp. 170, 178, 179.

CHAPTER XIII

THE SOMME

1ST JULY 1916 ¹

XIII. CORPS ²

(Maps 1, 5, 6 ; Sketches A, 18, 19)

Map 1. **Sketch A.** THE front line of the XIII. Corps, which was on the right of the British line next to the French, extended from Maricourt to beyond Carnoy. It lay near the bottom of the northern slope of the valley between the Maricourt and Montauban ridges, in which the village of Carnoy is situated. The German front line was higher up on the same slope. Both the ridges take off near Guillemont from the Ginchy—Pozières ridge and are really spurs from it. The Maricourt ridge drops on its eastern side into the Hardecourt valley, in which are the two woods, Bois d'en Haut and Bois Favière, where the French were to have severe fighting. Between the Montauban ridge, on whose crest the red roofs of the village were a conspicuous landmark before the bombardment, and the Ginchy—Pozières ridges is a long valley known from the shape of a wood it contains as Caterpillar Valley. The Carnoy valley bifurcates; the northern branch, which provided good cover and in which ran a pre-war light railway line, was known as Railway

¹ The official name for the fighting 1st to 13th July is the Battle of Albert.

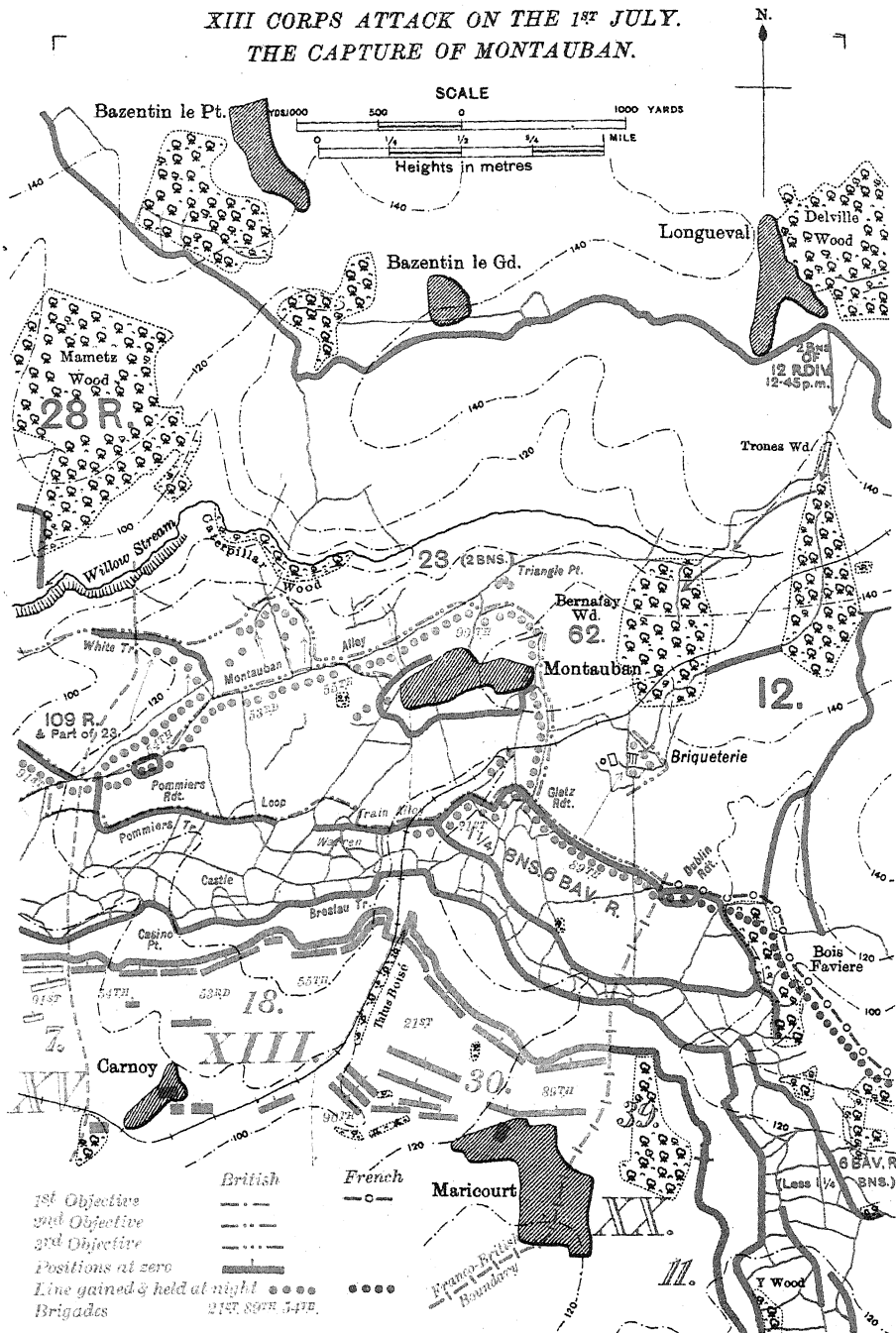
² XIII. Corps (Lieut.-General W. N. Congreve) :
30th Division (Major-General J. S. M. Shea), 21st, 89th and 90th
Brigades ;
18th Division (Major-General F. I. Maxse), 53rd, 54th and 55th
Brigades ;
9th Division (Major-General W. T. Furse), 26th, 27th and South
African Brigades.

G.O.C. R.A., Br.-General R. St. C. Lecky ;
G.O.C. Heavy Artillery, Br.-General L. W. P. East ;
Chief Engineer, Br.-General E. P. Brooker.

THE SOMME, 1916.

XIII CORPS ATTACK ON THE 1ST JULY.

THE CAPTURE OF MONTAUBAN.



Valley, and on its steep eastern slope stretched a long plantation called Talus Boisé. The ground over which the advance of the divisions of the XIII. Corps must proceed was therefore a long gentle slope, on the right almost flat, cut into by Railway Valley and other depressions, the spurs between being known by the names of the adjacent villages as Carnoy and Mametz spurs. There was splendid observation over the ground as far as the Montauban—Mametz road from Maricourt ridge, on whose reverse slopes the mass of the artillery of the corps, heavy and field, was deployed.

The German position was held by about 9 battalions of the *12th, 28th Reserve* and *10th Bavarian Divisions*.¹ The German defences consisted of a front position of several trenches, with a recently dug reserve line, Dublin Trench—Train Alley—Pommiers Trench, 700 to 1,000 yards behind it. A communication trench (called Montauban Alley) running from Montauban to Mametz on the reverse slope of Caterpillar Valley, formed a further retrenchment. The 2nd Position, some three thousand yards behind the first, extended past Maurepas to Guillemont, Longueval and the two Bazentins. The 3rd Position was in course of construction. The front system was strengthened by numerous strongpoints formed as a rule by isolating a sector of the trenches by means of all-round wire and trench-blocks. Among these self-contained defences were Glatz and Pommiers Redoubts, and "The Castle". The village of Montauban had been put in a state of defence, and on its southern side outside its perimeter ran a continuous trench.

The plan of attack of the XIII. Corps, issued on the

¹ The *6th Bavarian Reserve Regiment (10th Bavarian Division)* held from the Somme to the Montauban—Carnoy road, with the *63rd* (opposite the French) and *62nd Regiments (12th Division)* in support; and the *109th Reserve Regiment (28th Reserve Division)* from that road to Mametz (inclusive). Attempts had been made on the night of the 30th June/1st July to relieve the *109th* by the *23rd Regiment (12th Division)*, but, on account of heavy fire, only 1½ companies had got up to the line, the others remaining at Montauban.

The history (published 1931) of the *16th Bavarian Regiment (10th Bavarian Division)*, pp. 156-160, shows two companies in the 2nd Position, at Longueval and Bazentin le Grand, and the whole of the *6th Bavarian Reserve Regiment* in the front position. The maps and sketches should be corrected accordingly. The rest of the regiment was near Bapaume under orders to relieve the *99th Reserve Regiment*, shattered by the bombardment, in the Ovillers—Thiepval position. The third infantry regiment (*9th Bavarian Reserve*) of the division was in the Thiepval—St. Pierre Divion sector. The division, which had been resting since May, had been sent up to the Bapaume area on the 12th June.

15th June,¹ divided the operations into three "phases". In the first phase, the first day's work, Montauban, in the centre, on the top of the ridge, was to be secured. East of the village the advance was to reach the German trenches Nord Alley and Dublin Trench, in order to form a long flank to connect with the French at Dublin Redoubt. On the west, the line was to be pushed forward so as to capture Montauban Alley, and gain observation into Caterpillar Valley. The German reserve line Dublin Trench—Pommiers Trench, over a thousand yards distant, was to be the first objective; but from this line only the centre and the left of the corps were to go on to the second objective, Montauban and the top of the Montauban—Mametz ridge, and only the left to a third objective, a short distance ahead, in order to obtain better observation. As soon as the plan was settled, the 30th Division dug a new front trench, 150-200 yards nearer the enemy, with six communication trenches, across the re-entrant then existing between the Maricourt road and Talus Boisé.

The second and third phases, dependent on the success of the attack of the corps north of Fricourt, were to consist of a right wheel, pivoting on Favière Wood and Dublin Redoubt followed by a general advance eastwards through Bernafay Wood and Trônes Wood to the German 2nd Position, Falfemont Farm and Guillemont, the French on the right capturing Hardecourt and Maurepas.

As regards assistance from artillery the XIII. Corps plan laid down that:—"The advance of the infantry will be covered by a heavy barrage from all natures of guns and mortars. The heavy artillery barrage will lift direct from one line on to the next. The field artillery barrage will creep² back by short lifts.³ Both will work strictly according to timetable. The lifts have been timed so as to allow the infantry plenty of time for the advance from one objective to the next, on the principle that it is preferable that the infantry should wait for the barrage to lift than that the latter should lift prematurely, and thus allow the enemy to man his parapets. The

¹ Appendices 21, 22.

² Apparently the first use of the word "creep" in this connection.

³ This part of the operation was of the nature of a creeping barrage in that it was formed by a succession of short lifts; but by request of the infantry brigadiers the lifts were made on to previously registered points in the enemy's trench system. Thus the advance of the barrage was not continuous: it was dropped in turn on every piece of trench blocking the way, each battery keeping to its own "lane".

“infantry will follow as close behind the barrage as safety permits.”

The 30th Division was to attack on the right, the 18th on the left, Talus Boisé and then the track to Montauban, allotted to the 30th, forming the boundary between them.

The 9th Division was to be in corps reserve, assembling about Billon Wood (2 miles behind the front), Trigger Wood,¹ and localities where it would be sheltered from view by the crest of the Maricourt ridge.

The two leading brigades of the 30th Division were to capture the first objective, Dublin Trench—Glatz Redoubt, between Maricourt ridge and Montauban, in two stages, by 8.28 A.M. The right brigade moving along the flat top of the ridge was in the first stage to go only as far as Casement Trench, a switch trench running westward from Dublin Redoubt. The left brigade, passing along the western slope, was, in the first stage, to secure the trench 150 yards west of Glatz Redoubt, Train Alley, and next Glatz Redoubt. The third brigade, moving up Railway Valley, was then, at 9.30 A.M., to pass through the leading ones and capture Montauban, the second objective. The artillery lifts were timed to fit in with the three stages, a barrage map showing six lifts being issued by the divisional artillery commander, Br.-General G. H. A. White; and during the pause at the first objective the second was to be bombarded.

The 18th Division, moving up the Carnoy spur and the southern slope of the Mametz spur, was to capture the first objective, Train Alley and Pommiers Trench, using its three brigades in line. These, continuing abreast, were all to go on to the second objective, Montauban Alley, from Montauban to Pommiers Redoubt a commanding point on the Montauban—Mametz road. The total advance was nearly two thousand yards. The division was then, if possible, to push on to its third objective, a short distance only on the right but four hundred yards or more on the left, in order to gain possession of a projecting portion of the Montauban spur above Caterpillar Wood, which gave observation into the valley. The arrangements of the 18th Division artillery (Br.-General S. F. Metcalfe) were similar to those in the 30th Division, with the important addition that the advance to the second and third objectives, when the formidable front trench system on the

¹ The quarries in the valley between these woods were full of French batteries.

forward slope had been passed, was to be covered by a shrapnel barrage "moving in front of the infantry by "increments of range¹ until final barrage is established "on line H": that is beyond the objective for the day. Arrangements were also made with the XV. Corps on the left to enfilade Pommiers Trench with 60-pdr. shrapnel, which was done most effectively.²

On reaching the final objectives, the new line was to be consolidated by the formation of strongpoints. The 30th Division attached one section of a field company R.E. to each brigade, and the 18th Division two sections, for this purpose, besides detachments of the pioneer battalions (11/South Lancashire and 8/Royal Sussex). As soon as possible, detachments of infantry and machine guns were to be pushed forward from the final objective to seize important points. Thus the 30th Division was to secure La Briqueterie, a brick factory with a prominent chimney used as a German observation post, north-east of Glatz Redoubt, and the 18th Division was to raid Caterpillar Wood and to secure other points along the northern slope of Montauban ridge, from which Caterpillar Valley could be effectively commanded, while the escape of enemy guns from the valley would be prevented. Points beyond the new position suitable for artillery observation during the subsequent phases of the battle were also to be occupied. Certain specified field batteries (two brigades in all) were to be pushed forward to positions from which they could cover the ground between the new front and the German 2nd Position, special attention being paid to the establishment of a strong "box" barrage round Montauban to deal with probable German counter-attacks on the salient which would be created if the XIII. Corps were successful.³

The corps heavy artillery,⁴ which, combined with that

¹ Defined in a diary as "50 yards every 1½ minutes".

² In return the XIII. Corps permitted the XV. to put an 8-inch battery in its area in the Carnoy valley.

³ This barrage had been accurately registered with air observation during the bombardment. It was called for by a special visual (blue lamp) signal, and was put down in thirty seconds. The infantry was specially informed of this, and it gave the men great confidence.

⁴ This consisted of the 29th, 31st and 33rd Heavy Artillery Groups, and four French batteries of mortars:

Howitzers: two 12-inch; eight 9.2 inch; four 8-inch; twenty-four 6-inch.

Guns: two 6-inch; sixteen 60-pdrs.; four 4.7-inch.

Mortars: sixteen 240-mm.

This gives one heavy gun or howitzer for every 47 yards; with a field gun or howitzer to every 17 yards of front.

of the French XX. Corps on the right, was greatly superior in numbers to the German in this sector, being nearly four to one,¹ had already obtained the mastery of the enemy, and during the 1st July it practically destroyed its opponents, so that there was almost a complete absence of artillery reply. Indeed, so well had it done its work that, as will be seen, there was little resistance except from a few of the strongpoints, and machine guns, not artillery, were responsible for the British casualties.² Like the field artillery, the heavies were to be moved forward to positions from which the German 2nd Position, especially about Bazentin le Grand, could be effectively engaged.

It was decided not to attempt to cover the assault across No Man's Land by smoke, as the infantry commanders who had experience at Loos were opposed to its use, and the wonderful observation—almost every strand of wire could be seen—from the high ground near Maricourt, which ensured very accurate artillery barrages, would have been sacrificed. Some 4-inch Stokes mortars, however, were held in readiness to fire smoke bombs against machine guns and flanks of the line should this be required, and six Russian saps, to provide covered communications, had been mined by the 188rd Tunnelling Company R.E. right across No Man's Land ready to be connected to the German front line by blowing small charges at the ends.³

There was hardly any enemy shelling during the night on the XIII. Corps area, except a little by 5.9-inch howitzers on Carnoy, and the troops had no difficulty in getting to their assembly positions. Although the morning of the 1st July was fine, the low ground near Carnoy, where the British and German front trenches lay, was at first hidden in mist, which cleared about 7 A.M.

¹ The French XX. Corps had 32 heavy batteries, including some very ancient and noisy mortars, the British XIII., 18; the German *12th Division* had 10, to which must be added a third of those of the *28th Reserve Division*, which had 13.

² See Note II. at end of Chapter, which describes the "devastating effect" of the British and French fire on the German batteries.

³ The ground being hard chalk, the tunnellers were forced to work with push-picks to avoid being heard; when close to the enemy progress was continued by boring holes in the face with carpenters' augers. Vinegar was poured into the holes and, thus softened, the chalk surrounding each hole was then scraped out. One auger actually penetrated into a German officers' dug-out unnoticed by the enemy.

CAPTURE OF ITS FIRST OBJECTIVE (DUBLIN TRENCH)
BY THE 30TH DIVISION ¹

The assault by the right brigade of the 30th Division, the 89th (Br.-General Hon. F. C. Stanley),² the right of the British line, starting from four lines of assembly trenches, was carried out with complete success. At 7.22 A.M. there was a hurricane bombardment by six Stokes mortar batteries³ distributed on the divisional front at the end of special Russian saps, opened up during the previous night.⁴ At 7.30 A.M. through the mist and smoke the two leading battalions, the 17/King's and 20/King's, left their trenches and advanced in quick time, with rifles slung, across No Man's Land—which averaged 500 yards in width—in extended lines of companies at 100 paces' distance. To ensure good liaison, the officer commanding the 17/King's, Lieut.-Colonel B. C. Fairfax, and Commandant Le Petit of the 3rd Battalion of the 153rd Regiment, the left battalion of the French 39th Division, stepped over the parapet together with the second wave, at the point of junction, and, pushing forward, eventually led the advance arm-in-arm. The last companies started somewhat in advance of schedule time, in order to avoid the German barrage, which was almost immediately, though very feebly, put down on the assembly trenches which they had just left.

¹ The 30th Division, formed in November 1914, under Major-General W. Fry, was recruited in Lancashire (largely Liverpool and Manchester) by Lord Derby, two of whose brothers served in it, commanding an infantry and an artillery brigade respectively. It embarked for France in November 1915, Major-General Shea taking command in May 1916. The infantry brigades were originally the 89th, 90th and 91st, but the last was exchanged after arrival in France for the 21st Brigade (7th Division), two battalions of which were then exchanged, one with the 89th and the other with the 90th Brigade. Except these battalions, the units of the division had not taken part in any previous battle, although the 90th Brigade had suffered considerably from shelling during the action in which the French lost Frise on the 28th January 1916. The 149th Brigade R.F.A. had been in action on the same occasion, and had sunk row-boats carrying Germans across the Somme.

² For the composition of infantry brigades see "Infantry Order of Battle" at end of Volume.

³ Space does not admit of the mention of every trench-mortar battery and machine-gun company; they all had their specific tasks and places, and generally were to cover the advance to the first trench, then lift, and, later, go forward.

⁴ An accident in one of the emplacements, due, it is believed, to a shell striking the embrasure as it left the mortar, exploded hundreds of rounds stacked behind the sap.

The wire of the front line was found to have been exceedingly well cut,¹ one account saying "there was none left". The German defenders, cowed perhaps by the bombardment and certainly depressed by want of food, no rations having reached them for six days, were not out of their dug-outs in time to man the trench, and offered little resistance. Three hundred prisoners, chiefly of the *62nd Regiment*, and four machine guns were subsequently captured in the dug-outs by the "mopping-up" parties of the 2/Bedfordshire, the supporting battalion. The two leading battalions passed on, after a pause, to Casement Trench and Alt Trench, the goal of the first stage, a party of thirty Germans in a small copse, German's Wood, surrendering to them on the way. Thence, after a short pause for the artillery barrage to lift—for the advance had been so rapid that the infantry were actually held back by it—the 89th Brigade pressed on with the utmost steadiness to Dublin Trench, the first objective, which was reached at 8.30 A.M. It was found unoccupied. Simultaneously the 3rd Battalion 153rd Regiment entered Dublin Redoubt at the eastern end of the trench, where Commandant Le Petit embraced his British confrère. The new position was now consolidated, picks and shovels being brought up by carrying parties of the supporting battalions, the right in close touch with the French and the left in the eastern end of Glatz Redoubt² where the 21st Brigade was about to arrive. Dublin Trench had been so battered by artillery that it was unrecognizable, and at least one battalion passed over it and dug new trenches by connecting shell holes some fifty to a hundred yards on the German side of where Dublin Trench had been, a circumstance which saved many casualties later when the Germans shelled the old position. Three batteries of the 149th Brigade R.F.A. (Lieut.-Colonel Hon. G. F. Stanley) were pushed forward north-west of Maricourt; one was immediately knocked out, but the other two were left undisturbed by the enemy.³

The 21st Brigade (Br.-General Hon. C. J. Sackville-West⁴) achieved similar success. The German front line

¹ Mainly by the medium trench mortars, it was said.

² A heavy shell had penetrated a deep dug-out in this redoubt, killed a regimental staff and apparently scattered its defenders.

³ The total losses of the two leading battalions of the 89th Brigade, reported at noon, were :

	Officers.	Other ranks.
17/King's	3	100
20/King's	3	49

⁴ Now Major-General Lord Sackville.

was crossed with few casualties. The defenders, here too, were mostly caught in their dug-outs and taken prisoner by the "moppers-up". The leading battalions, the 19/Manchester and 18/King's, following the eastern slope of Railway Valley, went steadily forward until held up by the British barrage on Alt Trench, the first stage. Moving close up behind the barrage, the leading companies waited till it lifted, at 7.45 A.M., and then occupied the trench. The Manchesters had suffered little loss; but the King's, stopped by some Germans in Train Alley covered from view by a hedge, had been severely handled by enfilade machine-gun and rifle fire from the western side of Railway Valley, where the 18th Division was in difficulties. A party of Germans in a network of trenches known as "The Warren", projecting from the German reserve line just inside the 18th Division boundary, threatened indeed to hold up any advance towards Glatz Redoubt. The majority of the five hundred casualties sustained by the 18/King's during the day were incurred at this time. The 2/Green Howards, which were in support, suffered two hundred casualties from machine-gun fire in No Man's Land, and only a small number managed to cross it.¹ Two small parties which had followed the leading battalions as "moppers-up" were at once sent along the trenches to the left to deal with enemy bombers who, emerging from dug-outs, had begun to push eastwards. After some delay, these opponents were killed or scattered, mainly through the exertions of one officer who out-threw the Germans. This cleared the way for a party of the 18/King's, who ran up Train Alley, killed the defenders holding the line of the hedge, and took prisoner an officer and thirty men, the others retiring towards Montauban.² The Germans in the Warren, however, still held out in front of the 18th Division.

The 21st Brigade, relieved by the action of the 18/King's, advanced without further incident to Glatz Redoubt, which was reached at 8.35 A.M., and made junction with the 89th Brigade. The 30th Division, thanks mainly to the artillery preparation and covering fire, had thus attained its first objective in little over an hour.³

¹ The 2/Wiltshire employed mainly as carriers lost just under a hundred men.

² "Feld.-Art. Regt. No. 21" states that "soon after 9 A.M. large numbers (stärkere Truppen) of the 109th Regiment hurried back through the "battery positions in Caterpillar Valley behind Montauban."

³ The captured diary of Lieut.-Colonel Bedall, commanding the 16th Bavarian Regiment, states: "The troops who had so far held the lines

CAPTURE OF PART OF ITS FIRST OBJECTIVE (POMMIERS REDOUBT) BY THE 18TH DIVISION¹

Major-General Maxse attacked with his three brigades in line, from right to left, the 55th (Br.-General Sir T. D. Jackson), the 53rd (Br.-General H. W. Higginson) and the 54th (Br.-General T. H. Shoubridge).² Having been in the area since March, the units knew it well. There had been mine fighting in May on the Carnoy front, resulting in a mass of small craters which covered a width of about a hundred and fifty yards in No Man's Land close to the Carnoy—Montauban road. The Germans here had withdrawn from the front line after filling it with barbed wire and spiked stakes, and held the support line; but they continued to occupy some of the craters, in which they had built dug-outs, with a few machine guns and snipers. The 55th and 53rd Brigades were to pass on either side of the crater zone, which was to be cleared and occupied by a party from the 55th Brigade, assisted by a large flame projector.³

At 7.27 A.M. two mines (one 5,000 lbs. and the other 500 lbs.), laid by the 183rd Tunnelling Company R.E., were fired with success under the enemy's parapet, at the salient Casino Point and at the western end of the enemy front to be attacked, in order to destroy flanking machine guns and blow in dug-outs. Taking advantage of the explosions—the débris from the larger mine caused a few casualties in the 6/Royal Berkshire—the leading lines of the three brigades started forward from old trenches cleaned out for the purpose and from taped positions.⁴ Under cover of the barrage and machine-gun fire, the

“south of Mametz and south of Montauban had sustained severe losses from intense enemy bombardment, which had been maintained for many days without a pause, and for the most part were already shot to pieces”.

¹ The 18th (Eastern) Division was formed in October 1914 from the “Second Hundred Thousand”, mostly from men of the home counties and East Anglia, with one Northamptonshire battalion. It trained near Colchester and arrived in France 24th-25th July 1915. It had not taken part in any previous battle.

² The 8/Royal Sussex (Pioneers) and the Field Companies R.E. were divided amongst the brigades.

³ This flame projector was under the direction of Major W. H. Livens, R.E., subsequently the inventor of the Livens projector. The range of the flame was limited by its being in a fixed emplacement at the end of a Russian sap.

⁴ It was considered that freshly dug assembly trenches would probably give the enemy warning of the assault.

parapet was crossed into No Man's Land, which was only about two hundred yards wide. The bombardment of the crater area had not, however, destroyed its garrison,¹ and, although the flame projector on the western side of it successfully stifled resistance there, the eastern side was not affected, and the clearing party (a company of the 7/Buffs less two platoons) was unable to force an entry. A German machine gun firing eastwards along No Man's Land from the craters, and some others just east of the crater area, were therefore able to rake the line of the 7/Queen's, on the left of the 55th Brigade,² causing it, and the following troops of the 7/Royal West Kent, heavy casualties. The confusion and delay which ensued gave the Germans time to man the support trench—held as the front trench—and the trenches and strongpoints behind seemed to be already garrisoned. When therefore the barrage lifted and the advance was continued, there were over three hundred Germans ready in position, and their rifle fire for a long time was very heavy. The barrage had gone on to the next line and all advantage of it was lost, but, fortunately, the enemy's artillery fire was slight, chiefly shrapnel bursting high.

The check to the 7/Queen's delayed the advance of the 8/East Surrey on the right, and at 8.37 A.M., although this battalion had crossed the enemy front line, it had been unable to get beyond the support line, being held in front by the enemy in the Warren, and enfiladed from the left. It was not until half-an-hour later, when the establishment of the 30th Division in Glatz Redoubt and Train Alley, together with the advance of the 90th Brigade, threatened the line of retreat of these Germans, that the defence began to weaken, a number of men retiring by the communication trenches to and through Montauban. The 8/East Surrey, supported by two companies of the 7/Buffs, was then able to get bombing parties forward into the enemy trench just short of its objective, Train Alley; but by this time its three leading companies had lost all their officers but

¹ A proposed bombardment of the area by heavy howitzers on the previous day was abandoned because it involved withdrawing the troops in the front line during its execution. According to German accounts, the area was held by portions of the *109th Reserve* and *23rd Regiments*, but most of the prisoners eventually taken belonged to the *6th Bavarian Reserve Regiment*, who said they had only arrived during the night, so possibly the original garrison was destroyed.

² Front line 8/East Surrey and 7/Queen's; in support 7/Royal West Kent and 7/Buffs. The last-named battalion was much divided during the attack to reinforce the others.

one, and it was difficult to organize a further advance. The 7/Queen's, on the left, was still held up in front of Breslau Support Trench.

The 53rd Brigade,¹ west of the Carnoy road, with the 8/Norfolk on the right and the 6/Royal Berkshire on the left, was able to get forward more easily. This was due to the effect on its right of the flame projector, which cleared resistance off the western edge of the Carnoy craters, and on its left, of the mine under Casino Point, which destroyed the flanking arrangements, blowing one machine gun into the air. The moral effect, too, of this mine was considerable; for a number of Germans ran out into No Man's Land and surrendered to the Berkshire. The wire having been almost completely cut, the battalions crossed the enemy front and support lines, meeting little opposition, except on the right, where first Germans in "The Castle", a small work behind the support line, and then a party holding out in Back Trench, behind Breslau Support Trench opposite the 55th Brigade, delayed the right of the Norfolks. The Castle was quickly brought to surrender, but Back Trench continued to resist stoutly. This, however, did not affect the left of the Norfolks and the Berkshire, which proceeded to attack the next objective, Pommiers Trench, the German intermediate line, which lay on the high ground of Montauban ridge. In spite of the enfilade fire of the XV. Corps which had assisted the barrage, three German machine guns opened from this trench, and the advancing lines were checked until a bombing party working up Popoff Lane, a communication trench, succeeded in surprising one of the gun crews and rushing it. The crew of the other two guns, taken in flank, did not show further fight, and retired with their guns along a communication trench towards Pommiers Redoubt. The lines then moved on again, and at 7.50 A.M. Pommiers Trench was occupied without further incident. The consolidation of this trench, facing north, was at once taken in hand. "The Loop", a strongpoint at the eastern end of the trench, had still to be captured, fire from it causing heavy losses (the greater part of the day's casualties of the 6/R. Berkshire, 12 officers and 339 other ranks, were incurred at this period), and a company of the 10/Essex was sent to reinforce. Bombing squads with Lewis guns were sent towards the Loop, but found the trench blocked. A

¹ 8/Norfolk and 6/R. Berkshire in front line; 10/Essex and 8/Suffolk in support and reserve, and providing carrying parties.

strong party with a Stokes gun was sent up Pommiers Lane towards Pommiers Redoubt, 400 yards ahead; but here, too, the trench was found blocked by a mass of barbed wire, and it was clear that the redoubt would not be easy to take.

Meantime the 54th Brigade, the left of the 18th Division, attacking up the southern face of Mametz spur between the craters formed by the two mines which had been fired, with the 7/Bedfordshire and 11/Royal Fusiliers leading, had crossed both the German front and support lines with little loss. Moving as if at manoeuvres, they continued on, until a single machine gun in "The Triangle", a strongpoint in the third trench, swept the two leading companies of the Bedfordshire and caused heavy losses before it could be rushed. The advance of the Royal Fusiliers over the top of the Mametz spur was so rapid, that a halt had to be made in front of Pommiers Trench, as the artillery had not yet ceased firing on it. At 7.50 A.M., on the lift of the guns, this trench, the first objective, was at once assaulted and entered almost simultaneously with the left of the 53rd Brigade, which had been much assisted by two of the brigade machine guns.

During this advance, bombing parties of the 11/Royal Fusiliers, told off beforehand, moving ahead of the line, did splendid work in overcoming the resistance and clearing the dug-outs in Black Alley, a communication trench leading back to Pommiers Trench: their instructions were to stay in the alley until every German in it was dead, and they did not very long delay there.

Preparations were at once begun by the 53rd and 54th Brigades for the further advance across the top of the ridge against Pommiers Redoubt, Maple Trench and Beetle Alley, the next objectives.

At 8.28 A.M., therefore, when the artillery was due to lift to the second objective, the situation of the 18th Division was that the extreme right had nearly, and the left had completely, reached their first objective; but, in the centre, the 7/Queen's and the right of the 8/Norfolk were held up by the enemy in Breslau Support Trench and in the maze of trenches behind it. Meanwhile the left of the Norfolks, owing to the resistance in the Loop, where the 6/Berkshire was still engaged, could not move eastwards to help them.

The advance against Pommiers Redoubt¹ was carried

¹ It was the headquarters of a battalion of the 109th Regiment, and had a garrison of a whole company.

out at 8.30 A.M. by the 10/Essex (53rd Brigade) and the 7/Bedfordshire and 11/Royal Fusiliers (54th Brigade). With a good field of fire over the flat top of Montauban spur, and with its wire entanglements only imperfectly destroyed, the redoubt made a stout defence. Immediately the bombardment lifted from the second objective, the creeping barrage "by increments" was fired, and the attack developed, the leading lines encountering heavy machine-gun and rifle fire. Several times men reached the wire, but all frontal attempts to penetrate further broke down. Parties were therefore sent to try and approach the redoubt from the flanks.

A detachment of the Royal Fusiliers with Lewis guns was despatched along a communication trench to attack from the west, and succeeded in entering Maple Trench. From here it was able to enfilade the southern face of the redoubt, and put out of action the Germans who were lining it, head and shoulders above the parapet, firing on the infantry lying out in front. Before the enemy had recovered from this surprise the bulk of the Royal Fusiliers and the leading men of the Bedfordshire, who had worked round the eastern flank of the redoubt, rushed through the gaps in the wire. With the assistance of the companies left in front of the work, and after hand-to-hand fighting in which quarter was neither asked nor given, the remainder of the garrison was killed or taken prisoner. Maple Trench was also secured.

The fight for the redoubt lasted an hour; the casualties incurred were heavy; units were considerably intermingled; and the barrage was well ahead; but, in spite of this and although the troops on either flank—the left of the 53rd Brigade on the right and the 91st (of the 7th Division) on the left—had not reached the level of the redoubt, the Bedfordshire and Royal Fusiliers, reinforced by the 6/Northamptonshire, pressed on to Beetle Alley, beyond which the barrage was now falling. This trench was entered at 10.15 A.M., any resistance being overcome by bombing parties. Attempts to push eastwards along it and along Montauban Alley were, however, strongly resisted; the fight became a bombing contest; but, the German trenches being well blocked, for some time no further progress was made by the centre and left brigades of the 18th Division, whilst on the right movement was only just recommencing.

CAPTURE OF ITS SECOND OBJECTIVE (MONTAUBAN)
AND LA BRIQUETERIE BY THE 30TH DIVISION

The occupation of the Dublin Trench—Glatz Redoubt—Train Alley line, the whole of the first objective of the 30th Division, by the 89th and 21st Brigades, had prepared the way for the advance, through the 21st, on Montauban of the 90th Brigade (Br.-General C. J. Steavenson). This brigade had been in readiness in the assembly trenches in the deep valley about Cambridge Copse, west of Maricourt, since 2.30 A.M. At 8.30 A.M., one hour after zero, as previously arranged, its two leading battalions, the 17/Manchester and 16/Manchester, moved forward in lines of companies, each company in line of half-platoons in file, followed by the 2/R. Scots Fusiliers in close support, Lieut.-Colonel R. K. Walsh of this battalion being in command of the attack. The advance along the east side of Talus Boisé was sheltered, being in Railway Valley, while forward of this a smoke candle barrage was formed by the battalions of the 89th and 21st Brigades in Dublin Trench. The Germans put down a light barrage directly the movement began, but it did little damage, owing to the formation adopted and because the ground, in addition to being soft, was ploughed and pulverized by previous shelling; but Lieut.-Colonel H. A. Johnson of the 17/Manchester was wounded.

The advance of the Manchesters was carried out with remarkable steadiness and enthusiasm, in spite of the fact that severe casualties were soon inflicted on the brigade by a German machine gun which held out in a position behind the old German front line trench, about the point where it was joined by Breslau Alley. This machine gun had taken toll of the advance of the 18th Division and had then swung round on to the 90th Brigade, which, however, continued its advance undeterred. Train Alley and the 21st Brigade line was reached fifteen minutes before scheduled time and before the barrage, with its final intensive five minutes, was timed to lift. A halt had therefore to be made, the front lines waiting in Train Alley, the remainder of the brigade lying down in the open.

It was not till this moment that it was possible to locate the German machine gun, firing in enfilade on the left flank, which was entirely left open. It was then destroyed by a Lewis gun of the 16/Manchesters, its gallant crew standing to their posts to the end. There was a question at corps

headquarters as to whether the advance should be stopped until the 55th Brigade (18th Division) on the left, most of which was still held up, had won all of its first objective. But, in the expectation that an advance on Montauban would do much to weaken the opposition being offered to the right and centre of the 18th Division, the 90th Brigade was allowed to proceed.

The enforced wait lengthened. All the commanders of the leading companies of the 16/ and 17/Manchesters had been killed or severely wounded, but there was little delay when at last the artillery lifted. A sudden burst from a solitary machine gun in Montauban decided the situation and the front wave sprang forward and swept up the slope to the village followed by the rest of the brigade. Owing to the heavy casualties companies had become intermingled and they presented from the rear the appearance of two dense lines of men four hundred yards apart. Fortunately arrangements had been made by the 30th Division to screen the advance forward of Glatz Redoubt by a smoke barrage launched by two sections of the 4th Mortar Company of No. 5 Battalion Special Brigade R.E. (twelve 4-inch Stokes mortars), which had been sent to the redoubt for the purpose.¹ Although the trench outside the southern edge of Montauban was well-sited, the Germans made no effort to defend it, and the village was entered by the Manchesters and Scots Fusiliers at 10.5 A.M. without opposition. It was deserted—except for a fox—and a scene of complete devastation, although, the houses having been small, the alignment of the main streets was quite plain.² The front line pressed on through the ruins, with the second line hurrying up close behind from the determination of the men to be in at the finish. By 11 A.M., as the last of the smoke cloud dispersed, the part of Montauban Alley beyond the northernmost houses, the second and last objective, was entered. The Germans still there, some hundred in all, mostly surrendered without a fight. Across Caterpillar Valley beyond could be seen several hundreds

¹ German diaries ("Feld-Art. Regt. No. 21") state that the smoke cloud at this time was so thick in Montauban and Caterpillar Valley that one could only see two or three yards ahead.

² One of the French 240-mm. mortar batteries had fired on Montauban for the whole 7 days of the bombardment. The German dug-outs in the village were very deep, but one shell had entered the artillery command dug-out and killed the occupants. This no doubt disorganized the control of fire. Maps of the enemy communications and "reconnoitred battery positions" were found. One dug-out was full of dead whom there had been no opportunity for a week to bury.

more streaming northwards along the Bazentin le Grand road, and the forward artillery observing officers, who had been provided with lettered panorama sketches to enable them to direct fire on enemy concentrations, at once got the British guns turned on to these fugitives. The last to leave were the German field artillerymen, driven from their guns in Caterpillar Valley by men of the 16/Manchester, who rushed the batteries and captured and brought back the first three guns taken in the Somme battle. The others had to be left and some of them were removed by the Germans during the night.¹

The consolidation of the northern side of Montauban was at once taken in hand, and strongpoints as previously arranged constructed by the 201st Field Company R.E. and the 2/R. Scots Fusiliers. A hot meal for the troops was brought up by carriers from the cookers, which had been pushed forward to the old British line in Maricourt. From 1.45 P.M. onwards, however, work in Montauban itself was carried on with difficulty and considerable loss, the 201st Field Company R.E., the whole of which had been now sent to the 90th Brigade, having many casualties, for the enemy began an accurate and methodical bombardment of the village from the north and east, which continued throughout the afternoon.

With the fall of Montauban, the way to the capture of La Briqueterie, with the important German observation post in its chimney stack, was clear. At 11.30 A.M. orders had been issued from divisional headquarters for the heavy artillery to open on it, and to lift at 12.30 P.M., at which time the attack was to be delivered by No. 4 Company of the 20/King's. This enterprise was entirely successful. The company moved forward northwards in open order

¹ The 54th Brigade brought in two undamaged guns from south of Mametz Wood on the night of the 2nd/3rd July.

"Feld.-Art. Regt. No. 21" states:—"The infantry had retired behind the battery positions of 4/21 and 4/29. Colonel Pietsch thereupon gave the order to evacuate the position. In their retirement the men came under a heavy fire both from machine guns in Montauban and from airmen, who came down to within 150 feet. . . . The loss of the guns, however, gave the men no peace, and all volunteered for the dangerous task of recovering them. The same evening the battery leader of 4/21 and nine men went forward with three of the limbers through the front line of infantry to the old battery position. Three of the guns were limbered up under fire and brought back successfully to Longueval, although the battery leader was killed during the action."

According to the Bavarian Official Account (p. 275), four more of these guns, undamaged, were recovered from between the opposing lines by No. 4 Company 16th Bavarian Reserve Regiment on the night 3rd/4th July.

from Dublin Trench under cover of the bombardment to within close range of the buildings, whilst simultaneously a bombing party which had moved up Nord Alley, a communication trench leading from Glatz Redoubt, advanced eastward to cut off the retreat of the garrison. At 12.34 P.M. the buildings, which had suffered severely in the bombardment, were rushed, and many German dead were found; but no opposition was encountered until the far side was reached. There a machine gun was being hurriedly brought into action from a dug-out, and a few casualties occurred before resistance was overcome. A number of officers and men in the deep dug-out near by, surrendered.¹ Two machine guns and a quantity of documents, orders and material were taken.

Thanks to very efficient artillery support and careful rehearsals, the 30th Division had most successfully and expeditiously accomplished the first phase of its task, reaching and holding its second objective. It had cleared the Germans off a frontage of fifteen hundred yards to a depth of two thousand yards, captured 12 officers and 489 other ranks, and three field guns, and established a firm footing soon after midday on the Montauban ridge overlooking Caterpillar Valley, although, as the 18th Division was not yet up, its left was exposed. The French XX. Corps on the right, there being eight hours more of daylight, was prepared to go on;² the men of the 30th Division were not tired, nor had the losses been heavy; and the XIII. Corps reserve, the 9th Division, was available, besides higher reserves. But failure on other parts of the British battle line led to Major-General Shea being ordered to delay the initiation of the further phases of the battle of the 30th Division: the advance through Bernafay and Trônes Wood to Guillemont. He was, however, instructed to give a helping hand to the 18th Division.

Patrols were sent out, including some into Bernafay Wood which was found empty except for a few men who were taken prisoners,³ but no other steps were taken to

¹ Including the headquarters (colonel and adjutant) of the 62nd Regiment and two artillery officers (commander and observer) of No. 2 Group Field Artillery Regiment No. 21.

² On the following days, when the British wished to go on, it did not suit the French to do so.

³ At 3 P.M. German artillery observers found there was no infantry in Bernafay Wood (Somme-Nord, i. p. 67). About the same time, however, the R.F.C. reported that enemy infantry was moving from Trônes to Bernafay Wood.

keep touch with the enemy ; for the day's programme of advance had been carried out, and it had been impressed upon all at rehearsals that the enemy would counter-attack to recover Montauban as surely as night follows day. The energies of the troops were therefore devoted to consolidation, which proved no easy matter, as the chalky ground was so broken and cracked by shell fire that sand-bags had to be built up to obtain cover. Strongpoints in the area between Montauban and Dublin Trench—Train Alley were built by the battalions and engineers in support. Four communication trenches were dug across No Man's Land by the 11/South Lancashire (Pioneers), and by 6 p.m. the road from Maricourt towards Montauban was repaired by the engineers to a point two hundred yards beyond the old German front line.

CAPTURE OF THE WHOLE OF ITS OBJECTIVES BY THE 18TH DIVISION

By the original time-table, the objective of the 18th Division, the northern face of the Montauban ridge, should have been reached by 10 A.M. ; although the left of the division had got there by that hour, the right was still short of Train Alley, while the centre—the inner wings of the 55th and 53rd Brigades—was still near the German old front trench. It was not till 9.30 A.M. that the clearing party of the 7/Buffs was able to overcome the unexpectedly strenuous opposition in the Carnoy crater area, which had proved a regular warren of Germans. The enemy in Breslau Support Trench and the Loop continued, however, to hold on. The urgent need of pressing forward the advance was fully realized by Br.-General Jackson (55th Brigade) ; for the attack on Montauban, just related, of the 90th Brigade, on the right, was due to cross the line of Glatz Redoubt by 10 A.M. ; and furthermore the barrage might be lost, for it was impossible to get in touch with the artillery and change the times of the lifts. At 9.45 A.M. therefore he ordered the 7/R. West Kent, which he supposed to be in the British old front trench, to reinforce and carry forward the attack to the Pommiers line, but the officer commanding, having heard that the 8/East Surrey was held up, had already ordered his companies forward. Continuous machine-gun and rifle fire from the direction of the Loop interfered greatly with getting this movement under way. The runners sent to

the two left companies were wounded, and there was a delay until the adjutant himself got through with the message. Meanwhile the two right companies, under cover of the Carnoy spur, managed to reach the East Surrey, who were close up to Train Alley. The two left companies of the West Kent now came up and both battalions eventually reached the Montauban road about noon. Their presence was signalled to a contact aeroplane which soon afterwards flew low over the ridge blowing a Klaxon horn.

The progress of this advance, together with the occupation of Montauban by the 30th Division, and Pommiers Redoubt by the 53rd and 54th Brigades, had an unsettling effect on the Germans holding out about Breslau Support Trench and the Loop; for it seriously threatened their line of retreat. Many, following the earlier example of those in the Warren, began to leave the position, and shortly after 10 A.M. the 7/Queen's, sending forward parties along the communication trenches, was able, although only about ten grenades were available, to rush and clear it. The Queen's captured 90 men of the 62nd and 109th Regiments, and entered the western end of Train Alley, held by part of the East Surrey.¹ Whilst the eastern flank of the German resistance was being dealt with, the 8/Norfolk, the right battalion of the 53rd Brigade, was overcoming it on the other side; and at 10.20 A.M.—after a sniper who had caused many deaths had been shot by a company sergeant-major of the 6/R. Berkshire in single combat—some sixty Germans holding the Loop surrendered to this battalion.² There then remained only the enemy hanging on in a strongpoint in Back Trench,³ near where Breslau Alley crossed it. This was at once approached by bombing attacks from three sides, but it was not until about 2 P.M. that the garrison stood up on the parapet and surrendered; it included two officers and 150 other ranks, chiefly Bavarians.⁴ Back Trench was then occupied by the 7/Queen's

¹ One German machine-gunner, a grey-headed, elderly man, with a pile of empty cartridge cases nearly as high as the gun, was found dead, still holding on to its handle.

² A wounded Bavarian who had chained himself to his machine gun was found.

³ Midway between Breslau Trench and Train Alley.

⁴ Of the 6th Bavarian Reserve Regiment. The diary of this regiment contains the following entry:—

“1st July—Regimental staff moves from Ginchy to Bois de Bernafay, 1 km. east of Montauban, to battle headquarters.”

“2nd July—nothing known of the regiment.”

The Bavarian Official Account states: “Placed at the disposal of the 12th Division, the 6th Bavarian Reserve Regiment on the night of the

and the 8/Norfolk, both of which battalions had suffered heavily.¹

The Queen's, now numbering little more than a hundred all told, reinforced by a company of the 7/Bufs, moved on without further incident to the Montauban—Mametz road, where, about 3 P.M., it joined up with the 8/East Surrey, 7/R. West Kent and other Bufs on the right. Stokes mortars were brought into action against a party of Germans in front of Montauban Alley, and, under cover of this fire, this further sector of the alley was occupied by 5.15 P.M. without difficulty, the Germans retiring to Caterpillar Wood. Thus the right half of the second objective of the 18th Division was secured.

Meantime the rest of the alley had been captured, and the assistance which the XIII. Corps directed the 30th Division to give the 18th was found unnecessary. Working from Pommiers Redoubt, a bombing party of the 10/Essex cleared 400 yards of it as far as White Trench, reached by 3.30 P.M. Here, at 5.40 P.M., it met parties of the 6/R. Berkshire and 8/Norfolk, which had made their way up Loop Trench from the Loop with considerable difficulty, owing to the presence of a number of snipers with automatic rifles, who prevented any movement above ground near the trench. The Norfolks and Berkshire then took over the sector of Montauban Alley between the 7/Queen's (55th Brigade) and the 54th Brigade, and the whole alley, the second objective of the 18th Division, was in British possession.

The Norfolks now sent parties forward along Caterpillar Trench, double-blocking it in front of Caterpillar Wood, to which it led, without meeting any enemy. Both Norfolks and Berkshire established advanced parties in the third objective, the advanced line overlooking Caterpillar Wood, the right in touch with the 55th Brigade west of Montauban. On the front of the 54th Brigade, the 7/Bedfordshire and 11/Royal Fusiliers had worked forward to White Trench, their third objective, along the northern face of Montauban ridge, parties of both battalions occupy-

“29th/30th June was spread out over the whole of the divisional sector, and sent forward as working parties into the front trenches. During the attack of the French and English on the morning of the 1st July, the regiment was practically wiped out, losing 35 officers and 1,775 men.”

¹ Casualties :—

	Officers.	Other ranks.
7/Queen's	15	463
8/Norfolk	11	292

ing it at 4 P.M.¹ Strongpoints were sited in and behind the third objective, and constructed during the night. The supporting battalions of all three brigades set to work consolidating the front line and positions in rear and repairing the old German trenches; the 2/Wiltshire (21st Brigade) was sent for the same purpose to Montauban. Six field batteries were pushed up abreast of Carnoy, and single guns told off to enfilade certain lines. Towards 10 P.M. two battalions (12/Royal Scots and 6/K.O.S.B.) of the 9th Division were placed by the corps at the disposal of the 18th Division for carrying and digging.

As a result of the successes of the 30th and 18th Divisions, the XIII. Corps had driven the Germans from the entire sector of the Montauban ridge allotted to it as the objective in the first phase of the battle. The corps attributed the successes of its divisions to their training in open warfare; to thorough "mopping up", so that no Germans sprang up behind the lines to shoot the attackers in the back; and to the preliminary ascertainment, by feints, of where the German barrages would fall, and rapid movement of the troops over the belts of ground involved. The losses, in spite of the comparatively easy advance, had been over six thousand.²

The late afternoon was extraordinarily quiet: the bombardment of Montauban ceased and only a single German 5.9-inch gun shelled Montauban Alley at extreme range slowly and inaccurately. From the air some infantry was seen advancing between Trônes and Bernafay Woods.³ There was no difficulty in getting up supplies or removing wounded. The Germans being fully occupied by the attacking troops, the clearance of the wounded, indeed, had been begun soon after the first advance, and was carried on steadily all day across the open, motor ambulances coming up as far as Carnoy. All wounded were evacuated within 24 hours. Once Montauban had been reached, the long slope between it and the old front

¹ Casualties:—

	7/Bedfordshire	Officers.	15	Other ranks.	306
	11/Royal Fusiliers		5		222

		Killed.	Wounded.	Missing.	Prisoner.	Total.
30th Div.	{ Officers	36	76	—	—	3,011
	{ Other ranks	792	2,042	53	12	
18th Div.	{ Officers	40	70	—	—	3,115
	{ Other ranks	872	2,087	46	—	

³ No doubt part of the 12th Reserve Division arriving. See Note II. at end of Chapter.

line was dotted with groups of carrying parties, and of engineers repairing the roads and the light railway, which was made available for pushing trucks by hand. Even the field batteries trotted forward without molestation.

In the evening light the outposts of the XIII. Corps, looking across Caterpillar Valley to the broad southern slopes of the Ginchy—Pozières plateau, could see the villages of Longueval, with Delville Wood on its eastern side, Bazentin le Grand and Contalmaison, half hidden and separated by the Bazentin and Mametz Woods, and, further behind, High Wood. The names of these localities, when discovered from the map, meant nothing to the watching groups, though all were soon to become for ever memorable in the annals of the British Army.

As the light failed, all fighting ceased; even the British guns which had been shelling fugitives were silent. Activity behind the front line, however, increased and intensified: the machinery by which food, water¹ and ammunition reached the troops was soon in full swing, and aided by reinforcements, the work on defences and improvement of communications was redoubled.

An attempt made at 9.30 P.M. by a small party of Germans to approach Montauban from a quarry in Caterpillar Valley north of it was driven off by fire,² and night fell with the XIII. Corps in solid occupation of its conquests.

NOTE I

THE COMPLETE SUCCESS OF THE FRENCH ON THE 1ST JULY³

Map 6. The French Sixth Army (General Fayolle), astride the Somme, Sketch 19. on the British right, in the Group of Armies of General Foch, obtained all its objectives and more on the 1st July. North of the Somme, alongside the British XIII. Corps, was the XX. Corps (General Balfourier);⁴ next to it, across the river, were the I. Colonial Corps (General Berdoulat)⁵ and the XXXV. Corps (General Jacquot).⁶ The II. Corps (General Duchêne)⁷ was in reserve.

¹ A water main had been laid up to Carnoy before the battle, and a water point was now opened there.

² This party of 150 men of various regiments had apparently hidden in the quarry until night (Somme-Nord, i. p. 74).

³ From material and maps kindly supplied by the Historical Section of the French General Staff.

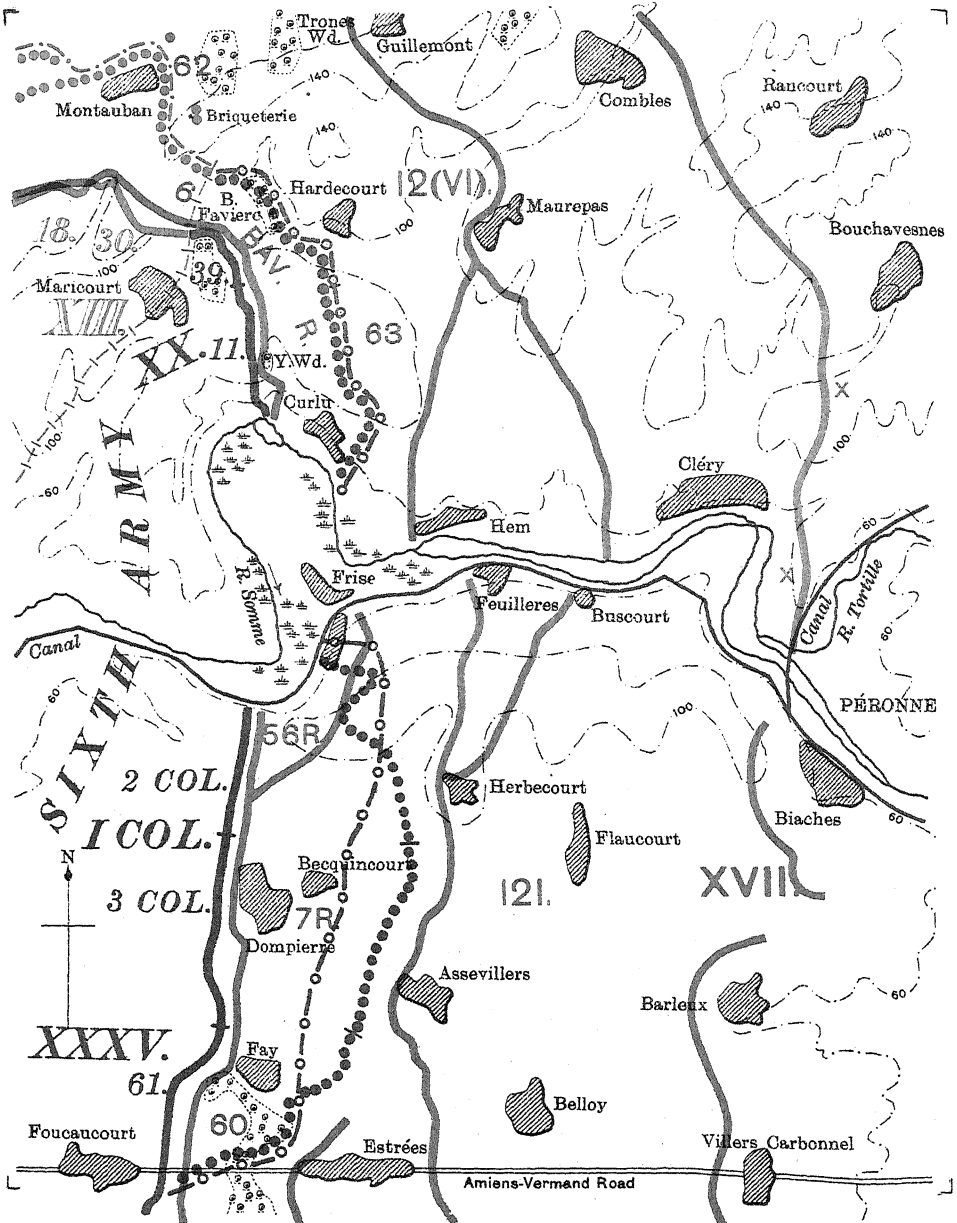
⁴ General Foch's first command in the war, and now composed of the 11th, 39th, 72nd and 153rd Divisions, with 32 batteries of heavy artillery.

⁵ 2nd Colonial, 3rd Colonial, 16th Colonial and 99th Territorial Divisions, with 65 batteries of heavy artillery.

⁶ 51st, 61st and 121st Divisions, with 20 batteries of heavy artillery.

⁷ 3rd and 4th Divisions, with 4 batteries of heavy artillery.

ATTACK OF THE FRENCH SIXTH ARMY ON THE 1ST JULY



Objective 1st July

British — — — — —

French — o — — — — —

German Third Line was under construction, except between..... X X

Line reached & held, 1st July

British
French

Ordnance Survey 1929.

The XX. Corps, with two divisions in the front line, made the assault at the same time as the British, 7.30 A.M. Favoured by a river mist which allowed the French to reach the front trenches unseen, the 39th Division (General Nourrisson) on the left, like the British 30th Division next to it, attained its objectives without any difficulty, although, according to German accounts, there was severe hand-to-hand fighting in Bois Favière, the north-eastern corner of which remained in German hands for some days. The situation at midday was so satisfactory that General Nourrisson, as already mentioned, proposed to attack Hardecourt, opposite his front; but, as the British XIII. Corps was not proceeding to the second phase of its programme, he abandoned the idea. Four counter-attacks from Hardecourt were repulsed by fire.

The 11th Division (General Vuillemot) had a stiffer task; in the first rush, however, it was right over the German first position, including the great Y Wood salient; but it failed to break into Curlu on the extreme right, and therefore formed a flank there. The village was captured by a second effort in the evening. "At the end of the day the XX. Corps was in occupation of the entire German first position; it had suffered very few losses, and had not employed any reserves, not even partially."

The French corps south of the Somme, whose heavy artillery was in overwhelming preponderance—85 batteries against 8—did not assault until 9.30 A.M., two hours after the British and XX. Corps, and this postponement enabled them to take the Germans by surprise.¹ On the left flank the village of Frise, captured from the French in January, held out—it was protected on one side by the Somme—but the I. Colonial Corps carried the German first position including the large villages of Dompiere and Becquincourt. By midday it was installed in its first objective, and General Berdoulat commenced preparations for the attack on the second, pushing his advance towards Herbécourt and Assevillers, so that by nightfall the corps was entrenched within assaulting distance of the German 2nd Position. The XXXV. Corps was equally successful, although, being on the flank, it suffered considerably from fire from the unattacked German sector further south. "Thus by the evening of the 1st July the Sixth Army had reached all its objectives, it had gone beyond them at certain points, and engaged the German 2nd Position. It had taken more than four thousand prisoners, of whom two thousand were the share of the Colonial Corps."

NOTE II

THE GERMANS OPPOSITE THE XIII. CORPS AND THE FRENCH XX. CORPS ON THE 1ST JULY²

In consequence of the heavy losses in officers suffered by the Germans, the account of the fighting opposite the XIII. Corps and French XX. Corps given in the German official monograph is somewhat meagre. There is, for instance, no mention of the British

¹ Schwarte, ii. p. 553.

² Somme-Nord, i. and Schwarte, ii. The distribution of the German forces is given in f.n. page 321.

mines or flame projectors. Owing to all labour being required to keep the 1st Position in some sort of defensible condition, the 2nd Position of the *12th Division* consisted only of a single shallow trench. The 3rd Position had been barely commenced.

The artillery of both the *12th* and *28th Reserve Divisions* suffered greatly in the preliminary bombardment, and more seriously still on the 1st July. According to one reliable history, the German batteries in the valleys north of Mametz and Montauban were destroyed with the greater part of their ammunition, and very few guns could be withdrawn to the 2nd Position.¹ The official monograph goes into some details: "One battery in the *12th Division* had lost a gun on the 30th June. Gradually the other three were "put out of action." Another "lost two guns before midday. The other two followed in the afternoon." In a third battery, two were lost, and in a fourth, "all the howitzers became gradually unserviceable. The greater part of the other batteries of the Group had considerable losses. Their fighting power fell off more and more." In the *28th Reserve Division* "the batteries had suffered severely in the artillery battle, and could give little assistance. A great number of the guns were smashed up. . . . Particularly the batteries in the Caterpillar Valley had lost numerous guns. When the British attacked there were only ten field and thirteen heavy batteries in readiness, and these had numerous unserviceable guns." All the field guns of the *28th Reserve Division* were "rendered unserviceable by British fire or other causes". The British artillery fire on the 1st July in this part of the field is described as "devastating" (*verheerend*).

By midday on the 1st July four of the heavy batteries on the XIII. Corps front were completely unserviceable, and later another is mentioned as sharing the same fate.

Opposite the 30th Division, most of the garrison and nearly all the machine guns had been put out of action by gun fire, and the rear defences could not be manned in time owing to the rapid British advance.

Opposite the left of the 18th Division, in the sector of the *109th Regiment*, there were no deep dug-outs except in the front trench; the whole garrison congregated in these, and there was no defence in depth. Opposite the right, where the previous mine explosions had forced the garrison to defend the support trench, new dug-outs had been made.

Opposite the French XX. Corps "nearly all the deep dug-outs in the first position were blown in, only a few specially deep ones were still partly serviceable. The garrison lay mainly in shell and mine craters." Under protection of a thick morning mist, the French overran the whole front line.

As usual in the case of disaster, the information that came back was "inexact", and the greatest confusion seems to have arisen on the German side. The British were reported before midday to have occupied Bernafay and Trônes Woods—as they might have done—and "the situation was uncertain". In view of the small reserves and great loss of artillery, counter-attacks appeared useless; in fact there were few troops at hand to oppose a further advance of the XIII. Corps if boldly pushed, and orders to collect all available men, including clerks, cooks, batmen, etc., and 200 recruits, to

¹ Schwarte, ii. p. 551.

occupy the 2nd Position were issued.¹ The *12th Reserve Division*, in rest in the Cambrai area, which already had some troops in the 3rd Position, had, at 1.35 A.M., been ordered by the *XIV. Reserve Corps* to Rancourt—Bouchavesnes (about 6-7 miles east of Montauban). Various detachments were hurried up to weak places, and about 1.30 P.M. the division was directed to be prepared to attack the ridge between Montauban and Mametz at dark. At 9 P.M. this was postponed to 11.30 P.M., but at midnight the leading regiments detailed had only just reached the 2nd Position.

¹ The losses of only two of the regiments engaged are available: the *109th Reserve* lost 42 officers and 2,105 other ranks. The *6th Bavarian Reserve Regiment* lost 35 officers and 1,775 men. In the Bavarian Official Account it is said that this regiment "was practically wiped out", and the captured diary of Lieut.-Colonel Bedall states that it "was completely destroyed; of 3,500 men only 500 survivors remain, and these for the most part are men who have not taken part in the battle, with two regimental officers and a few stragglers who turned up on the following day. All the rest are dead, wounded or missing."

CHAPTER XIV

THE SOMME

1ST JULY 1916

XV. CORPS ¹

(Maps 1, 7 ; Sketches A, 20)

Map 1. **Sketch A.** THE XV. Corps, on the left of the XIII., faced the head of the Fricourt salient, the corner stone of the German line between the Ancre and the Somme. The slopes of the Bazentin—Pozières ridge are here broken through by the Willow stream and its feeders, whose valleys before they unite to pass through the gap between the ends of Mametz and Fricourt spurs, have in plan roughly the shape of a trident. The centre valley runs up the western side of Mametz Wood, with Caterpillar Valley to the east and Contalmaison Valley to the north-west ; the two latter formed as it were a “ditch” inside the German position from the neighbourhood of Montauban to Pozières.

¹ XV. Corps (Lieut.-General H. S. Horne) :

7th Division (Major-General H. E. Watts), 20th, 22nd and 91st Brigades ;

21st Division (Major-General D. G. M. Campbell ; from December 1915 to May 1916, Major-General C. W. Jacob, then promoted to command a corps), 62nd, 63rd and 64th Brigades ;

17th Division (Major-General T. D. Pilcher), 50th, 51st and 52nd Brigades.

G.O.C. R.A., Br.-General E. W. Alexander ;

G.O.C. Heavy Artillery, Br.-General W. J. Napier ;

Chief Engineer, Br.-General P. G. Grant.

The heavy artillery consisted of five groups, the 3rd, 14th, 18th, 21st and 23rd, and the 44th Siege Battery, and comprised :

Howitzers : two 12-inch ; twelve 9·2-inch ; twelve 8-inch ; and twelve 6-inch ;

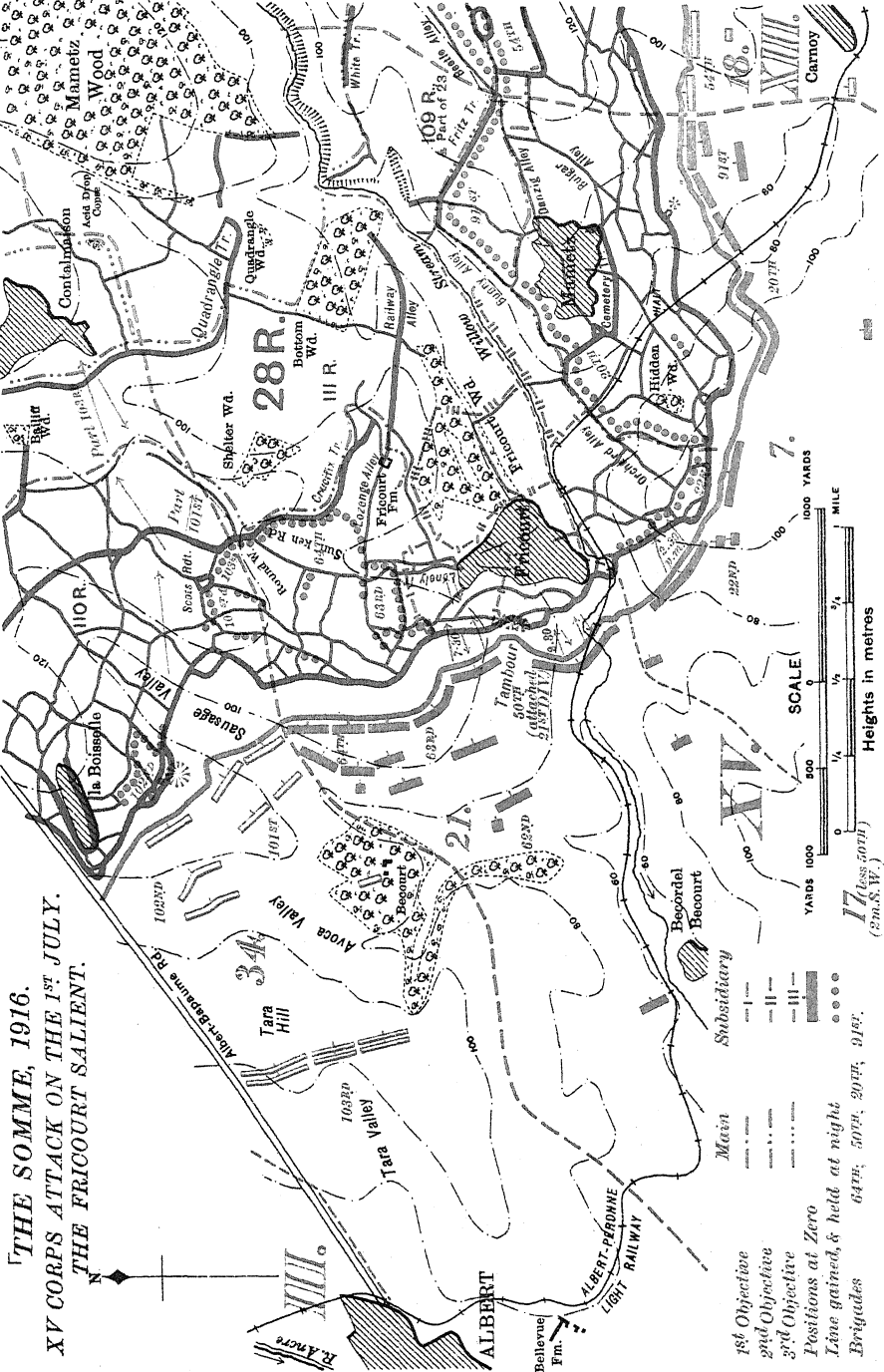
Guns : four 6-inch ; twenty 60-pdrs. ; and sixteen 4·7-inch.

As corps artillery there were also the French 6th Field Artillery “Groupe” and a 4·5-inch howitzer battery.

The front being a little over 5,000 yards, this gave about one heavy per 58 yards, and one field gun or howitzer per 25 yards.

SKETCH 20.

SKETCH 20.



THE SOMME, 1916.
 XV CORPS ATTACK ON THE 1ST JULY.
 THE FRICOURT SALIENT.

1st Objective
 2nd Objective
 3rd Objective
 Positions at Zero
 Lane gained, & held at night
 Brigades

64th, 50th, 20th, 94th.

YARDS 1000
 500
 0
 1/4 1/2 3/4 MILE

SCALE
 7.
 Heights in metres

17 (less 40th)
 (2nd S.W.)

The Willow stream was made the boundary between the two divisions of the XV. Corps in the front line, the 7th on the right facing north, opposite Mametz village, on the lower slopes of Mametz spur, and the 21st on the left facing east along the western slopes of Fricourt spur. The 17th Division was in corps reserve. Map 7.
Sketch
20.

The German defences about Mametz and Fricourt were of exceptional strength, a maze of trenches and communication trenches twelve hundred yards in depth, and the front trench, with its many salients and flanks, was particularly well sited for defence. The villages themselves had been developed into little fortresses; there were numerous strong machine-gun emplacements, and the dug-outs were exceptionally fine, some of them with two storeys, lighted with electricity and, as it was said, provided with every convenience except water. The front system was backed up by two intermediate lines: Fritz Trench—Railway Alley—Crucifix Trench and White Trench—Wood Trench—Quadrangle Trench, and also by the 2nd and 3rd Positions, here three and six miles, respectively, behind the front line. Opposite the XV. Corps was the centre sector of the *28th Reserve Division*, held by six battalions.¹ In this area also the German artillery had been practically silenced; there was no real barrage when the assault began, only a few shells fell intermittently, and the defence was maintained almost entirely by machine guns, the crews with their weapons having remained in the dug-outs till the last moment, whence they emerged intact.

In the first phase of the battle the 7th and 21st Divisions were to clear the high ground on both sides of the Willow stream gap, including the villages of Mametz (in the first stage) and Fricourt (in the second). Then, passing over the spurs called by these names and the German first intermediate line, they were to secure a position in the second intermediate line, astride the valley facing Mametz Wood, the right in touch with the XIII. Corps in White Trench and the left with the III. Corps in Quadrangle Trench, south of Contalmaison. This position appeared to be a favourable one for meeting a counter-attack, while it offered good observation posts and cover for artillery from which to bombard the German

¹ Part of the *109th Reserve Regiment* (headquarters in Mametz village), with one company of the *23rd Regiment*, held as far as Hidden Wood, south-west of Mametz, and the *111th Reserve Regiment* carried on the line across Caterpillar Valley past the western side of Fricourt to about Round Wood on the top of the Fricourt spur. A battalion of the *55th Landwehr Regiment* was in the 2nd Position.

2nd Position. Should all go well, in the subsequent phases of the battle, the XV. Corps, using its reserve division, was to press on through Mametz Wood up the northern slope of Caterpillar Valley and capture the villages of Bazentin le Grand, Longueval and Ginchy.

In order to avoid the difficulties and losses which would be inevitable in a frontal attack against the strong defences of Fricourt village and Fricourt Wood, the triangular area covered by them was not to be dealt with in the initial assault, which was to be delivered on either side, thereby isolating it as a preliminary to its capture at a later stage. With this end in view, the right or outer brigade of the 7th Division was to capture Mametz and then press on to White Trench, whilst the centre brigade was to form a defensive flank along the southern side of the Willow stream valley facing Fricourt and its wood. Similarly, the left, or outer, brigade of the 21st Division was to cross the top of Fricourt spur, continue on to Bottom Wood, joining up there if possible with the right brigade of the 7th Division, whilst the centre brigade, with part of the right, formed a defensive flank facing Fricourt village and wood. The inner brigades of both divisions were to wait in the front trenches until the situation created by the advance of the others was favourable for the attack to be launched against Fricourt, the hour for which would be settled by the corps commander.

At 6.25 A.M. the intensive bombardment of the enemy's front system was begun,¹ and between 7.15 and 7.25 A.M., in order to mislead the enemy, what remained of the gas was released from the centre of the corps front from which no assault was at first to be delivered. At 7.22 A.M. a hurricane bombardment by Stokes mortars on the whole front of attack took place. At 7.26 A.M. smoke discharges were launched by the 4th Mortar Company of No. 5 Battalion, Special Brigade R.E., in order to create barrages to screen the inner flanks of the attacking wings of the 7th and 21st Divisions, also to form a cloud on the German support line opposite the 7th Division, to mask the direct assault. At 7.28 A.M. three mines of 25,000 lbs., 15,000 lbs. and 9,000 lbs., placed by the 178th Tunnelling Company R.E., were fired under the German line opposite the salient known as

¹ One 18-pdr. battery dug in close behind the front line opposite Wing Corner (a salient in the German front line immediately south of Fricourt) now opened fire for the first time, having been silent during the preliminary bombardment.

“ The Tambour ”, facing Fricourt, against which no assault was to be made. The purpose of the mines was to distract the enemy’s attention and form craters which would block enfilade fire against the 21st Division from the northern face of “ The German Tambour ” (just south of the Tambour).¹ Bulgar Point, a heavily wired strongpoint jutting out into No Man’s Land (south of the south-east corner of Mametz) was completely destroyed by a 2,000 lb. mine, and a sap west of it by one of 200 lb. Four small mines of 500 lbs. each were also exploded under the German line south of Hidden Wood, where much mining had already taken place and a frontal attack was not to be made.

The artillery orders of the XV. Corps for the assault are of special interest, as going further in the use of the creeping barrage than those of the XIII. Corps.² The instructions issued by the G.O.C. R.A. of the Corps on the 14th June laid down :—

“ When lifting, 18-pdrs. should search back by increasing their range, but howitzers and heavy guns must lift “ directly on to the next objectives.” A map showing six proposed lifts from the German front line back to Caterpillar Valley and the west side of Mametz Wood was issued.

The divisional instructions went into detail. Those issued on the 18th June by Br.-General J. G. Rotton of the 7th Division artillery³ contained the following :—

“ During the advance of the infantry a barrage of “ artillery fire will be formed in front of the infantry according to the timings shown on the tracings issued to “ those concerned. The lines shown on the tracings indicate the nearest points on which guns will fire up to the “ hour indicated. At the times shown heavy guns will lift “ their fire direct to the next barrage line. The divisional “ artillery will move their fire progressively at the rate of

¹ Fire from its southern face caused very serious loss to the left brigade of the 7th Division.

² Appendix 23, i. and ii. Major-General E. W. Alexander, V.C., who was G.O.C. R.A. of the corps, stated to the compiler that “ to some extent “ this was used by the 15th Division [of which he was C.R.A.] at the battle “ of Loos. . . . I rather think that I got the tip from Budworth [the late “ Major-General C. E. D. Budworth].” In the “ Journal of the R.A. “ Institution ” for April 1931 will be found an article “ The Coming of the “ Creeping Barrage ” by Major A. F. Becke, which deals with the subject as a whole.

³ He had three 18-pdr. batteries of the 17th Division in addition to his own, and one of the 21st Division.

“ 50 yards a minute. Should the infantry arrive at any point before the time fixed for the barrage to lift, they will wait under the best cover available and be prepared to assault directly the lift takes place.”¹

The instructions of the infantry brigades repeated the paragraph given above, those of Br.-General C. J. Deverell (20th Brigade), who had collaborated in devising the procedure, adding :

“ The assault will be carried out steadily behind the artillery barrage. At the hour named for the barrage to lift, the leading line will be as close to the hostile position as possible, and on the barrage lifting will at once move forward steadily, keeping touch, and only halt or lie down when next compelled to do so by awaiting the lift of the artillery barrage.”

The 21st Division artillery (Br.-General R. A. C. Wellesley) issued instructions that :

“ Batteries will search back to the next barrage in order that the whole ground may be covered by fire immediately before our infantry advance over it.”

The explanation given in some of the battalion operation orders shows that the procedure was thoroughly understood ; those (of the 25th June) of the 15/Durham Light Infantry (Lieut.-Colonel A. E. Fitzgerald),² in particular, being most lucid :

“ The barrages will not exactly lift from one point and be put on to another ; they will gradually drift forward, leaving certain lines at certain hours (which may be changed). The line of the barrage must be constantly watched by the infantry, whose front lines must keep close up to it.”

The “ drifting forward ” of the 18-pdr. barrage undoubtedly gave considerable assistance to the attack of the brigades of the 7th and 21st Divisions. The barrage, however, was “ thin ”, fewer guns being employed than in later attacks, and only shrapnel was fired, while it moved too quickly for the infantry to keep up with it. After the first shoot, the infantry never again got near enough to the barrage to derive any benefit from it, one battalion (63rd Brigade) reporting that the intervening ground between its first wave and the barrage was full of Germans as safe

¹ It must be understood that, in this experimental stage, the creeping barrage began at the enemy front trench and did not help the infantry across No Man's Land.

² Wounded 1st July, died of wounds 12th July 1916.

from it as our own men.¹ Much further experience was needed before the creeping barrage became really effective.

7TH DIVISION : THE ENTRY INTO MAMETZ VILLAGE

The right and centre brigades of the 7th Division were to attack on a front of eighteen hundred yards between the Carnoy—Mametz track and the quarry south of Hidden Wood. They assembled in the support trenches, leaving the front line empty, in order to avoid casualties. The 91st Brigade (Br.-General J. R. Minshull-Ford) was to capture the head of the Mametz spur, and the eastern half of Mametz village which lay on that spur. It was to consolidate as its first objective the line Fritz Trench, eleven to seventeen hundred yards ahead on the west of Pommiers Redoubt, with a left flank thrown back along Bunny Alley to the northern edge of Mametz village, its right connecting with the XIII. Corps in Beetle Alley. In the centre, the 20th Brigade (Br.-General C. J. Deverell) was detailed to form the defensive flank facing Fricourt. It was to wheel left-handed during its advance and occupy a line with its right on the north-western edge of Mametz, its centre along Orchard Alley, astride the Maricourt road, and its left joining up east of Bois Français with the 22nd Brigade, which was to await in the British front trenches the order to advance through Fricourt.² On this sector also four Russian saps had been driven right up to the German front line, the ends of the saps being successfully opened up soon after zero.

The 22/Manchester and 1/South Staffordshire, leading the assault of the 91st Brigade across No Man's Land which was only 100-200 yards wide, crossed the German front line with little loss; but, in spite of the creeping barrage, heavy machine-gun and rifle fire came from Mametz and from Danzig Alley, an eight-foot deep communication trench running through, and eastwards

¹ There were plenty of forward observing artillery officers with the infantry, so many that, as one infantry officer said, he thought there was a tactical exercise in progress; but they could get no information back to artillery headquarters, and, as all batteries had the strictest orders to fire according to the programme until further orders, they continued to do so.

² The Field Companies R.E. (54th, 95th and 1/3rd Durham—later 528th), with the Pioneer battalion (24/Manchester), were kept back in reserve, it being intended that they should go up at night to construct strong-points and communication trenches. As far as possible, the companies were always sent to work in the zone of the same brigade; they were "affiliated", as it was called, but not "attached".

and southwards from, the village. Heavy casualties were inflicted upon the extended companies as they advanced up the slope on to the shoulder of the spur. Nevertheless, by 7.45 A.M., an advance of seven hundred yards had been made, and the line of Cemetery Trench immediately south of Mametz had been rushed by the 1/South Staffordshire. By 8 A.M. parties of the 22/Manchester were entering Bucket Trench, only a couple of hundred yards short of their objective, and the leaders of the South Staffordshire were in the ruins of Mametz. At this early stage of the movement, the enemy resistance was half-hearted. In a few places machine-gun detachments held on tenaciously and caused heavy casualties—especially near the south-western corner of the village, where a concrete machine-gun post in a house, with 4-inch armour-plate loopholes, was subsequently discovered—but elsewhere surrenders came freely as the British advanced. From Danzig Alley and the western and northern part of Mametz, however, opposition continued, and in face of it the advance was gradually brought to a standstill. The South Staffordshire were forced back to Cemetery Trench and the hedges south of the village, leaving only a few small parties ensconced in the ruins. Soon after 9.30 A.M. the two supporting battalions were sent forward to reinforce and carry forward the attack. The two front companies of the 2/Queen's reached those of the Manchester in Bucket Trench and Bulgar Alley, but, the creeping barrage having passed on, they were unable to enter Danzig Alley (East). Similarly, the 21/Manchester reinforced the South Staffordshire, but could make no progress beyond Cemetery Trench. A re-bombardment for half an hour of Danzig Alley (East), Fritz Trench and Bunny Alley, forming a triangle north and east of Mametz, was ordered by Major-General Watts, and was begun at 10 A.M.; but it seems to have been ineffective and did not lessen the resistance. Small parties which managed to enter Danzig Alley were counter-attacked from Mametz village and compelled to withdraw, and for the moment no further advance could be made. At 11.15 A.M. the corps commander, having heard of the capture of Pommiers Redoubt by the XIII. Corps at 9.30 A.M. and of Beetle Alley at 10.15 A.M., ordered a further effort to be made to capture Danzig Alley and Fritz Trench beyond it. At 12.25 P.M. a further half-hour bombardment was carried out on the same objectives as before, at the request of Br.-General Minshull-Ford, who saw that a local

counter-attack was developing; and following this the two remaining companies of the 2/Queen's were sent forward to deliver an assault. The renewed artillery fire, following on the advance of the XIII. Corps to Pommiers Redoubt and Beetle Alley, across the enemy communications from Montauban to Mametz, broke down the resistance; but one forward section of German field guns remained firing over open sights until its detachments were all killed. Soon after 1 P.M. Danzig Alley (East) was in British possession, its defenders disappearing into Mametz or falling back north-westwards along Fritz Trench. Bombing parties now moved westwards along Danzig Alley and thence northwards from it up Bright Alley, which was occupied by 1.40 P.M. At the same time an entrance was made by the Queen's into Fritz Trench, in which a number of Germans still held out, from the eastern end of Danzig Alley. About 75 prisoners were taken by the bombing parties. By this hour, too, the 1/South Staffordshire, supported by three companies of the 21/Manchester (the fourth was kept in brigade reserve) had crossed the two hundred yards of open ground between Cemetery Trench and the southern houses of Mametz village, reinforced the small parties of the battalion still among the ruins, and occupied the western end of Danzig Alley (East), which lay along the main street of the village, thus completing the capture of the first objective. A number of Germans, however, still held out in the northern quarter of Mametz.

The fan-shaped advance of the 20th Brigade (Br.-General C. J. Deverell), intended to form the defensive flank, led it down the Carnoy valley, on either side of the light railway, and on the left over the top of the spur marked "Quarry" (south of Hidden Wood). Along the enemy front on this flank, between the 20th and 22nd Brigade lay 500 yards of cratered area, a warren of Germans, which required very thorough "mopping up", in spite of the four mines fired there just before zero. The 2/Gordon Highlanders on the right was to capture the western half of Mametz village and the northern slopes of the valley, whilst the 9/Devonshire overran the southern and steeper side, the two battalions joining hands about Mametz station (Halt).¹ Thence they were to move together on to the objective, Bunny Alley and part of Orchard Alley. On the left, the 2/Border Regiment was to wheel left-handed

¹ Here was found, untouched, a machine-gun emplacement cleverly sited low down in a bank parallel to the line of advance.

over the Quarry spur, clear the cratered area, and occupy Apple Alley, which diverged southward from Orchard Alley.

The operation required of the brigade was complicated; it was delayed by the stout resistance of the Germans, particularly in the centre, and consequently soon lost the advantage of the creeping barrage.

The 9/Devonshire, in the centre on the steep side of the Carnoy valley, assembled some 250 yards behind the front trench, which, with the support trench, was too badly damaged to be used. From the moment its first lines entered No Man's Land, they suffered from a devastating machine-gun barrage, their movement being completely exposed to direct fire at long range from Fricourt Wood and at close range from ground about the level of the enemy support trench, and in enfilade from trenches south of Mametz. Fully half the casualties of the battalion occurred before Mansell Copse in the centre of No Man's Land, here 400 yards wide, was reached.¹ The extended lines of the companies nevertheless pressed steadily forward and entered the German front trench, small parties pressing on to the support trench, two hundred and fifty yards behind. By degrees they cleared these trenches and adjoining communication trenches, and sent back a number of prisoners. By now all the officers had fallen; it was impossible to proceed, but the 9/Devonshire kept the enemy in front engaged in order to assist the battalions on right and left, which could be seen advancing. At 7.40 A.M. the fourth company was sent forward to reinforce, but it lost all its officers in No Man's Land, and although survivors of it joined the others in the German front system, no further progress could be made. Later two companies of the 8/Devonshire from brigade reserve were sent up. They, too, lost very heavily on entering No Man's Land, but parties gained touch with the Gordons and 9/Devonshire.

The 2/Gordon Highlanders, on the right of the 9/Devonshire, advanced on a 400-yard frontage in close touch with the 1/South Staffordshire (91st Brigade) and assaulted the German front trench with great spirit, the German defenders, who were preparing to meet them with bombs, being overrun before they could throw them. The left company, owing to some uncut wire in a dip of the ground, was at first unable, however, to get through; suffered

¹ An officer of the 9/Devonshire who had made a plasticine model of the ground over which the 20th Brigade had to advance had forecast that this would be the case, and he himself was among the killed.

heavy casualties before the trench in front of it could be cleared from the flank; and lost touch with the barrage. Here, and along the whole Fricourt sector, the number of unexploded British shell, of all calibres, lying about was very great. From now onwards the losses of the battalion were severe, heavy fire being opened on it from "The Shrine," a strongly held post in front of Cemetery Trench, and from Mametz behind it. By 7.55 A.M. however, the leading troops had attained Shrine Alley, a trench passing through the Halt 300 yards behind the front line and parallel to it, running into Cemetery Trench: in places they had passed over it and reached the Mametz—Halt road. The enemy now offered more stubborn resistance, heavy fire being also opened by him from a cutting beyond this road on the southern side of the Maricourt road (here parallel to the light railway), which should have been cleared by the 9/Devonshire. Supported by a company of the 8/Devonshire, the left of the 2/Gordon Highlanders set to work to clear the dug-outs in the cutting, a task which occupied the greater part of the morning. In the meantime, the remainder of the Gordons had been unable to progress beyond Shrine Alley, though they maintained touch with the South Staffordshire on the right in Cemetery Trench.

On the left the 2/Border Regiment had moved forward with less difficulty. After crossing the front line the battalion, helped by the barrage, had wheeled to the left successfully, and advanced on Hidden Lane (behind Hidden Wood) on the upper slope of the valley, one hundred and fifty yards short of its objective, Apple Alley. The lines had by now become broken into groups, which were bombing and bayoneting the Germans scattered about in the cratered area, in the remains of trenches, and in the entrances to the German mines; but by 9.30 A.M. Hidden Lane was occupied. Considerable loss was suffered at this period from machine-gun and rifle fire from Mametz, which enfiladed the trench, and also from the right rear from Hidden Wood. This wood was cleared by an attack across the open, combined with a bombing raid down Hidden Lane, and parties were then sent forward to Apple Alley. The 2/Border Regiment thus reached its objective, but its right was in the air, the 9/Devonshire not having come up. The Gordon Highlanders also being short of their objective, it was obvious that the defensive flank towards Fricourt could not be formed without reinforcements and a further effort.

21ST DIVISION : THE ADVANCE TO THE SUNKEN ROAD

The 21st Division was formed up with three of its four brigades, the 50th (attached from the 17th Division for the assault), the 63rd and 64th, in the front line, and the 62nd Brigade in reserve. The greater part of the 50th Brigade (Br.-General W. J. T. Glasgow)¹ were to remain in the front trenches in readiness for the assault on Fricourt at a later stage of the battle, if the village were not "squeezed out" by advances on its flanks; but its left battalion, the 10/West Yorkshire, was to form the defensive flank towards Fricourt.² The 63rd and the 64th Brigades were to gain the German first intermediate line, Crucifix Trench, as the first objective, and Bottom Wood and part of Quadrangle Trench, the second intermediate line, as the second objective, joining up at the wood with the 7th Division.³ No Man's Land was in places as much as three hundred yards but mostly about two hundred wide.

The attack of the 10/West Yorkshire (50th Brigade) was delivered on a frontage of six hundred yards. The lines of the two leading companies crossed into the German front trench with little loss, and pressed on towards "Red Cottage" at the northern end of Fricourt, the Germans in that quarter of the village and the neighbouring trenches not emerging from their deep dug-outs quickly enough to stop them. By the time, however, that the third and fourth companies moved forward, the machine guns in Fricourt and the German Tambour,⁴ brought up out of the dug-outs which had not been blown in by the mine explosions, were in position⁵; and, the barrage having

¹ The brigade had been holding the front of the 7th Division; it was then withdrawn into reserve, and had had no opportunity of becoming acquainted with the front from which it was to attack, patrolling being forbidden for fear of the enemy gaining an identification. A section of the 78th Field Company R.E. was attached to it.

² Shown on Map 7 and Sketch 20 as 1st Subsidiary Objective.

³ The Royal Engineers (97th, 98th and 126th Field Companies), and the Pioneer battalion (14/Northumberland Fusiliers) of the 21st Division were divided into working parties to construct strong and supporting points in the objectives when captured, and took position in rear of the leading or rear battalions of the 63rd and 64th Brigades, according to whether they were to consolidate the first or second objective.

⁴ So far as can be discovered, from one nest only in the village and one only in the Tambour.

⁵ The amount of damage done to Fricourt by the bombardment had been small on account of the failure of the 9-2-inch shells to explode, the fuzes having come out during flight.

passed on, there was no fire to keep the Germans down in their shelters. The machine guns which were causing most loss were firing from the northern edge of the Tambour, but although this information was at once passed back, they were still in action two hours later. As a result, the third and fourth companies were practically annihilated and lay shot down in their waves. Lieut.-Colonel A. Dickson and all the regimental staff, including the second-in-command and adjutant, were killed, and only small groups reached the German front trench. The leading companies however, passed on along communication trenches and reached Red Cottage; but, being isolated, they were overcome later in the morning, except a few small parties who effected a junction with the right of the 63rd Brigade further north. Owing to the intense machine-gun fire opened from Fricourt on any sign of movement in the open, it was not found possible to reinforce the survivors of the third and fourth companies in the German front trench, and they remained there until dark, the battalion losing 22 officers and 688 other ranks in the day's fighting.

The 63rd and 64th Brigades had first to ascend the western slope of and cross the Fricourt spur, and then advance across the depression down which ran the western of the two Contalmaison—Fricourt roads (Sunken Road)¹ before they could reach their initial objective, Crucifix Trench, on the eastern slope of the Fricourt spur. Their right was directed on Fricourt Farm and the left, thrown forward, on Round Wood, just south of Scots Redoubt.

Both the leading battalions of the 63rd Brigade (Br.-General E. R. Hill) lost very heavily in the assault of the German front trench. Two companies of the 4/Middlesex, on the right, in attempting to leave their own front trench five minutes before zero and crawl forward into No Man's Land, came under such heavy machine-gun fire that they had to return. So severe had been the casualties that they were then ordered to advance as one line only, and the survivors left the trench for the second time only a minute before zero. They faced the fire in a most gallant manner. Though swept by six machine guns, untouched by the bombardment—two in a small work between the front and support trenches and four in the northern part of Fricourt—they reached the German support trench. All the officers

¹ Marked on Sketch 20 by Lonely Trench, which was on the western side and parallel to the road.

of the leading companies were now casualties, and the surviving men, about forty in all, pressed on in scattered parties after the barrage to the Sunken Road. The two rear companies of the battalion also incurred heavy losses in crossing No Man's Land from the machine guns in Fricourt and only 4 officers and 100 other ranks reached the German front trench.¹ Fearing a counter-attack against his right flank from Fricourt, where the Germans could be seen moving about in some numbers, the commanding officer, Lieut.-Colonel H. P. F. Bicknell, decided to remain for the time being in the front trench and there consolidate his position. He was thus able to check three consecutive attempts made by the Germans shortly afterwards to bomb northwards.

The 8/Somerset L.I., on the left, also came under heavy fire when its front companies crept into No Man's Land before zero hour, but the assault was nevertheless delivered. The losses were severe, Lieut.-Colonel J. W. Scott being wounded, and all but three of the officers hit before the German front trench was reached. The battalion, however, preceded by a shower of grenades, succeeded in entering the trench, and thence parties of bombers led the way along the communication trenches to the support trench and beyond.

The orders given to the supporting battalions had been to start their advance at 8.30 A.M., so as to be ready to pass through the leading battalions to the second objective, Bottom Wood and Quadrangle Trench on the southern end of the Contalmaison spur, as soon as the creeping barrage advanced. Owing to the opposition encountered by the leading units, it was judged necessary to postpone the movement indefinitely. Soon after, on arrival of reports of the heavy losses in the first assault, it was feared at brigade headquarters that the two front battalions would be unable to maintain the positions gained unless reinforced; so at 8.40 A.M. the 10/York & Lancaster and 8/Lincolnshire were ordered forward. Both suffered heavily in crossing No Man's Land, but the survivors pressed on to the high ground on the top of the spur and reached the leading units. On the right, the 10/York & Lancaster advanced through the remnants of the Middlesex in the German front trench and got to the Sunken Road, beyond which the barrage was now put down; but there it was held up by heavy machine-gun fire both from Fricourt and Fricourt

¹ Casualties of the 4/Middlesex, 19 officers and 469 other ranks.

Wood on its right front. On the left, the 8/Lincolnshire reinforced the Somerset and, led by bombers, made further progress along the communication trenches, which were tenaciously held by a long line of enemy bombers. Lozenge Alley, running towards Fricourt Farm, was thus occupied as far as the Sunken Road and manned to secure the right flank. Small detachments moved northwards along the Sunken Road into Crucifix Trench, and others eastwards along Lozenge Alley towards Fricourt Farm, but these latter were compelled to retire. Strong parties of German bombers now counter-attacked up Lonely Trench, in order to clear Sunken Road; but they were repulsed, parties of the York & Lancaster eventually constructing a sandbag barricade which effectually blocked Lonely Trench. The sections of the 98th Field Company R.E. sent up to consolidate became involved in the fighting, and were utilized to strengthen the 63rd Brigade's right flank.

The original front of the 64th Brigade (Br.-General H. R. Headlam) had a salient at each end with a drop back of sixty or seventy yards in the centre, but the divisional engineers, without even the infantry knowing it, had mined a Russian sap from salient to salient. The top of this tunnel was knocked in on the night of the 30th June/1st July, so that the first wave could start from a straight line in front of the British wire, which, however, was almost entirely removed.

The attack of the brigade was led by the 9th and 10/K.O.Y.L.I. During the final five minutes of the intense bombardment,¹ the leading companies left the Russian sap and succeeded in crawling forward into No Man's Land. But the Germans, notwithstanding the heavy fire, here also brought machine guns out of dug-outs and, placing them on top of the parapet, opened rapid fire, whilst enfilade machine-gun fire from the trenches on the higher ground south of La Boisselle swept No Man's Land and the whole of the ground over which the subsequent advance of the brigade was made. As soon as the bombardment ceased, the lines of both battalions rose and went forward, and, in spite of heavy losses, they pressed on, never wavering, the lines in rear coming up and filling the gaps. The German wire had been well cut, and the Yorkshiremen,

¹ In this three 18-pdr. batteries of the 95th Brigade R.F.A., dug in on the eastern edge of the southernmost strip of Bécourt Wood at 1,350-1,800 yards range, specially fired on the sector that the 64th Brigade was to attack: during the last minute with percussion instead of time shrapnel.

although met by showers of stick-bombs, rushed in and overran the position. The two supporting battalions, the 15/Durham L.I. and 1/East Yorkshire, following up close behind, now reinforced the line; and all four battalions, intermingled, pressed forward at a rapid pace to the support trench, which was successfully occupied, two hundred German prisoners being sent back under escort.

The capture of the two lines of trenches had been carried out within ten minutes from the start, but at great cost, more than half of the two leading battalions, including most of their officers, having fallen. Lieut.-Colonel C. W. D. Lynch (9/K.O.Y.L.I.)—who had gone forward to lead his men when there was a check—was killed, and Lieut.-Colonel M. B. Stow (1/East Yorkshire) mortally wounded. Lieut.-Colonel H. J. King (10/K.O.Y.L.I.) was wounded later in the day.¹ When the creeping barrage moved forward and the advance was continued beyond the first position across the top of the spur below which lay the Sunken Road, a running fight developed; small parties of Germans attempted to offer resistance, but they were forced back or overcome with bomb and bayonet. About 8 A.M., after a mile of open ground had been covered, the Sunken Road was reached. Here a mountain gun and some boxes of soft-nosed bullets were captured, and a general halt was called. Parties of all four battalions, however, pressed on to Crucifix Trench and occupied it, when some hundred Germans in overcoats came forward from Shelter Wood and surrendered. The companies remaining in the Sunken Road were at once reorganized in Lonely Trench behind the road, and the further bank was consolidated for defence. It was now obvious that machine-gun and rifle fire from three localities about five hundred yards ahead, Fricourt Wood, Shelter Wood and Birch Tree Wood, would, as the barrage had passed on, make any further advance very difficult. Br.-General Headlam came up at this time to the Sunken Road, placing what men he could find to cover the exposed left where the 34th Division (III. Corps) should have been, as he did so. Parties were sent forward to gain touch with those in Crucifix Trench, and Lewis-gun detachments moved out to hold Lozenge

¹ The casualties for the day were :

	Officers.	Other ranks.
9/K.O.Y.L.I.	21	383
10/K.O.Y.L.I.	21	428
15/Durham L.I.	15	373
1/East Yorkshire	21	478

Wood to the south. Learning that Round Wood to the north was still in German hands, Br.-General Headlam himself led a party towards it; but his brigade-major, Major G. B. Bosanquet, was killed whilst reconnoitring for the advance and most of the party were knocked over by a machine gun in the wood. As the 34th Division had not come up, the left flank was secured by a post at the corner where Crucifix Trench meets the Sunken Road. Round Wood, just to the north of this corner, and the trench running west by north from it were occupied by a company of the 1/East Yorkshire about an hour later (9.45 A.M.), just as the Germans were counter-attacking the parties of the 15/ and 16/Royal Scots (34th Division) which had now appeared.¹ The Yorkshiremen took part in stopping this, driving the enemy back into Shelter Wood.

Lieut.-Colonel A. E. Fitzgerald, 15/Durham L.I., the only surviving commanding officer, was put in charge of the captured line, with instructions not to continue the advance till further orders, as the troops on either flank were hesitating to do so and in fact were not yet up in alignment. Owing to the long communications and the congestion in the trenches, artillery support was difficult to arrange, and Br.-General Headlam now returned to report to divisional headquarters, reaching there at 11 A.M. A message which he had previously sent off arrived one-and-a-half hours later, sufficient indication of the difficulties of intercommunication. On his representation that both flanks of the division were in the air—for the small parties of Royal Scots on the left had seemed to disappear—two battalions of the 62nd Brigade, in reserve, the 10/Green Howards and the 1/Lincolnshire,² were sent up. They were, however, delayed by congestion in the trenches and by change of orders resulting from the improvement in the situation on the left. Eventually they took post on the right of the 63rd and left of the 64th Brigade respectively.

THE ASSAULT ON FRICOURT

The messages which reached XV. Corps headquarters at Heilly (8 miles south-west of Fricourt) by midday gave

¹ See Chapter XV. These parties had diverged to the right and got into the 21st Division area.

² To the 1/Lincolnshire was attached the first active service contingent of the Bermuda Volunteer Rifle Corps (one officer and 80 rank and file), which arrived in France 23rd June 1915.

General Horne an optimistic impression of the situation on either side of him. From the right the XIII. Corps sent news that the 30th Division had captured the whole of Montauban, that the 18th Division had taken Pommiers Redoubt and reached Beetle Alley on the further side of the Mametz ridge, and that the enemy was in full retreat on Bazentin le Grand, being shelled as he retired. From the left the III. Corps announced (11.45 A.M.) that its leading troops had pushed through Peake Woods and were moving on Contalmaison, which gave an utterly erroneous idea of the situation. Aeroplane observers reported (11.20 A.M.) that enemy guns were being withdrawn along the Pozières—Bapaume road and that the British infantry had been seen moving along the communication trenches between Fricourt and Contalmaison. In view of this encouraging outlook, and because the preliminary bombardment of the Fricourt sector seemed to have been very successful,¹ General Horne decided to order the initiation of the third phase of the battle, the attack up the Willow stream valley on Fricourt and Fricourt Wood. As a matter of fact the units attacking on either side of these localities had not yet reached the whole of their first objectives or had even formed, except partially on the right, any defensive flank towards Fricourt. Moreover, the second phase, the advance beyond Mametz and Fricourt Farm towards the German second intermediate line covering Mametz Wood, had not yet been begun. At 12.50 P.M. orders were sent to the 7th and 21st Divisions—whose 22nd and 62nd Brigade with the greater part of the 50th Brigade, were still intact—and to the artillery concerned, that zero hour for the third phase would be 2.30 P.M., and would be preceded by the usual half-hour bombardment.²

The 22nd Brigade (Br.-General J. McC. Steele)³ of the 7th Division, waiting in the front trenches on the end of the Maricourt spur south of Fricourt, accordingly sent the 20/Manchester with two companies and the bombers of the 1/Royal Welch Fusiliers to attack. The leading companies of the Manchester crossed No Man's Land and entered the German trenches with little loss; but the support lines came under severe machine-gun fire directed down the

¹ See German account at end of Chapter.

² No creeping barrage was arranged for this attack: at zero the barrage was to lift 500 yards back, 15 minutes later lift 250 yards and continue on this line 1 hour and 30 minutes.

³ 1/Royal Welch Fusiliers and 20/Manchester only. The remaining two battalions were in divisional reserve.

long gentle slope on the left, and suffered heavy casualties : Lieut.-Colonel H. Lewis of the Manchesters was killed, and, on the left of the line, the detachments, which, after crossing the front trench were to bomb down the two support trenches towards the valley and Fricourt, were practically annihilated. In the centre a small party entered "The Rectangle", a strongpoint connecting the support lines, but was bombed out of it and forced back to a support trench which had been occupied by the right companies. An attempt was made to advance across the open from this trench, but heavy loss was suffered from fire from the left, so it had to be abandoned. A long bombing contest now ensued with varying fortune and no further advance was made. The success of the Welch Fusiliers, who had bombed their way up Sunken Road Trench and both sides of the Rectangle until they reached Apple Alley, even entering Fricourt for a time, enabled the Manchesters to hold on. The line at nightfall, when the 54th Field Company R.E. came up from reserve to assist in consolidating the ground gained, included the second support trench and the Rectangle, with advanced posts up the communication trench, the right in touch with the 20th Brigade in Apple Alley.

North of the Willow stream the attack on Fricourt by the 50th Brigade (Br.-General W. J. T. Glasgow) was even less successful. According to the original plan it was to be carried out by the 7/Green Howards, protected on the north by the 10/West Yorkshire, which should by this time have formed a flank towards Fricourt. But the practical annihilation of the West Yorkshire in the morning had made such co-operation impossible, and the 7/East Yorkshire, in support, was moved up into the front trenches to take their place and assist the attack by keeping the enemy down by fire. The Green Howards were only three companies strong, for, owing to an error, one company had attacked at 7.45 A.M., soon after the first general assault, and was, like the West Yorkshire, practically destroyed in the first twenty yards by a single machine gun. On receiving the orders for the 2.30 P.M. attack, the 50th Brigade represented that it would be useless to attack with the 7/Green Howards until the objective originally assigned to the 10/West Yorkshire had been made good. But orders were received for the attack to proceed, that is Stage 2 was to be carried out regardless of the failure of Stage 1. The attack by the 7/Green Howards was delivered against

the strongest part of the Fricourt defences, between Wing Corner and the German Tambour, still occupied in force. As regards the wire the short artillery preparation had been ineffective—owing to bad fuzes, so the infantry maintain—thus there were only four small gaps in it, and the deep dug-outs, the feature of the Fricourt defence, had not been touched. When the three companies, covered by Lewis-gun fire from the railway embankment, crossed the parapet into No Man's Land they at once came under murderous machine-gun and rifle fire from front and left, some Germans standing on the parapet to fire. Whole lines fell in the first fifty yards, and within three minutes the battalion lost 15 officers and 336 other ranks. A few men reached the village, but all these, except a handful who got into a cellar and there passed the night, were soon killed or captured. The survivors of the attack lay out in shell holes until dark, when they returned to the British line. The advance of the 7/East Yorkshire, made on the initiative of its commander a little after that of the Green Howards, shared a similar fate. The two leading companies suffered casualties of 5 officers and 150 other ranks in the first few yards, and were unable to cross No Man's Land. Further operations of the 50th Brigade were therefore stopped.

FURTHER ADVANCE OF THE 7TH DIVISION

Whilst the brigades on the inner flanks of the 7th and 21st Divisions had been making their fruitless efforts to reach Fricourt and the ground in the valley between this village and Mametz, on either side, the other four—the 91st, 20th, 63rd and 64th—were strengthening the line gained earlier in the day on the Mametz and Fricourt spurs. About 1 P.M. the last company of the 8/Devonshire was sent in to fill the gap between the Gordon Highlanders and the 9/Devonshire. Its leading platoon lost heavily, but the company commander, guiding it to the left to avoid the devastating fire from the Shrine, brought his men up, as will be seen, most opportunely. Taking advantage of the assault on Fricourt at 2.30 P.M., which attracted German attention to that sector, fresh efforts were made by the four brigades to get forward. Major-General Watts (7th Division) had placed at the disposal of the 20th Brigade on the right two companies of the 2/Warwickshire from divisional reserve with which to push on from the trenches facing Mametz through the village to Bunny Trench beyond.

They were to co-operate with the 1/South Staffordshire (91st Brigade) which, with the help of the 21/Manchester, had already worked forward from the southern into the eastern part of the village and captured a number of prisoners. With the two companies of the 8/Devonshire sent up in the morning, the two companies of the Warwickshire were organized into four lines. They advanced after half an hour's bombardment at 3.30 P.M., the last company of the 8/Devonshire joining in. Before they had even reached the front line of the 2/Gordon Highlanders in Shrine Alley, some two hundred Germans came forward from Mametz and the Shrine dug-outs, holding up their hands, a considerable number having been seen previously retiring northwards towards Fricourt Wood. The 8/Devonshire cleared the deep dug-outs in Danzig Trench (South) at the bottom of the valley, reached Hidden Wood, and was able to take all the objectives allotted to the 9/Devonshire with comparatively few casualties. By 4.5 P.M., after a few Germans had resisted to the last with the bayonet, the whole of the ruined village of Mametz was in British hands, and Bunny Trench along its north-western edge had been occupied. The first objective allotted to the 20th Brigade was consolidated, and the remaining two companies of the Warwickshire were moved up to Shrine Alley as a brigade reserve. By 5 P.M., except for slight machine-gun fire from Fricourt Wood and a few long range shells, the situation was quiet and movement could be carried on in the open.

In the meantime the 91st Brigade had secured all its objectives and taken several hundred prisoners. On the right, east of Mametz, the 2/Queen's had by 6.30 P.M. or earlier completely cleared Fritz Trench, the eastern end of which had been entered about 3 P.M., and, after considerable opposition, Bright Alley. An hour later the South Staffordshire moved from Mametz up Bunny Alley to its junction with Fritz Trench.

By evening, therefore, the first objective of the right and centre of the 7th Division—Fritz Trench, beyond Mametz, and a flank facing Fricourt—had been secured, the line running from Beetle Alley, where junction had been made with the XIII. Corps, along Fritz Trench, and thence down Bunny Alley and Bunny Trench round the north-western edge of Mametz. Thence the 20th Brigade took it down the slope along Orchard Alley, across the Péronne road and railway by Apple Alley, up on to the Maricourt

spur, joining with the left brigade (22nd), whose line on the right was partly in the German support line and partly in the front line.

As early as 6 P.M. the rear services of the division were well established, two roads via Carnoy and Wellington Redoubt having been repaired up to the German front line, and two duck-boarded communication trenches provided for each brigade for "up" and "down" traffic.

The enemy's resistance on the front of the 30th, 18th (of the XIII. Corps) and the 7th Divisions was completely broken. Everything was curiously quiet, localities beyond the first day's objectives—even Mametz Wood—could probably have been occupied with small loss, and they subsequently proved very costly both in time and life to capture. The battalions at the front reported that the enemy had cleared off, and that ground further to the front could be made good, but no orders for any further movement were issued by any of the higher staffs.

With the assistance of the 54th and 95th Field Companies R.E., which went up above ground about 4.30 P.M., the 24/Manchester (Pioneers) and the 1/3rd Durham Field Company which went up later, the whole of the new front of the 7th Division was wired during the night: four strongpoints were constructed, and dumps of stores formed in shell holes. Mametz village was placed in a state of defence under the direction of Lieut.-Colonel W. W. Norman (21/Manchester). A wireless station was erected at its south-west corner, and two of its wells were cleared out, saving a long "carry" of two-gallon water tins.¹ Part of the advanced dressing station at Minden Post (500 yards west of Carnoy) was also sent up to Mametz.

SITUATION OF THE 21ST DIVISION

Although the 7th Division had greatly improved its position, the 21st Division hardly moved during the afternoon; it did, however, manage to establish a flank towards Fricourt. In order to take advantage of the 2.30 P.M. attack on that village, the 63rd and 64th Brigades had been ordered to press on at that hour from the Sunken Road and Crucifix Trench to Fricourt Farm and Shelter Wood, respectively, and the 63rd Brigade was to be ready to cut off the retreat of any Germans from

¹ The work of discovering wells and improving roads was continued by the R.E. on the following days.

Fricourt village. On the front of this brigade, however, any movement from Lonely Trench and Lozenge Wood was at once checked by machine-gun fire from Fricourt Farm and the northern side of Fricourt Wood. The order to the 64th Brigade did not reach Colonel Fitzgerald, commanding the leading troops, till ten minutes after the preliminary bombardment of Shelter Wood had lifted, and the attack from Crucifix Trench, carried out by a mixed force of the 10/K.O.Y.L.I. and 15/Durham L.I., failed. At 4.35 P.M., therefore, Major-General Campbell ordered both brigades to hold and consolidate the trenches gained. At that hour the line ran from the Willow stream along the British original front to opposite the German Tambour, the 7/Green Howards having failed to get forward. North of this work some of the survivors of the 10/West Yorkshire, the left of the 50th Brigade, were still in the German front trench, but the majority were in the British front line. On their left the units of the 63rd Brigade formed a flank towards Fricourt village and wood along Lonely Lane—Lozenge Alley—Lozenge Wood, where a message sent by pigeon brought them the ammunition and water of which they were badly in need. Further north, the 64th Brigade had gained and held the first objective from Lozenge Wood along the first intermediate line, Crucifix Trench, to Round Wood, where its left was in touch with the 34th Division (III. Corps).

At 5.33 P.M. Major-General Campbell had ordered the 62nd Brigade (Br.-General C. G. Rawling) to send up its two remaining battalions (12/ and 13/Northumberland Fusiliers) to take the place of the 64th Brigade, which had suffered the heaviest losses in the attack. The latter brigade was relieved at dawn on the 2nd and withdrawn to the old German support trench, where it organized a defensive flank facing north. Three hours after this order (8.50 P.M.), following some conversation on the telephone, corps headquarters—in view of the heavy losses of the 21st Division—ordered the 17th Division, from corps reserve, to take over the front facing Fricourt, and the 51st Brigade (Br.-General R. B. Fell) with the 77th Field Company R.E. relieved the 50th Brigade preparatory to a renewal of the attack on the village the next morning. This relief proved unfortunate, and, in view of the situation, an appeal was actually made against it by the 50th Brigade; for before dusk it was evident from the observing posts that the Germans were weakening, and patrols then sent out estab-

lished that they were going back. The 6/Dorsetshire had, indeed, been moved up and, with the remaining two companies of the 7/East Yorkshire, ordered to assault. This movement was now countermanded and the change of brigades took place. Owing to congestion in the trenches it was not completed until 5 A.M. on the 2nd, by which time the 51st Brigade, having marched from Morlancourt carrying 50 extra rounds of S.A.A. and 3 days' rations, was very tired; and the opportunity had passed.

In the 21st Division area, as the enemy hardly fired a shot after dark, there was no difficulty in clearing the wounded—any delay being due to lack of sufficient stretchers and bearers—or in getting up supplies. Water proved the only exception, for the parties told off to carry it were insufficient owing to the heavy demands. During the fighting there had been congestion in the communication trenches, due to the walking wounded who persisted in taking the nearest way instead of the trenches allotted to them. Then there had been straggling on the roads, which led to the D.D.M.S. of the corps, Colonel F. R. Newland, making the suggestion, later carried into effect, that lorries should be provided to carry walking wounded once they were clear of the communication trenches.

As a general result of the day's fighting, the XV. Corps had made considerable headway on both its flanks, the right wing having advanced two thousand five hundred yards and captured Mametz, and the left two thousand yards across the top of the Fricourt spur to beyond the Sunken Road. It had taken prisoner in all 29 officers and 1,596 other ranks. In the centre, however, the attack had failed and, in spite of envelopment on three sides, there were still Germans in Fricourt.

The losses of the XV. Corps had been over eight thousand of all ranks, due almost entirely to machine-gun fire.¹

1		Killed.	Wounded.	Missing.	Total.
7th Div.	{ Officers	67	69	—	3,380
	{ Other ranks	965	2,252	27	
21st Div.	{ Officers	91	103	1	4,256
	{ Other ranks	1,091	2,859	111*	
17th Div. (50th Bde.)	{ Officers	21	21	—	1,155
	{ Other ranks	536	544	33	

* One prisoner of war.

NOTE

THE GERMANS OPPOSITE THE XV. CORPS¹

The front opposite to the XV. Corps was held by the centre portion of the *28th Reserve Division*. Opposed to the 7th Division was the greater part of the *109th Reserve Regiment* (its eastern boundary was the Carnoy—Montauban road), with the *I.* and *III. Battalions* and 15 machine guns “in shell hole positions” in the line, and the *II. Battalion* in support in and around Danzig Alley. The regiment should have been relieved on the night of the 30th June/1st July by the *23rd Regiment*, but, owing to the heavy British fire, only one company and a half of the relieving unit had been able to get up, and the rest, as already mentioned, had remained near Montauban. The deep dug-outs in the front line had not been much damaged, but, as hardly any had been constructed in the other lines, the garrison was mostly crowded together in the front line and caught there; thus the defence had no depth.² The artillery of the *28th Reserve Division* could give very little assistance, as “a great number of the guns had been smashed up”,³ and it suffered badly on the 1st July from further fire directed by aeroplane observation. The few guns still in action could not prevent the British reinforcements from coming up.⁴ All telephone communication broke down. The machine guns in Danzig Alley (East) and in the northern part of Mametz were either knocked out by direct hits or became unserviceable. It is claimed that Mametz was still held at 6 P.M., and that the few men of the *23rd* and *109th Reserve Regiments* left alive only withdrew at 7 P.M.⁵

At the first news of the attack the brigade commander sent the *55th Landwehr Ersatz Battalion* and two battalions of the *23rd Regiment*, with all available men of the *109th Reserve Regiment*, as already mentioned, to occupy the 2nd Position. In view of the uncertainty of the situation at Montauban and the necessity for securing the 2nd Position, and for keeping back some troops to occupy Mametz Wood, he decided not to send forward reinforcements to recover the front lines which had been lost.

Opposite the 21st Division was the sector of the *111th Reserve Regiment*, and it suffered “quite particularly” during the bombardment. “The trenches and obstacles, the weaker dug-outs and also the best observation posts were nearly completely destroyed. . . . Only by great exertions were the trenches, whose original course was hardly recognisable, kept passable. The entrances of the few deep dug-outs not smashed up could only be kept open “by extemporized means.” The situation on Fricourt spur was the worst. There a company of the *110th Reserve Regiment*, on the

¹ Somme-Nord, i.

² This is certainly true of the portion south of the Carnoy—Fricourt road, where the front trench was found literally crowded with German dead and wounded.

³ See Note at end of Chapter XIII.

⁴ According to British observation, there was hardly any shelling of the XV. Corps after 2 P.M.

⁵ At 6 P.M. the only Germans in Mametz were a few badly wounded prisoners. It was entirely in British hands soon after 4 P.M.

extreme right (north), had been reduced to eighty men by the bombardment, and another of the *111th* was ordered to replace it. This company, however, did not go up to the front. It sent twenty men to Round Wood—who were no doubt there when a party of the 64th Brigade attacked the wood—to block the gap in the line by fire, and held the rest in reserve between the wood and Contalmaison.

The success of the British, in spite of a warning of attack received by the *28th Reserve Division* through its listening station at La Boisselle,¹ is attributed to “the weak German artillery barrage “being unable to stop the advance of the enemy”, and to lack of hand-grenades. It is stated that a mine was fired which buried thirty British, but there is no mention of this in any British account. Only 3½ lines are given to the attack on Fricourt, to say that it failed with heavy loss. The German casualties for the day are not available.

¹ See Note at end of Chapter XV.

CHAPTER XV

THE SOMME

1ST JULY 1916

III. CORPS¹

(Maps 1, 8 ; Sketches A, 21)

THE position of the III. Corps between Bécourt and Authuille, lay on the forward slopes of a long low ridge between Albert and La Boisselle, marked by Tara and Usna Hills, a continuation of the spur of the main Ginchy—Pozières ridge on which the village of Ovillers stands. Behind this ridge the divisional artillery was deployed in rows, one brigade behind the other, dug in on bare and open ground. The observers were on the crest, with a perfect view of the whole German position spread out before them like a map, each trench shown up by its chalk parapet. The enemy 1st Position, with its front line higher than the British, lay across the upper slopes of the three spurs which reach out south-westwards from the main ridge towards Albert. Map 1.
Sketch A.

The distance between the opposing lines varied from 800 to 50 yards, as will be seen on the map, the trench nearest to the enemy, opposite La Boisselle, being known as "Glory Hole".

The right of the corps faced the western slope of the

¹ III. Corps (Lieut.-General Sir W. P. Pulteney) :

34th Division (Major-General E. C. Ingouville-Williams, killed in action 22nd July 1916), 101st, 102nd and 103rd Brigades.

8th Division (Major-General H. Hudson), 23rd, 25th and 70th Brigades.

19th Division (Major-General G. T. M. Bridges), 56th, 57th and 58th Brigades.

G.O.C. R.A., Br.-General H. C. C. Uniacke ;

” Heavy Artillery, Br.-General A. E. J. Perkins ;

Chief Engineer, Br.-General A. L. Schreiber.

Map 8.
Sketch
21.

long Fricourt spur; its centre, the La Boisselle spur, with the village of that name almost in the German front line; whilst in front of its left was the upper part of Ovillers spur, with the village within the German front defences. The depressions running into the enemy position between the three spurs were known as Sausage Valley and Mash Valley. Neither was more than a thousand yards wide, so that, being bare and open, any advance up them could be effectively met by crossfire from both sides; whilst the spurs themselves were covered with a network of trenches and machine-gun nests. The great Thiepval spur—actually opposite the X. Corps, next on the left—overlooked practically all the first belt of ground over which the divisions of the III. Corps had necessarily to advance.

The German defences consisted of a front system with four main strongpoints in its southern half: Sausage Redoubt (or Heligoland), with Scots Redoubt behind it; Schwaben Höhe; and La Boisselle village. A fifth, Ovillers, was situated centrally in its northern half. Behind the front defences were two intermediate lines: the first from Fricourt Farm to Ovillers, and the second, incomplete, in front of Contalmaison and of Pozières. Behind these again was the 2nd Position from Bazentin le Petit to Mouquet Farm, consisting of two lines. The 3rd Position was three miles in rear of the second. Owing to the enemy's front position being on the forward slopes, it was completely exposed to fire, except the front trenches near La Boisselle and these were not only very near our own front line but difficult to reach with shell fire owing to the configuration of the ground. It will be observed, however, on reference to the map, how singularly well the front line was adapted to defence, being sited, as the ground demanded, as a series of salients and re-entrants, the La Boisselle and Thiepval salients being particularly strong.

The high road Amiens—Albert—Pozières—Bapaume cut through the centre of the III. Corps front. In its straight course from Albert up to the Pozières ridge it ascends aslant the northern slope of the La Boisselle spur, and thence rises steadily to Pozières. This highway was roughly the line of demarcation between the two divisions which were to make the assault, the actual dividing line being at first about five hundred yards to the left of it, but near Ovillers passing to the right. The 34th Division, on the right, was to attack and capture the German defences on the Fricourt spur and astride Sausage Valley as far as

La Boisselle (inclusive). It was then to advance to the line Contalmaison—Pozières (exclusive), halting some eight hundred yards in front of the German 2nd Position. The 8th Division, on the left, was to capture the German front defences north of the Bapaume road, including the whole western slope of Ovillers spur and the village. It was then to push forward to a line facing the German 2nd Position between Pozières (inclusive) and Mouquet Farm.

The two assaulting divisions had thus to capture two fortified villages and six lines of trenches, and to advance into the German position to a depth of roughly two miles on a frontage of four thousand yards—a formidable task.

The 19th Division, in corps reserve, but with its guns in action under the other divisions, was to be in a position of readiness in an intermediate position north of Albert, and as the 34th and 8th Divisions moved forward to the assault, the two leading brigades of the 19th Division were to take their places in the Tara—Usna line, ready to move forward to relieve them when they had secured their objectives.

The corps artillery—mostly concentrated on both sides of the Amiens road, just west of Albert—comprised 98 heavy guns and howitzers, in addition to the divisional batteries, and a “groupe” of French 75-mm. of the 18th Field Artillery Regiment to fire gas shell. It was organized in five groups, two working with each of the assaulting divisions and the other, composed of the heavier natures, covering the whole front.¹ This gave a heavy gun to every 40 yards, and a field gun to every 23 yards.

As the infantry commanders were by no means satisfied with the results of the bombardment of La Boisselle and Ovillers, a battery of eight Stokes mortars was told off to shell the former at zero. It was speedily knocked out by shell fire, but before this happened considerable effect appeared to have been produced on La Boisselle.

The programme of fire for the 1st July provided for eight lifts of the heavy artillery, and laid down that “after the assault the subsequent movement of the infantry will be assisted and regulated by a system of barrages which will move back slowly” in accordance with a timetable.² In this programme the sixth lift, to fall behind

¹ Howitzers: One 15-inch; three 12-inch (on railway mountings); twelve 9·2-inch; sixteen 8-inch; and twenty 6-inch.

Guns: One 12-inch, one 9·2-inch (both on railway mountings); four 6-inch; thirty-two 60-pdrs.; and eight 4·7-inch.

² At the rehearsals of the assault, the artillery lifts had been represented by lines of men carrying flags.

Contalmaison and Pozières, took place 1 hour and 25 minutes after zero, and the final lift, roughly one thousand yards further back, 22 minutes later. The "slowly" referred to the general pace of the advance of the barrage, which was about two miles in 1 hour and 47 minutes. It was made in "jumps" by the heavy artillery as in the XIII. and XV. Corps: the divisional artillery barrage, on the other hand, was to go back "very slowly", and the instructions issued in the 34th Division artillery (Br.-General A. D. Kirby) made clear what was intended. They state:

"Lifts are timed to commence at the same time as the Heavy Artillery. But instead of lifting straight back on "to the next line, divisional artillery will rake back gradually to the next line." The rake, however, the speed of which was given in an appendix, was not continuous, but a series of short lifts of 50, 100, or 150 yards. It was further said that "the speed at which the rake goes back to the next line will be calculated so that the shrapnel barrage "moves back faster than the infantry can advance". There was not therefore a creeping barrage, but only an attempt to deal with every small intermediate trench.

There were frequent complaints of bad gun ammunition during the preliminary bombardment and on the 1st July, for, as in the XV. Corps, the field-gun ammunition proved to be very faulty, causing numerous premature bursts with consequent casualties as the guns were ranged in several lines. Many of the heavy howitzer shells fell short, and many failed to burst: an officer with the successful right wing of the corps reported "a dud shell every two or three yards over several acres of ground". On the other hand, it should be mentioned that the 12-inch railway gun, firing at zero from behind Albert at 13 miles' range, drove the headquarters of the German *XIV. Corps* out of Bapaume.¹

Two very large mines, to be fired two minutes before zero, were laid by the 179th Tunnelling Company R.E. under the shoulders of the salient formed by the trenches round La Boisselle in order to destroy any flanking arrangements, and by the height of their lips to prevent enfilade

¹ This is admitted in *Somme-Nord*, i. p. 18, but the time, stated vaguely as the evening of the 30th, is a mistake. A message picked up on the night of the 1st/2nd July, notifying the change of headquarters, resulted in General von Stein being shelled out again next day. His final headquarters were in Beugny, 3½ miles behind Bapaume.

fire along No Man's Land on either side. The southern one, known as "Lochnagar", under Schwaben Redoubt, contained 60,000 lbs. of ammonal;¹ the other, "Y Sap", 40,600 lbs. of ammonal.² As mine warfare had been going on in the La Boisselle area, infinite precautions were necessary to prevent the discovery of this new enterprise, especially as there was no continuous front trench along the mine-field, which was only held by a series of posts covering the mine shafts.³

34TH DIVISION⁴: THE ASSAULT ON LA BOISSELLE SALIENT

The full weight of the twelve infantry battalions of the 34th Division was to be thrown in the first assault, by successive waves, against the German position. It was to attack in four "columns", each column three battalions deep on a frontage of four hundred yards. Between the third and fourth columns opposite La Boisselle there was to be a gap. Unlike Ovillers in the 8th Division area, La Boisselle, the key of the front system owing to its salient position, was not to be attacked directly; the two left columns, passing on either side of it, were as they advanced to send into it special bombing parties (amounting in all to

¹ In two charges of 36,000 and 24,000, 60 feet apart, and 52 feet below the surface.

² The tunnel was driven from the northern flank with a gallery 1,030 feet long, the longest ever driven in chalk during the war.

³ This tunnelling in close proximity to the enemy was carried out in silence, with bayonets fitted with a special spliced handle; the men were barefooted; and the floor of the gallery was carpeted with sandbags. The operator inserted the point of the bayonet in a crack in the "face" or alongside a flint, gave it a twist, and dislodged a piece of chalk, which he caught with his other hand and laid on the floor. If for any reason he had to use both hands on the bayonet, another man caught the stone as it fell. The dimensions of the tunnels were about 4½ feet by 2½ feet. An advance of 18 inches in 24 hours was considered satisfactory. The spoil was packed in sandbags and passed out along a line of men seated on the floor, and stacked against the side, ready for use later to "tamp" the charge. There was no interference from the Germans, but as the charges were being loaded they could be heard quite plainly in their system at Lochnagar below and at Y Sap above the British.

⁴ This division arrived in France on 9th-10th January 1916. Originally numbered 41st and nominally organised in December 1914, it actually came into being on 15th June 1915, when a single officer, the D.A.Q.M.G., arrived at Ripon. It consisted entirely of new men, raised mainly in the north of England by local effort. Two infantry brigades and the Pioneer battalion were Northumberland Fusiliers; the two battalions of Royal Scots came from Edinburgh. (See "Infantry Order of Battle" at end of Volume.) The artillery came from Sunderland, Staffordshire, Leicester and Nottingham; the engineers from Nottingham.

one platoon), supported by Lewis and Stokes guns, to clear it from both flanks. Brigade and battalion commanders who expressed doubts as to the feasibility of this course were reminded that the commander of the Fourth Army had said the village would have been rendered untenable and the Germans in it "wiped out" by the preliminary bombardment, while the flanking shoulders on either side of it would be destroyed by the great mines. On the 30th June, however, the front line troops had found the garrison very much on the alert, for parties put over the parapet to clear passages through the wire in front of it were fired upon. It was arranged, therefore, that at zero when the barrage lifted, the bombardment of the village should be continued by trench mortars until the flanking parties could enter. To deal with Sausage Redoubt, a dangerous flanking work, during the night an emplacement for a trench-mortar battery was dug in No Man's Land—there 500 yards wide—and its fire proved very effective until all its personnel were killed or wounded. It was subsequently discovered that the damage done by the bombardment was superficial, and that none of the deep dug-outs had been injured. In one of them an overhearing station had remained in action to the last. At 2.45 A.M. it had picked up part of a telephoned British order which pointed to an assault in the morning.¹

The two right columns which assembled in the Tara—Usna trenches were formed of the 101st Brigade (Br.-General R. C. Gore),² each having one battalion in front and one in support with a battalion of the 103rd Brigade (Tyneside Irish, Br.-General N. J. G. Cameron³) in rear. The two left columns were similarly composed of the 102nd Brigade (Tyneside Scottish, Br.-General T. P. B. Ternan), with the two remaining battalions of the 103rd Brigade in rear. As the 103rd Brigade contained, as did the division as a whole, a large number of miners, extensive galleries had been dug in Tara hill for the first assembly of its battalions. At the hour of assault all four columns were to advance in extended order in lines of companies, each in column of platoons at 150 paces' distance. Br.-General Gore ordered the headquarters (lieutenant-colonel, second-

¹ See Note at end of Chapter.

² The original commander, Br.-General H. G. Fitton, had been shot by a sniper in January.

³ Br.-General Cameron was wounded soon after zero, and the brigade was commanded by Lieut.-Colonel G. R. V. Steward, 27/Northumberland Fusiliers, until 4th July, when Br.-General H. E. Trevor took it over.

in-command, adjutant, etc.) of his battalions to stand fast when the troops advanced, and not to go forward until ordered by the brigade. They therefore remained intact and available to reorganize their commands at night, whilst practically all the other battalion staffs became casualties.

The first objective of the two leading lines of battalions was the German front system, consisting of four trenches. The fourth trench, requiring an advance of about two thousand yards, was to be reached forty-eight minutes after zero hour, i.e., 8.18 A.M. The second objective was the German second intermediate line, the Kaisergraben, in front of Contalmaison and Pozières villages. This line was to be reached by 8.58 A.M., when the 101st and 102nd Brigades were to halt and consolidate. The 103rd Brigade, forming the third line of battalions and following close in rear, would then pass through the 101st and 102nd Brigades, capture Contalmaison village, and advance to the third, and final, objective of the division, a line close to the outer or eastern edge of that village and Pozières. This line, to be reached by the 103rd Brigade at 10.10 A.M., was to be put into a state of defence preparatory to a subsequent assault on the German 2nd Position, which lay eight hundred yards beyond.¹

At zero hour the whole infantry of the division, except the head of the second column, rose as one man, the front line going "over the top" and the rear lines moving down the slopes of Tara—Usna ridge, even the reserve battalions of the 103rd Brigade leaving their trenches. In a matter of ten minutes some 80 per cent. of the men in the leading battalions were casualties; for directly the artillery barrage lifted off the German front line, an ever-increasing number of machine guns—mostly in rear of the front line, well sited and hidden, and untouched by the bombardment—came into action, sweeping No Man's Land, which was 200-800 yards wide, and the front slopes of the Tara—Usna ridge. There was no surprise: the Germans were ready. Warned by the order which had been overheard, and well drilled at manning the parapet, they came up out of their deep dug-outs as if by magic directly the barrage moved, and established a rough firing line before the British had got across No Man's Land.

¹ The 34th Division was opposed by the German *110th Reserve Regiment* on a similar frontage, two battalions holding the front defence system, the third battalion being in reserve in the intermediate lines and 2nd Position.

The four assaulting columns met with misfortunes of varying nature, accentuated by the fact that all the battalions of the 103rd Brigade left the Tara—Usna line at zero when the leading troops went "over the top". Thus, in most cases, as soon as the latter were held up, the tail of each column telescoped on its head, with the result that composite parties formed of men of all battalions were to be found nearly everywhere, thus presenting splendid targets to the enemy. The right column was faced by the steep convex slope of the long western side of the Fricourt spur. The front companies of the 15/Royal Scots moved forward to within two hundred yards of the German front trench before zero hour, covered by the final bombardment and trench mortar fire. On the barrage lifting, they overran with great steadiness and with little loss the German front trench which lay along the upper part of the slope, the pipe-major in the first wave playing the pipes, which, however, were soon punctured. At this early stage flanking machine-gun fire from Sausage Valley and La Boisselle forced the leading companies of the 15/Royal Scots, which were ahead of those of the second column, from their proper direction, and practically destroyed the left wings of the rear companies and of the lines of the 16/Royal Scots, which were following. The intended line of advance lay north of east, but owing to the hail of fire from the left the lines instinctively veered due eastward, moving straight up instead of aslant the rising slope, leaving parties of the 15/Royal Scots to clear up the German trenches in their sector, which included Sausage Redoubt. This divergence was maintained and accentuated as the advance progressed, carrying the right column into the zone of the XV. Corps. Thus by 7.48 A.M. the 15/ and 16/Royal Scots were well on the top of the Fricourt spur, but had left uncaptured both Sausage Redoubt and Scots Redoubt. The error of direction was not discovered until half-an-hour later, when, after advancing nearly a mile and crossing the German first intermediate line, the Royal Scots reached Birch Tree Wood beyond the Sunken Road, in the depression leading down to Fricourt village and ran into units of the 21st Division (XV. Corps). The remains of the two Scottish battalions, now considerably intermingled, edged away therefore to their left, northwards, to rectify the mistake. Those of the 15/Royal Scots moved along Birch Tree Trench, in the German second intermediate line, towards Peake Woods, and those

of the 16/Royal Scots took up a position in support along the Fricourt—Pozières road (the "Sunken Road" of the XV. Corps sector), two hundred yards in rear.

Before this northward movement along Birch Tree Trench was completed, the enemy¹ attacked from the direction of Peake Woods, chiefly with bombing parties along the trench. Simultaneously heavy machine-gun fire was opened from the left flank and rear by German parties in the third and fourth trenches, and by a party in Scots Redoubt. This counter-attack caused heavy loss, and forced the Royal Scots to withdraw southwards, the 15/Royal Scots along Birch Tree Trench to a position just inside the XV. Corps sector, about Birch Tree Wood—Shelter Wood, and the 16/Royal Scots, with men of the 27/Northumberland Fusiliers, and 11/Suffolk² from the next column, to the vicinity of Round Wood. They then initiated a movement towards Wood Alley and Scots Redoubt, being joined by men of various battalions, amongst them a captain of the 11/Suffolk, who had been wounded. Finding only a second-lieutenant with the Royal Scots, he took command, and both objectives were secured—Scots Redoubt in an almost undamaged condition and most valuable as a flank support.

The Royal Scots were now astride the Fricourt spur, even a little beyond their first objective along the eastern side of it, and faced the Contalmaison spur, a thousand yards away across the valley. One party of the 16/Royal Scots, according to German accounts, actually penetrated the village and was there annihilated. The 27/Northumberland Fusiliers, which was to follow close behind the 16/Royal Scots, was stopped by the intense and accurate machine-gun fire which dominated No Man's Land. Parties got through to the Fricourt—Pozières road, and some men, with others of the 24/Northumberland Fusiliers of the next column on the left, reached Acid Drop Copse and the outskirts of Contalmaison. But such isolated advances could not change the fortune of the day. On learning what the situation was, Br.-General Gore selected the battalion quarters of the 16/Royal Scots (Lieut.-Colonel Sir G. McCrae) to go forward and take command. The position reached by the Royal Scots was consolidated, and as it flanked the eastern side of the Fricourt spur towards

¹ A company from the reserve battalion of the 110th Reserve Regiment.

² See "Infantry Order of Battle" at end of Volume.

Contalmaison, it formed a strong defensive flank on the left of the XV. Corps.¹

On the left of the second column, opposite the gap of two hundred yards which divided it from the third, the Lochnagar mine (the double mine) was successfully exploded at 7.28 A.M., blowing up the German garrison and causing a great crater ninety yards across and seventy feet deep, with lips fifteen feet high. Immediately south of the mine, however, the German front trench, following the contour of Sausage Valley, formed a pronounced re-entrant; and the infantry of the second column, delayed five minutes by order in view of the mine explosion,² was not only behind the columns on either side in crossing No Man's Land, but had further to go than that on its left. The barrage had of course lifted and the Germans thus had plenty of time to man the position deliberately, including Sausage Redoubt, the northern face of which flanked the advance. Their fire, combined with that of the flanking machine guns in Sausage Valley and La Boisselle, turned first on to the right column and then on to the second, was fatal to the success of the 34th Division. Within two minutes of zero hour, before the lines of the 10/Lincolnshire had cleared the front trench, machine-gun fire raked them and those of the 11/Suffolk following. The latter unit, in addition, suffered from a weak artillery barrage placed on the British trenches by the German batteries soon after the assault had been launched. Men fell fast, and the lines were gradually reduced to isolated small parties.

On the extreme right, a party which tried to storm Sausage Redoubt was burnt to death by flame throwers as it reached the parapet; but some of the Suffolks got through and joined, as we have seen, the Royal Scots of the first column on top of the Fricourt spur. Still the courageous efforts of the mass of the Lincolnshire and Suffolks to cross the five hundred yards of No Man's Land were unavailing, and the 24/Northumberland Fusiliers following them was ordered to halt in the front trenches.³

¹ The casualties in the two Scottish battalions on the 1st July were :—

		Killed.	Wounded.	Missing.	Total.
15/Royal Scots	{ Officers	11	6	2	513
	{ Other ranks	230	263	1	
16/Royal Scots	{ Officers	6	7	—	466
	{ Other ranks	327	67	59	

The figures for the 16th Bn. are most abnormal.

² There was no necessity for this wait (see Chapter XVII).

³ Some, however, had started before the order reached them. The Lincolnshire lost 15 officers and 462 other ranks; the Suffolks, 15 officers

The survivors took any cover available in the open fire-swept zone ; some men, from all three battalions, reached and consolidated a position in the Lochnagar crater. The party of the 15/Royal Scots left by the right column to deal with Sausage Redoubt attempted to bomb northwards into it, but was not strong enough to do so. Two attempts made by the 27th Field Company R.E. and a company of the 18/Northumberland Fusiliers (Pioneers) to reinforce this party across No Man's Land also failed owing to machine-gun fire ; it was obvious that until the Germans could be cleared out of the redoubt, the troops of the second column lying out in No Man's Land could neither be reinforced nor relieved during daylight.

The third column of the 102nd Brigade formed of the 21st, 22nd and 26th Northumberland Fusiliers, the last battalion belonging to the 103rd Brigade, tried to pass immediately south of La Boisselle, but north of the Lochnagar crater. Starting immediately the mine was fired, and having less than two hundred yards of No Man's Land to cross, it succeeded in overrunning the trenches of Schwaben Höhe. The leading lines then moved along the western side of Sausage Valley, immediately below La Boisselle village, and crossed the next two lines of trenches (Kaufmanngraben and Alte Jägerstrasse). Their right flank was, however, exposed owing to the failure of the second column to advance at zero.

Detachments of bombers were sent out towards La Boisselle, but were unable to make progress. Up to this time, that is twelve minutes after zero hour, the bombardment of the village had been continued by trench mortars, so as to cover the advance of the assaulting columns to the north and south of it ; but this did not prevent the Germans from emerging from the deep dug-outs under the ruins. They opened machine-gun fire, as has been seen, on the columns and enfiladed the lines of infantry moving past the southern front of the village, and they drove back the bombing parties. Very heavy losses were incurred by all three battalions of the third column at this stage. Nevertheless Quergraben III., the German first intermediate line, astride the Contalmaison road, was reached in places, some men being reported as far east as Bailiff Wood, in the second intermediate line, only five hundred yards from

and 512 other ranks. An artillery officer who walked across found "line after line of dead men lying where they had fallen".

Contalmaison itself. But, as elsewhere, it is difficult to discover how far units penetrated, for the leading men were only too often killed or taken prisoner. The Germans now counter-attacked southwards along Kaiserstrasse and Quergraben III., and the Tyneside Scottish, unable to retaliate effectively owing to a shortage of bombs, withdrew to the remains of the third German front trench (Kaufmanngraben). Reduced to 7 officers and about 200 other ranks, they held and consolidated this trench on a front of four hundred yards, their right on the road up Sausage Valley.

The fourth column, the left of the 102nd Brigade, which was to pass by the northern side of La Boisselle—while the "Glory Hole" between this column and the third was held by a company of the pioneer battalion—was led by the 20/ and 23/Northumberland Fusiliers (1st and 4th Tyneside Scottish), with the 25th (2nd Tyneside Irish) following. Here, too, the German front line followed the contour of Mash Valley, forming a pronounced re-entrant, so that on the left nearly eight hundred yards of No Man's Land had to be crossed. All depended on the bombardment having obliterated the defences near the two villages, and upon the chance that the defenders, demoralized by it and the firing of the Y Sap mine, would surrender freely.

In spite of the successful firing of the mine,¹ immediately the Tyneside Scottish left the British trenches they encountered cross machine-gun fire, not only from Ovillers on their left front, but at short range from La Boisselle and its trenches on the right, besides some shelling. The two leading battalions pressed on most gallantly across No Man's Land, but were almost annihilated before they reached the German front trench. It was seen later from the position of the dead that some had crossed the front trench and moved on to the second before they were shot down, and that flanking parties had tried in vain to force an entrance into La Boisselle. The 25/Northumberland Fusiliers, advancing behind them, also lost heavily in its vain efforts to carry forward the attack across No Man's Land. By now all the commanding officers of the 102nd Brigade, Lieut.-Colonels C. C. A. Sillery, A. P. A. Elphinstone, W. Lyle, and Major F. C. Heneker, had fallen and two

¹ An officer and 35 men were taken out of a dug-out just beyond the dangerous radius of the mine, thoroughly cowed. The officer stated that nine dug-outs equally full must have been closed in by the mine.

seconds-in-command and two adjutants had been killed and the others wounded. In the 103rd Brigade, Lieut.-Colonel L. M. Howard had been killed, and Lieut.-Colonels J. H. M. Arden and M. E. Richardson wounded (the latter however continued with the 26/Northumberland Fusiliers till evening), and 15 out of the 16 company commanders were casualties.

At 10 A.M. the situation on the front of the 34th Division was that part of the right column had reached a position on the further side of the Fricourt spur about Round Wood and Birch Tree Wood in touch with the XV. Corps and in the latter's sector; the second column was lying out in No Man's Land held up by machine-gun fire both from Sausage Redoubt and from La Boisselle, although part of it had joined up with the first on Fricourt spur; the third was in possession of a small sector of the German defences around Schwaben Höhe, on the northern slope of Sausage Valley; and the left column, except for a few individuals, had failed to reach the German front trench north of La Boisselle, and had withdrawn to its starting place. Although this village was to all appearance obliterated, the Germans, safe in their deep dug-outs during the bombardment, were holding the ruins in strength, and bombing parties had been unable to enter.

So thick, however, was the smoke and dust, that until nearly 9 A.M. it was believed at divisional headquarters that the attack had made progress, and the close support field battery had actually begun to move forward.

All three brigades having been employed in the attack, Major-General Ingouville-Williams had no troops available to clear the enemy out of Sausage Redoubt, or to press the attack on La Boisselle village from the south. At 11.25 A.M., therefore, he telegraphed to III. Corps headquarters asking for reinforcement for these purposes, and a battalion (9/Welch) of the 19th Division in corps reserve, was placed at his disposal. Any action by this battalion was, however, postponed, and an attack by the last available company of the 18/Northumberland Fusiliers (Pioneers) countermanded, as it was decided that the 19th Division should carry out an attack on La Boisselle with two brigades after dark. Measures were nevertheless taken in hand spontaneously by the troops near by for the purpose of clearing Sausage Redoubt, but they were limited to the action of small parties. At 1 P.M. the redoubt and the adjoining trenches were bombarded until 3.20 P.M.,

when a party from the 21st Division (XV. Corps) was to bomb northwards along the German front trench to the redoubt, and another from the 34th Division southwards from the Lochnagar mine crater. The bombardment, however, did not affect the German defence, and the attacks on the redoubt were a failure: the 21st Division party was too weak, and could make little headway; whilst of the 34th Division party, the leading line lost 23 out of 30 men killed or wounded almost immediately the advance began. Sausage Redoubt, which by checking the second column had been the chief factor in the delay of the advance of the 34th Division on Contalmaison, remained therefore in German hands. By the evening, however, two communication trenches were available across No Man's Land into the German trenches held on either side of the redoubt. On the right, one had been dug in the XV. Corps area, and touch was thus gained with the 15th and 16/Royal Scots at Birch Tree Wood—Round Wood; whilst on the left one of the tunnels¹ constructed previously under No Man's Land to within a short distance of the German front line, formed a covered communication by which touch was gained with the party of the Tyneside Scottish holding the German defences south of La Boisselle. By these routes, bombs, ammunition, water, etc., were sent up by carrying parties of the 209th Field Company R.E. and the 18/Northumberland Fusiliers (Pioneers), and the transport personnel of the 16/Royal Scots (who fed and re-equipped the troops near Scots Redoubt); and it was due to the exertions of these parties that the men in the front line were able to hold on to the two small footings they had gained.

The survivors of the 10/Lincolnshire and 11/Suffolk who had been held up in No Man's Land throughout the day—when to move was to be shot at from the German parapet—got back under cover of darkness to the British front trench, which was later taken over by the 19th Division.

¹ Three tunnels had been constructed on the III. Corps front to provide covered communication across No Man's Land after the assault, one in the 34th Division area south of La Boisselle, and two in the 8th Division area, one north of La Boisselle and the other to a point opposite Owillers. These tunnels were 8' 6" high, 3' 6" wide at the bottom, and 2' 6" at the top. They had been dug through the chalk at a depth of 12 to 14 feet, the last 150 feet being excavated with bayonets to prevent any sound of working reaching the enemy. Owing to the construction having been kept secret, the tunnels were not taken into use as soon as they might have been.

8TH DIVISION: THE ASSAULT ON THE OVILLERS SPUR

The 8th Division,¹ which put all its three brigades in the front line, was to assault the Ovillers spur, the dominating feature immediately north of the Albert—Bapaume road, with the lower slopes inside the British lines. To the centre of the division fell the easiest part of a difficult operation: its advance against Ovillers, on the eastern slope of the spur, would be out of sight of the defenders except for the last three or four hundred yards. The flank brigades, however, were forced to move along the exposed and open slopes of the valleys on either side—Mash Valley to the south and Nab Valley to the north—and these were swept from the German positions on the far sides of the valleys, from La Boisselle in the 34th Division area, and from the Leipzig Salient in that of the 32nd Division area. In fact, it seemed to Major-General Hudson that there was small chance of success unless the divisions on either side advanced a little ahead of his own. A proposal to postpone its zero hour slightly was, however, rejected by the commander of the Fourth Army; but the 8th Division was given a call on a battery of the 32nd Division to keep down flanking fire.

The right brigade, the 23rd (Br.-General H. D. Tuson) was to attack up Mash Valley, its right gaining the Albert—Pozières road due south of Ovillers. Thence it was to advance astride the road over the mile of steadily rising ground to its objective, Pozières village. The centre brigade, the 25th (Br.-General J. H. W. Pollard), was to carry the sector of the German front defences in and about Ovillers village. The 70th Brigade (Br.-General H. Gordon), on the left, was to attack up the southern slope of Nab Valley on to that part of Ovillers spur north of the village, and thence advance over almost level upland to the German 2nd Position north of Pozières, the left of the brigade on Mouquet Farm (exclusive).²

¹ This division, originally composed of troops of the old Army, arrived in France in November 1914. It had lost heavily in the Battles of Neuve Chapelle and Aubers Ridge in 1915. In the autumn of 1915, when certain old infantry brigades were sent to stiffen new divisions, its 24th Brigade was exchanged for the 70th of the 23rd Division. The division therefore went into battle with a large proportion of recruits lacking battle experience. Its Pioneer battalion, the 22/Durham L.I., joined it only a fortnight before the battle.

² The 8th Division was opposed by the *180th Regiment*, with two battalions holding the front defences on the Ovillers spur and across Nab Valley, and its third battalion in reserve in the 2nd Position north of Pozières. Of the four lines of trenches comprising the front defences, the first two were

For the last eight minutes before the infantry assault, that is from 7.22 A.M. onwards, the final artillery bombardment was supplemented by the fire of trench-mortar batteries from concealed positions near the front, three sections (twelve 3-inch Stokes mortars) to each brigade,¹ which fired eighty to one hundred rounds per mortar on the German front defences. During this period the leading waves moved out two or three hundred yards into No Man's Land, where it was wide (it varied from 300 to 800 yards), at once coming under machine-gun and rifle fire; in fact, from 7 A.M., when the bombardment was intensified, at least two machine guns constantly traversed the front line.

At 7.30 A.M. the artillery barrage lifted, the trench mortars ceased fire, and the leading battalions of all three brigades rose and moved forward, each battalion in four lines of companies at 50 paces' distance, and on a frontage of 400 yards. The enemy machine-gun and rifle fire immediately grew in volume: from La Boisselle and Ovillers and from the German second trench it poured into No Man's Land. Nevertheless, the advance over the greater part of this absolutely bare ground was carried out with great coolness and precision, and in excellent order.² When, however, the front wave was within eighty yards or so of the German trench the enemy fire rose to extreme violence along the whole front of the position. Almost simultaneously the German batteries behind Ovillers placed a barrage on No Man's Land and along the British front and support trenches, causing heavy losses. Instead of keeping the even walking pace intended, the lines of companies, on receiving this very heavy fire, tried to charge forward, as the ground in the centre of No Man's Land was uncratered and provided no cover. The original wave formation soon ceased to exist, and companies became mixed together, making a mass of men, among which the German fire played havoc. That they were moving quickly did not help them to escape, and for the most part only isolated detachments reached the German trench.

held by three companies from each battalion, each company on a frontage of 400 yards, whilst the fourth company, in reserve, was in the third trench. The fourth line was occupied by two companies from the reserve battalion, one in rear of each of the front battalions. There were thus ten infantry companies, approximately 1,800 men, to oppose the three brigades, roughly 9,600 men, of the 8th Division.

¹ Except the 23rd, the width of No Man's Land in front of it being too great.

² See the German account at end of Chapter.

On the front of the 23rd Brigade, a number of the 2/Middlesex and 2/Devonshire¹ actually passed through the scattered groups of Germans in the front trench, and some reached the second trench, two hundred yards beyond; but further advance was completely checked by cross fire from the communication trenches and from shell holes on either flank. The survivors, about seventy in all, were re-organized by Lieut.-Colonel R. Bastard of the 2/Lincolnshire, in three hundred yards of the German front trench, which they held for nearly two hours, until, much reduced in numbers and having exhausted their supply of bombs, they were driven out by German counter-attacks from both flanks. Retiring as best they could, they occupied shell holes in No Man's Land, and found that the rear waves, unable to move forward, were lying out in the open behind them, and suffering so very heavily that the ground was covered by dying and wounded men.²

The 2/West Yorkshire, which moved forward in support at 8.25 A.M., lost over two hundred and fifty men in passing through the German artillery barrage on the British front trench, while its subsequent advance was enfiladed throughout from La Boisselle and that side of the valley. Only small parties reached the German front trench.³ The advance of the 2/Scottish Rifles beyond the front line was therefore stopped. About this time Lieut.-Colonel Bastard returned to the British front line to collect as many men as possible to support those in front of the German defences; but, by brigade orders, no further attempt was made to reinforce, and he went forward again and withdrew what men he could to the old front line.

On the front of the 25th Brigade the course of events was almost similar, the lines of the leading battalions, the 2/Royal Berkshire and 2/Lincolnshire⁴ receiving the same heavy fire. Parties of the latter battalion, moving by short rushes from shell hole to shell hole, reached the German front trench about 7.50 A.M., but this was so wrecked that it gave little cover, and attempts made to consolidate a position along it were of no avail. Some men pressed on to the second trench, but by 9 A.M., enfiladed from both flanks and attacked by bombers from the shell

¹ The 2/West Yorkshire was in support and 2/Scottish Rifles in reserve.

² The 2/Middlesex lost 22 officers and 601 other ranks; the 2/Devonshire, 17 officers and 433 other ranks.

³ The 2/West Yorkshire lost 8 officers and 421 other ranks.

⁴ The 1/Royal Irish Rifles was in support and the 2/Rifle Brigade in reserve.

craters, they were compelled to withdraw as best they could, Lieut.-Colonel A. M. Holdsworth of the Berkshire receiving wounds of which he died six days later, his successor, Major G. H. Sawyer, also being wounded. The 1/Royal Irish Rifles, which had moved forward in support of the 25th Brigade attack, suffered very heavily from the German artillery barrage on the British front trench, losing Lieut.-Colonel C. C. Macnamara, died of wounds; and its subsequent efforts to cross No Man's Land proved as costly in life and fruitless as had those of other units, only ten men getting over. Each of the three battalions of the 25th Brigade had now lost more than half its strength in the action.¹ Many of the survivors lay out in the shell craters in and about the German front line throughout the day, only returning to the British trenches at nightfall.

The assault of the 70th Brigade, on the left, was at first more successful. Aided by the attack of the 32nd Division on the left, which diverted from it some of the German flanking fire from the Leipzig Salient and works on the Thiepval spur, the two leading waves of the 8/K.O.Y.L.I. and part of those of the 8/York & Lancaster² got across No Man's Land, and pressed straight over the front trench and on to the second one, but leaving untouched the trenches north-east of "The Nab." Very few of the third and fourth waves, however, got across the four hundred yards of open grassland separating the two lines. At the second trench opposition stiffened and further progress of the first waves became slow, although some men entered the third trench, two hundred yards beyond. Owing to the heavy casualties the impetus of the assault was now exhausted; no reinforcements appeared, and time was given to the enemy to take measures for the defence of the gap which had been made in his line.

The 9/York & Lancaster, following the leading battalions, tried to get forward to support them; but the machine-gun fire from the Thiepval spur, which enfiladed the advance at a range of six hundred to eight hundred yards, now greatly increased. The battalion lost fifty per cent. of its strength almost at once, and very few men reached the

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	Officers.	Other ranks.
2/Royal Berkshire	27	347
2/Lincolnshire	21	450
1/Royal Irish Rifles	17	429
2/Rifle Brigade	4	115

² The 9/York & Lancaster was in support and the 11/Sherwood Foresters in reserve.

German front trench. Br.-General Gordon had now to make a decision. The 11/Sherwood Foresters, his fourth battalion, was moving up automatically towards the front line. Should he allow it to go on? In view of the situation on his flanks, where his neighbours seemed at this time to be progressing, he decided to do so. The Foresters had to pass a continuous stream of wounded on the way up, and literally step over the corpses of the York & Lancaster which had preceded them, but forward they went in two waves in a desperate attempt to join the remnants of the brigade still in the German lines. The first wave suffered heavily in No Man's Land, but parts of it got across to the wire, only to be shot down; for Germans almost immediately appeared in the front trench. The second wave was sent forward, but the machine-gun fire was too severe and hardly a man reached the enemy wire. A further effort was made by a party of fifty, chiefly bombers, to get across No Man's Land under cover of the sunken road leading from the Nab towards Mouquet Farm; but a heavy frontal fire down the road from a single German machine gun checked it within eighty yards of the German trench. Later in the morning so intense was the fire sweeping the front of the Ovillers spur, that communication with the troops in the German position was completely cut off, even attempts at visual signalling being unsuccessful.

The losses of the 70th Brigade were the heaviest in the division, and it had very few unwounded men left; two commanding officers, Lieut.-Colonels B. L. Maddison and A. J. B. Addison, were killed, and the other two, Lieut.-Colonel H. F. Watson and Captain K. E. Poyser, wounded.¹

At 9.15 A.M. the 25th Brigade asked that the barrage should be brought back on to the Ovillers line, and, after some discussion, this was done; it could not well be turned on to the front system, which the Germans had manned again at most places, as our men were lying close up to it, even where they were not thought to be in it.

About 9.30 A.M. the commanders of the 23rd and 25th Brigades were instructed by divisional headquarters to arrange mutually the hour for a half-hour bombardment prior to a renewed attack on Ovillers; but both Br.-General Tuson and Br.-General Pollard reported that, as the

¹

	Officers.	Other ranks.
8/K.O.Y.L.I.	21	518
8/York & Lancaster	21	576
9/York & Lancaster	14	409
11/Sherwood Foresters	17	420

German defences were fully manned, they did not consider a fresh attack advisable with the few troops remaining in hand, and they pointed out that the bombardment would fall on our own men believed to be in the first and second lines. Br.-General Gordon made a similar reply when asked to renew the attack of the 70th Brigade—there was indeed little left of it, and its front was held by under a hundred of its men and the 15th Field Company R.E. Major-General Hudson informed the III. Corps accordingly, and at 12.15 P.M. General Pulteney placed the 56th Brigade (Br.-General F. G. M. Rowley) of the 19th Division at his disposal for another attempt, formal orders for it being issued at 12.35 P.M. The 56th Brigade was directed to attack on a frontage of six hundred yards past the northern side of Ovillers, its right on the Ovillers—Courcelette road (which passes north of Pozières), so as to come up on the immediate right of those troops of the 70th Brigade, the 8/K.O.Y.L.I. and 8/York & Lancaster, which were believed to be holding out. The assault was to be launched at 5 P.M., after half-an-hour's artillery preparation. Wiser counsels, however, prevailed.

It was apparent that until the Thiepval spur was captured by the X. Corps, and the machine guns there, as well as those in Ovillers, silenced, no further advance was possible. Up to 2.30 P.M. various observers reported seeing bomb fighting going on in the German front trench. Parties of our men, doubtless those who had been driven back from the second and third trenches, were seen standing on the parapet and throwing bombs. They were eventually overpowered by the enemy, who got at them from both flanks.

Thus the Germans were again in complete possession of their defences opposite the 8th Division, and of most of their line opposite the 34th Division.

At 4.15 P.M., in view of the poor prospect of success, the difficulty in getting the troops up owing to congestion in the trenches, and the fact that it appeared doubtful if any British troops were still alive and uncaptured in the German position, the order for the 5 P.M. assault was cancelled. At 5.30 P.M., however, orders were issued to proceed with the attack on La Boisselle at 10.30 P.M. with the 57th and 58th Brigades of the 19th Division. The movement did not, however, take place until the early morning of the 2nd.

The 8th Division received instructions that it would be relieved by the 12th Division from Fourth Army reserve, which had been placed by General Rawlinson at the

disposal of the III. Corps at 4.40 P.M. Meantime the other field companies R.E., 2nd and 1st Home Counties (T.F.), of the division, which had not left their positions of assembly, were sent up to assist in holding the line. They actually spent the night in bringing in wounded. The relief was carried out uneventfully during the night, which was extraordinarily quiet on the III. Corps front, and completed by 5.40 A.M. 2nd July, the three brigades of the 8th Division being withdrawn to the north-west of Albert.

The losses of the 8th and 34th Divisions on the 1st July were over eleven thousand,¹ but Owillers and La Boisselle were both still in the enemy's hands and the III. Corps had nothing as consolation for its heavy casualties but a success on the right by the 15/ and 16/Royal Scots next to the XV. Corps, and a holding of the 2nd and 3rd Tyneside Scottish at Schwaben Höhe.

Of the wounded, 5,605 were received in the field ambulances of the III. Corps in the twenty-four hours after 6 A.M. on the 1st July, and 4,993 were evacuated thence to C.C.S.'s in the same period. Once they got out of No Man's Land (and the enemy offered no opposition to their removal after the attack had completely died down), they were brought back with great rapidity, cases from as far forward as the third German trench, after first dressing, reaching the main dressing station in 2½ hours. In spite of the sudden rush of large numbers—a third C.C.S. had to be opened—there was never an undue accumulation at the field ambulances, although the numbers were too great for the stretcher bearers to carry off the field, and it was not until the 3rd July that all were got away.

NOTE

THE GERMANS OPPOSITE THE III. CORPS ²

The section of the *110th Reserve Regiment* opposite the 34th Division suffered greatly during the bombardment: "Trenches and "obstacles, the slighter dug-outs and all the best observing posts "were nearly completely battered in. . . . The original position of "the trenches was scarcely recognizable and only by the greatest "exertions were they kept passable. The entrances of the few deep "dug-outs not smashed up could only be kept open by constant "attention." The assault did not come as a surprise:—"At 2.45 A.M.

¹		Killed.	Wounded.	Missing.	Prisoner.	Total.
8th Div.	{ Officers	99	92	9	—	5,121
	{ Other ranks	1,828	3,003	77	13	
34th Div.	{ Officers	113	148	3	1	6,380
	{ Other ranks	2,367	3,439	291	18	

² From Somme-Nord, i. p. 53, and Schwaben.

“the 56th Reserve Brigade, from its battle headquarters at Contalmaison, reported to the 28th Reserve Division a fragment of an order of the 34th Division, picked up by the ‘Moritz’ overhearing post at the southern point of La Boisselle. It ran: ‘The infantry must hold on obstinately to every yard of ground that is gained. Behind it is an excellent artillery.’ This order, apparently the conclusion to an order of the Fourth Army, pointed to the beginning of the general enemy offensive in the morning.”¹

The mine (Y Sap) fired close to La Boisselle, it is stated, occasioned no loss, as the trenches there had been evacuated, but the large double one (Lochnagar) at Schwaben Höhe did much damage, and the defenders were delayed in getting out of their dug-outs. But it is claimed that, after many hours’ hand-to-hand fighting with heavy losses, they managed to drive out the British who had penetrated the position. That Schwaben Höhe and the trench behind it were lost is admitted, but it is incorrectly stated in the official monograph that “only the great crater at Schwaben Höhe remained in the enemy’s hands”.

The 180th Regiment, defending the Owillers sector opposite the 8th Division, lost 78 killed and 124 wounded in the bombardment, and its defences, like those of the 110th Reserve Regiment, were badly damaged, only those of the right company opposite The Nab remaining in “tolerably good” condition.

The following is an account of the assault on this front by a German eye-witness (Schwaben, pp. 108-9):

“The intense bombardment was realized by all to be the prelude to an infantry assault sooner or later. The men in the dug-outs therefore waited ready, belts full of hand-grenades around them, gripping their rifles and listening for the bombardment to lift from the front defence zone on to the rear defences. It was of vital importance to lose not a second in taking up position in the open to meet the British infantry which would advance immediately behind the artillery barrage. Looking towards the British trenches through the long trench periscopes held up out of the dug-out entrances there could be seen a mass of steel helmets above the parapet showing that the storm-troops were ready for the assault. At 7.30 A.M. the hurricane of shells ceased as suddenly as it had begun. Our men at once clambered up the steep shafts leading from the dug-outs to daylight and ran singly or in groups to the nearest shell craters. The machine guns were pulled out of the dug-outs and hurriedly placed in position, their crews dragging the heavy ammunition boxes up the steps and out to the guns. A rough firing line was thus rapidly established. As soon as the men were in position, a series of extended lines of infantry were seen moving forward from the British trenches. The first line appeared to continue without end to right and left.

¹ In the monograph the message is given in German. It has been translated back into English. The actual message sent out by the Fourth Army to the corps, Reserve Army and IV. Brigade R.F.C. at 10.17 P.M. on the 30th June ran:—

“In wishing all ranks good luck the Army commander desires to impress on all infantry units the supreme importance of helping one another and holding on tight to every yard of ground gained. The accurate and sustained fire of the artillery during the bombardment should greatly assist the task of the infantry.”

“ It was quickly followed by a second line, then a third and fourth. “ They came on at a steady easy pace as if expecting to find nothing “ alive in our front trenches. Some appeared to be carrying kodaks “ to perpetuate the memory of their triumphal march across the “ German defences.¹ The front line, preceded by a thin line of “ skirmishers and bombers, was now half-way across No Man’s Land. “ ‘Get ready!’ was passed along our front from crater to crater, “ and heads appeared over the crater edge as final positions were “ taken up for the best view, and machine guns mounted firmly in “ place. A few moments later, when the leading British line was “ within a hundred yards, the rattle of machine-gun and rifle fire “ broke out along the whole line of shell-holes. Some fired kneeling “ so as to get a better target over the broken ground, whilst others, “ in the excitement of the moment, stood up regardless of their own “ safety, to fire into the crowd of men in front of them. Red rockets “ sped up into the blue sky as a signal to the artillery, and immediately “ afterwards a mass of shell from the German batteries in rear tore “ through the air and burst among the advancing lines. Whole “ sections seemed to fall, and the rear formations, moving in closer “ order quickly scattered. The advance rapidly crumpled under “ this hail of shell and bullets. All along the line men could be seen “ throwing up their arms and collapsing, never to move again. “ Badly wounded rolled about in their agony, and others, less “ severely injured, crawled to the nearest shell hole for shelter. “ The British soldier, however, has no lack of courage, and once “ his hand is set to the plough he is not easily turned from his “ purpose. The extended lines, though badly shaken and with “ many gaps, now came on all the faster. Instead of a leisurely “ walk they covered the ground in short rushes at the double. “ Within a few minutes the leading troops had advanced to within a “ stone’s throw of our front trench, and whilst some of us continued “ to fire at point-blank range, others threw hand-grenades among “ them. The British bombers answered back, whilst the infantry “ rushed forward with fixed bayonets. The noise of battle became “ indescribable. The shouting of orders and the shrill cheers as the “ British charged forward could be heard above the violent and “ intense fusillade of machine guns and rifles and the bursting bombs, “ and above the deep thunderings of the artillery and shell explosions. “ With all this were mingled the moans and groans of the wounded, “ the cries for help and the last screams of death. Again and again “ the extended lines of British infantry broke against the German “ defence like waves against a cliff, only to be beaten back.

“ It was an amazing spectacle of unexampled gallantry, courage “ and bull-dog determination on both sides.”

Where the British did break in, their efforts to extend right and left were limited by occupying the communication trenches, of which there were far more than in the British defences.

The defence was carried out by the two front battalions of the *180th Regiment* unaided, only a part of one company of the battalion in regimental reserve being engaged. The casualties of the regiment on the 1st July were 4 officers and 79 other ranks killed and 3 officers and 181 other ranks wounded, and 13 missing.

¹ These “ kodaks ” were no doubt the pigeon baskets, “ power buzzer ” boxes and other experimental gear carried.

CHAPTER XVI

THE SOMME

1ST JULY 1916

X. CORPS ¹

(Maps 1, 9 ; Sketches A, 22)

Map 1. **Sketch A.** THE Thiepval plateau stands out like a great buttress at the western end of the Pozières ridge, overlooking the river Ancre, to which it slopes down steeply on the west and north. From its southern, or rather south-western, face, project three spurs on which stand respectively Ovillers, Thiepval and Thiepval Wood, with Nab Valley (later called Blighty Valley), leading up to Mouquet Farm, between the two first.

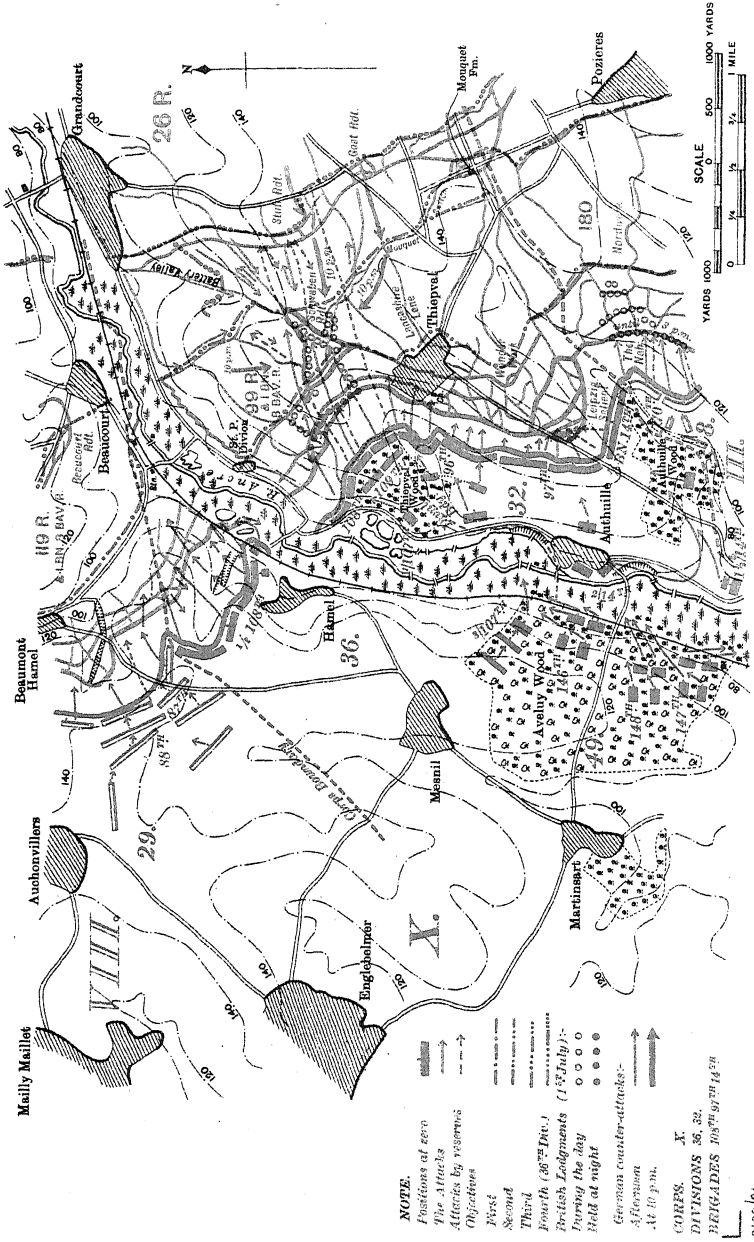
Map 9. **Sketch 22.** The front line of the X. Corps from its boundary with the III. Corps at Authuille Wood in the centre of Nab Valley, lay for 2,500 yards on the lower slopes of the western face of the Thiepval spur, with the Ancre behind it, then passed over the Thiepval Wood spur, along the front of the wood, and crossed in front of Hamel to the western bank of the Ancre, continuing for a thousand yards across the Auchonvillers spur to the right flank of the VIII. Corps.

The German front defences here, held by 8 battalions,²

¹ X. Corps (Lieut.-General Sir T. L. N. Morland) :
32nd Division (Major-General W. H. Rycroft), 14th, 96th and 97th Brigades ;
36th Division (Major-General O. S. W. Nugent), 107th, 108th and 109th Brigades ;
49th Division (Major-General E. M. Perceval), 146th, 147th and 148th Brigades.
G.O.C. R.A., Br.-General C. C. Van Straubenzee ;
„ Heavy Artillery, Br.-General H. O. Vincent ;
Chief Engineer : Br.-General J. A. S. Tulloch.

² The X. Corps was faced by the centre portion of the 26th Reserve Division, whose sector, from Ovillers to Beaumont Hamel, overlapped it.

THE SOMME, 1916.
X CORPS ATTACK ON THE 1ST JULY.
THIEPVAL.



NOTE.
 Positions of *own* units
 The *attacks*
 Attacks by *reserves*
 Objectives
 First
 Second
 Third
 Fourth (56th Div.)
 British *Reserves* (1st July)
 British *attacks*
 Held at night
 German counter-attacks
 At 10 p.m.
CORPS. X
DIVISIONS. 46, 56
BATTALIONS. 108, 109, 110, 111, 112

descending from the Ovillers spur, fell back a little up Nab Valley, and then ran forward in a sharp salient, so as to include the upper slopes of the western edge both of Thiepval spur and plateau, to St. Pierre Division in the Ancre valley. Beyond the river a minor valley separated the hostile lines. Thus, as a whole, the Germans overlooked the British position. Owing, however, to the convexity of the chalk slopes, much of the Ancre valley was dead ground, and Authuille and Thiepval Woods on the left side of the stream, and the great Aveluy Wood on the right, still a lovely mass of green, afforded cover from view. In spite therefore of the advantages of the enemy line, the British assembly positions could be constructed unobserved, and the troops concealed after they had been concentrated.

The German position was one of great strength. Thiepval village, opposite the centre of the X. Corps front, stood high on the spur within the German front defences, approximately at the point where the spur merges into the higher ground of the plateau. It had consisted of a cluster of over sixty buildings, chiefly dwelling houses, with a church and chateau, but at the conclusion of the bombardment, with the exception of part of the battered walls of the chateau, hardly one brick rested on another, so that the 32nd Division headquarters, which had been opposite Thiepval some months, had every confidence that the attack would be a success. Thus no plan had been settled as to what should be done if Thiepval proved too tough a nut to crack. The houses, however, had large cellars which, now covered with a mass of fallen brick and débris, gave cover against all but the heaviest shell. The concentrated bombardment on the village both before and during the action did not find the machine-gun nests, and proved therefore to be of very little avail. The nests were not only well hidden but well protected.

Excellent shelters and ammunition stores for machine guns to be used in the open were provided by the cellars. A group of these on the western side of the village had been organized as a series of interconnected machine-gun

The troops in this portion were, in the centre, the *99th Reserve Regiment* (4 battalions) with the *8th Bavarian Reserve Regiment* attached, and the inner flanks of the *180th Regiment* and *119th Reserve Regiment*. One battalion of the *99th* was in the intermediate position (Mouquet Switch and Hansa Line), with the *180th Recruit Battalion* behind it at Grandcourt in the 2nd Position.

emplacements, forming what was known as Thiepval fort, which was not unmasked until after the attack had been launched. The ruins of the chateau at the south-western corner of the village were similarly turned into a strong machine-gun post. The machine guns in the Thiepval fort and the chateau were able between them to sweep almost the entire upper part of the western slope of the Thiepval spur. To the south they could enfilade any attack up the slopes from the Ancre valley down to Authuille, whilst to the north they covered the open ground in front of the British trenches along the eastern edge of Thiepval Wood.

Further south, astride the Thiepval spur, the flanks of Leipzig Redoubt,¹ at the tip of the Leipzig Salient, a huge strongpoint with numerous machine guns, completely commanded No Man's Land to the south and west. This space was generally very wide, being at some points as much as six hundred yards, only near the western face of Leipzig Redoubt narrowing down to two hundred.

In the German third or reserve line there were four specially strong self-contained works, designed to flank it: "The Wonder Work" ("Wundtwerk"),² in the south above Leipzig Redoubt, was sited slightly on the reverse slope of the Thiepval spur, in order to avoid direct artillery observation, and was in a position to check any advance across the top of the spur if the front defences were broken through. The second was organized in the rear portion of Thiepval village. The third, "Schwaben Redoubt" ("Feste Schwaben"), a great triangle of trenches with a front face of three hundred yards, stood on the top of the plateau³ with a good command of Thiepval village and the whole length of Thiepval spur. The fourth strongpoint, St. Pierre Divion, guarded the flank on the river.

In addition to these defences on the position directly opposite the X. Corps, both flanks beyond it provided valuable cross-fire. Any attack against the Leipzig Salient could be enfiladed from a strong machine-gun nest, on the Ovillers spur across Nab Valley opposite the Nab, known as the "Nord Werk" which appears to have escaped attention from the heavy artillery; whilst on the northern flank another strong work, Beaucourt Redoubt ("Feste Alt

¹ This was the original German name; later when it became one large shell hole it was renamed "Granatloch" (shell hole).

² Named after General v. Wundt, commanding the *51st Reserve Infantry Brigade*, which had built the defences on this sector of the front.

³ Just above where the tower of the 36th (Ulster) Division War Memorial now stands.

Württemberg"), in the intermediate line on the north bank of the Ancre, commanded, with St. Pierre Divion, the greater part of the northern and north-western slopes of Thiepval plateau. The German 2nd Position ran from Mouquet Farm to Grandcourt, with an intermediate line in front of it, of which the two portions known as "Mouquet Switch" and "Hansa Line" were connected with Schwaben Redoubt. The 3rd Position was three miles in rear of the 2nd. Altogether, from its natural position and the skill with which the defences had been developed in eighteen months' work, the sector was of extraordinary strength, requiring all the art of the gunner and of the engineer to dislocate and destroy its strongpoints and obstacles before there could be any hope of a successful infantry assault.

So far from being cowed by the bombardment and keeping quiet as elsewhere, the Germans on the X. Corps front had given ominous signs of life; and their guns for six days before the assault had frequently shelled the British front position, which could be enfiladed from the north, causing considerable losses and preventing sleep. Battalions, however, which reported that the enemy machine guns had not been silenced were told by the divisional staffs that they were scared. In a final message to his men, one of the infantry brigadiers said: "I am convinced that the German lines are full of men, but they will be in their dug-outs", and it was with this hope that the troops attacked.

The X. Corps was required to capture the whole of the Thiepval spur and plateau in its first onslaught. The task was big, but the prize was also great; for success at this point would enable the attackers to overlook and menace a great part of the German front: northwards to Serre and southwards to Pozières and Contalmaison.

On the right, the 32nd Division was to assault the German defences along the Thiepval spur between the Leipzig Salient and Thiepval village, both inclusive. The 36th Division was to capture all that part of the plateau between Thiepval village (exclusive) and St. Pierre Divion (inclusive). After securing the Wonder Work, Thiepval village and Schwaben Redoubt, the two divisions were to cross the spur and summit of the plateau to the German intermediate position, that is Mouquet Switch on the front of the 32nd, and Hansa Line on the front of the 36th Division. After capturing this position they were to consolidate it, whilst their reserve brigades were to pass through and attack the German 2nd Position, the Mouquet

Farm—Grandcourt line. By the time-table, this line was to be reached and assaulted at 10.10 A.M., that is two hours forty minutes after zero hour. The attack had, as in other corps, been carefully practised over dummy trenches, so much so that an officer of the Ulster Division records that the men carried on even when the officers had fallen.

The 49th Division, in corps reserve, but earmarked to come under General Gough as part of the "army of pursuit" as soon as the 32nd and 36th Divisions had captured their objectives, was to move before daylight on the day of assault to a position of readiness in Aveluy Wood, and a number of bridges, with causeways across the marshy ground on both sides of the Ancre, had been constructed so as to ensure a rapid passage of the river.¹

The heavy artillery of the corps consisted of two heavy artillery groups to support the divisions, and two counter-battery groups under one commander.²

Six field batteries of the 49th Division were attached to the 32nd and 36th Divisions, and a "groupe" of the French 20th Artillery Regiment to the 36th.³ The field guns were in good pits dug in the chalk, with three or four feet of earth supported on steel joists and timber over them. Excluding from the frontage the gap in the line near the Ancre, there was one heavy gun per 57 yards and one field gun per 28 yards.

There were to be six lifts of the heavy artillery, the super-heavy guns (15-inch and 12-inch) lifting seven minutes before the others. No arrangements were made for any sort of creeping barrage, but the 18-pdrs. were to search from trench to trench in ten lifts: the 4.5-inch howitzers were to fire on selected strongpoints, moving back to others further in rear, keeping time with the 18-pdr. barrage. Unfortunately as it proved the infantry got very little assistance from the guns. The barrages, the first lift of which at zero was from the front trench on to the reserve line (Wonder Work—Schwaben Redoubt—St. Pierre Divion), ran away from the troops and had eventually

¹ The swampy state of the valley bottom was due to the banks of the canalised course of the Ancre, at a higher level than the original course west of it, having been damaged by shell fire.

² With a total of:

Howitzers: two 15-inch; two 12-inch; twelve 9.2-inch; twelve 8-inch; twenty 6-inch.

Guns: twenty-eight 60-pdrs.; four 4.7-inch.

³ Total of field artillery in action: 18-pdrs., 128; 4.5-inch howitzers, 36; 75-mm., 12.

to be brought back; but meantime, owing to stringent orders for the barrages to go on until countermanded by higher authority, it was impossible for the batteries to comply with the demands of the infantry that they should knock out machine guns which were giving trouble. Of the two 9·2-inch howitzers specially detailed to destroy machine-gun nests in and about Thiepval, one had a premature burst which not only put it out of action, but its companion also. After midday there was much individual shooting by batteries, but as forward observing officers were not at first allowed to accompany the infantry, and later all communication wires were cut, there was no properly observed artillery fire.

The long spur extending from Auchonvillers to Mesnil and Aveluy Wood provided excellent distant observation, and in a trench dug on it, particularly in the part called Brock's Benefit,¹ in front of Mesnil, there were many artillery observation posts. Observation, owing to a little extra height, was better in the northern portion than in the southern, where Aveluy Wood also interfered with the view, and the general opinion was that more damage had in consequence been done in the enemy's defences opposite the 36th Division than in front of the 32nd. It was thought that the wire, though thoroughly cut north of Thiepval and fairly well cut at the Leipzig Salient, was still a considerable obstacle between those localities.

Shortly before the final bombardment began at 7 A.M. gas was released from cylinders placed in No Man's Land during the night, and drifted slowly towards Thiepval. The German gas alarms at once sounded, but there was little or no fire in reply. Once the British infantry began to show themselves the German machine guns opened as if there had been no bombardment.

32ND DIVISION²: THE ASSAULT ON THE THIEPVAL SPUR

The 32nd Division, whose advanced report centre was on the high ground $1\frac{1}{2}$ miles west of Aveluy Wood, was

¹ So called after the G.O.C. R.A. 36th Division, Br.-General H. J. Brock. The artillery of the 32nd Division was commanded by Br.-General J. A. Tyler.

² This New Army division had arrived in France, under its original commander, in November 1915, when its 95th Brigade was exchanged for the 14th of the 5th Division. Its units—the infantry was raised by local effort in 1914—came from the north of England, but included three Scots battalions, with the 17/Northumberland Fusiliers as Pioneer battalion.

assembled on the lower slopes of the Thiepval spur from Authuille Wood to Thiepval Wood.¹ The assembly trenches had been dug only a few days before, and the men were tired—"dog-tired" according to some accounts—from the labour of digging in the chalk and carrying up stores. The two front brigades, the 97th and 96th, were to assault the whole western face of the spur from the Leipzig salient to Thiepval village (both inclusive), and then advance eastward crossing the upper part of Nab Valley. The southern face of the salient was not to be assaulted, for it was expected that, being taken in reverse by the above advance, it would fall automatically. The front opposite it was merely held by two companies of the 2/Manchester (14th Brigade). Thus, as the III. Corps had neglected the southern side, neither side of the Nab Valley re-entrant was to be attacked. Yet their trenches commanded and flanked considerable stretches of No Man's Land. It proved unfortunate that such a vital point as a valley should have been fixed as the boundary of two corps.

The 97th Brigade (Br.-General J. B. Jardine), on the right, was deployed on a frontage of eight hundred yards, with its right directed on the blunted point of the Leipzig Salient. The 17/ and 16/Highland Light Infantry were to lead the assault, supported by the 2/K.O.Y.L.I., and as soon as these battalions had overrun the Leipzig defences, the 11/Border Regiment, assembled in Authuille Wood opposite the southern face of the spur, was to cross No Man's Land and clear up the trenches, the whole brigade then advancing with its right on Mouquet Farm.

The leading companies of the 17/Highland L.I. moved out from the British front trench at 7.23 A.M. and, by order of Br.-General Jardine, crept forward to within thirty or forty yards of the German front line.² At 7.30 A.M. the bombardment lifted, and, the wire being effectively cut, the Highland L.I. in one well organized rush overran the front of the Leipzig Salient and obtained possession of its head, known to the British as Leipzig Redoubt. The defenders were taken prisoners before they could emerge from their dug-outs in the chalk quarry, which covered an area of about sixty yards by

¹ One section of the 206th, 218th and 219th Field Companies R.E. was attached to the 14th, 96th and 97th Brigades, respectively; the remainder of the companies were kept in divisional reserve.

² Br.-General Jardine was one of the officers attached to the Japanese Army in the Manchurian War, and had noticed that the Japanese pushed close in under cover of gun-fire before assaulting.

forty, around which the redoubt was formed. Without delay, the companies moved on against Hindenburg "Strasse" or Trench, one hundred and fifty yards beyond; but, in crossing the open slope, machine guns in the Wonder Work caused such heavy casualties that the attackers were compelled to halt. Lieut.-Colonel A. S. Cotton, commanding the 161st Brigade R.F.A. supporting the 97th Brigade, telephoned this information to Br.-General Jardine from his observation post, adding, in reply to a question, that the barrage was still going forward, and neither in the 32nd Division nor in the III. Corps on the right did any troops appear to be following it. Br.-General Jardine therefore ordered him to take two batteries out of the barrage and switch them on to the defences in rear of the Leipzig Redoubt, and this, though contrary to higher orders, was done. Under cover of the artillery fire the Highland L.I. managed to withdraw to the Leipzig Redoubt.

The right of the 2/K.O.Y.L.I., moving close behind in support, now arrived and assisted in consolidating the position in the redoubt. Renewed efforts to advance across the open failed, however, with heavy loss, and bombing detachments sent from the flanks of the redoubt to work along the German front trenches to the east and north into Hindenburg Trench and Lemberg Trench ("Strasse") behind it, were equally unable to make progress. At 8.30 A.M., according to the time-table, the 11/Border Regiment, in reserve, moved out from Authuille Wood. Unable, in the smoke and dust, to see the actual situation, and believing the advance to be going according to plan, the battalion expected to find the southern face of the salient in British hands. It came at once under heavy enfilade machine-gun fire from the Nord Werk sector to the south. In spite of this fire which caused devastating casualties, including Lieut.-Colonel P. W. Machell, killed, with practically all the officers, the lines of companies continued their efforts to cross No Man's Land. Small parties on the left succeeded in reaching Leipzig Redoubt, where they joined the 17/Highland L.I., but the majority were unable to get forward, and the survivors were reassembled during the day in Authuille Wood.

The left of the 97th Brigade, the 16/Highland L.I. with the left half of the 2/K.O.Y.L.I. in support, which was to have overrun the Wonder Work, failed to break into the German front trench. Although the shelling of Thiepval

village had been apparently very effective, the front trenches and wire were not much damaged. Even during the period of final intense bombardment, as the 16/Highland L.I. crept forward to its assault positions close in front of the enemy wire, machine-guns had opened from these trenches and the chateau. Directly the men rose to charge, the fire increased in volume : there was the stabbing clatter of machine guns in action but no gun was to be seen from the artillery observation posts. Held up at the wire, every gap in which was covered,¹ many of the H.L.I. were shot down and Lieut.-Colonel D. Laidlaw was wounded.² Small parties on the right succeeded, like those of the 11/Border, in joining up with the 17/Highland L.I. in Leipzig Redoubt ; but the centre and left were unable to get forward, and remained lying out in No Man's Land. At any sign of movement rapid machine-gun fire from the chateau was opened, and this checked any effort to resume the attack here.

The two leading battalions of the 96th Brigade (Br.-General C. Yatman), the 16/Northumberland Fusiliers and 15/Lancashire Fusiliers, met with disaster at the outset, the immediate cause being the machine guns in Thiepval fort.³ The Northumberland Fusiliers, who followed a football drop-kicked by an eminent North Country player, assaulted the southern and central parts of the village, but were held up by a continuous hail of bullets not far from their front trenches. They, too, had to halt in No Man's Land, and so intense and accurate was the machine-gun fire that whole lines of men were swept down dead or wounded at every further attempt to get forward by rushes. It was said, with some truth, that only bullet-proof soldiers could have taken Thiepval on this day.

The success of the machine guns in stopping the leading companies gave time for the enemy to climb out of his dug-outs. The German infantry, some standing on the parapet as the barrage had moved on, then added rifle fire to that of the machine guns against the supporting company, when it tried to carry forward the attack. The

¹ A raiding party a few hours before was held up and shot in the wire, the enemy having a machine gun covering every gap in it. Two R.E. parties, carrying Bangalore torpedoes, were therefore attached to each of the leading companies for the purpose of cutting gaps. None of them survived.

² The losses were 19 officers and 492 other ranks.

³ The 16/Lancashire Fusiliers, divided into half battalions, was in support, and moved up into the front trenches. The 2/Royal Inniskilling Fusiliers was in reserve in the Ancre valley.

remaining company of the Northumberland was therefore ordered to man the fire-step of the front line and open covering fire.

The 15/Lancashire Fusiliers, on the left, suffered almost as heavily from the machine-gun fire from Thiepval fort, though the survivors of the leading companies succeeded in entering the enemy front trench before the Germans had time to emerge from underground. Without waiting to clear the dug-outs, however, about a hundred Fusiliers went on past the northern side of Thiepval village; but immediately afterwards the Germans swarmed out of their shelters and manned the front trench in time to overpower the survivors of the supporting waves as they arrived. Going on, the men of the leading companies swung left-handed and joined up with the right of the advancing 36th Division south of Schwaben Redoubt; but throughout the day—on the strength of air reports¹ that British helmets were moving about in Thiepval, confirmed by a message from the 32nd Division that its men had entered the village—it was believed at X. Corps headquarters that they had entered and were holding the eastern portion of Thiepval. About 10.30 A.M., however, in view of the heavy enemy fire on the front trenches and on No Man's Land, orders arrived from the 32nd Division for the brigades to hang on where they were, as measures were being taken to turn Thiepval from the north.

The mistaken belief that Thiepval, or at any rate part of it, had been occupied by troops of the 32nd Division resulted in the artillery leaving the village alone throughout the day.

36TH DIVISION²: THE CAPTURE OF SCHWABEN REDOUBT

The assault of the 36th (Ulster) Division against the German front position was entirely successful, except on the left near the Ancre. At 7 A.M., in addition to the intense artillery bombardment, forward sections of field guns in Thiepval Wood and Hamel came into action; three 2-inch (stick) trench-mortar batteries, and a 9-inch mortar firing 200 lb. bombs lent by the French, in Thiepval

¹ The smoke from the barrages obscured the trench systems. The air information was of little use except for the movement of German reinforcements well behind the line.

² This division of the New Army had arrived in France in October 1915. All units, except the artillery, were raised in Ulster in 1914; the artillery was recruited in the suburbs of London from May 1915 onwards.

Wood, continued wire-cutting; and the Stokes mortars opened a hurricane fire on the German front trench, sending showers of earth and débris from it high into the air all along the line. At 7.15 A.M., under cover of this fire, which from German accounts was most destructive,¹ the leading battalions of the 109th Brigade (Br.-General R. G. Shuter) and 108th Brigade (Br.-General C. R. J. Griffith), which were to lead the assault, left their trenches and crept forward through the gaps in the British wire to within a hundred yards of the German position.²

At 7.30 A.M. buglers in the front trench sounded the "advance", and the assaulting lines rose and moved forward at a steady pace with the precision of a parade movement, watched anxiously by the officers of their battalion staffs who, by divisional instructions, were not to go further than their battle headquarters. The front companies were in four extended lines at 50 paces' distance, followed by the supporting companies in artillery formation, lines of platoons in fours. The scene with the mist clearing off and the morning sun glistening on the long rows of bayonets was brilliant and striking enough. In no formation was religious feeling deeper than in the Ulster Division, all ranks felt that they were engaged in a Holy War, under Divine guidance and protection, and the remembrance that the day was the anniversary of the battle of the Boyne³ filled every Ulsterman's heart with certainty of victory.

On the right, in the 109th Brigade, the 9/ and 10/Royal Inniskilling Fusiliers⁴ carried all before them, though they had to cross the greater part of No Man's Land, 300-450 yards wide, and success was a matter of seconds. As the lines of these two battalions crossed the débris of the wire entanglement, groups of Germans were already appearing from the deep dug-outs, and in places their light machine guns were being hurriedly propped up into firing positions. But the wire had been so well cut by the artillery and trench mortars, that, rushing forward without a check, the Ulstermen were able to reach and disarm the Germans before they could open fire. The front and support trenches were taken with few casualties; but on approaching the

¹ See Note at end of Chapter.

² Each brigade had two sections of a field company R.E., furnished by the 150th and 122nd, respectively, attached. The 107th had one section of the 121st Company.

³ 1st July (old style). The anniversary is now kept on the 12th.

⁴ The 11/R. Inniskilling Fusiliers and the 14/Royal Irish Rifles were in support and moved up to the front trenches.

reserve trench, five hundred yards beyond, some machine guns in Thiepval, previously fully occupied in repelling the assault of the 32nd Division, now turned their attention to the 36th Division advancing eastwards past their flank along the skyline of the plateau. This fire caused heavy loss to the 9/R. Inniskilling Fusiliers on the right. Nevertheless, the advance was not checked, and by 8 A.M. the reserve trench, including the front face of Schwaben Redoubt, had been entered. A number of Germans came out of the deep dug-outs of the redoubt, dazed and bewildered, and surrendered without offering opposition. Over four hundred prisoners had already been captured, and they were sent back in groups, 16 Germans to each escorting soldier ; so anxious were they to reach shelter, that many ran back towards the British lines, outpacing their escorts. From now onward machine-gun and rifle fire increased both from the right, from the direction of Thiepval, and from the left, from St. Pierre Divion, and Beaucourt on the far bank of the Ancre ; but in front few Germans could be seen, and the advance was continued successfully to Mouquet Switch and the eastern salient of Schwaben Redoubt, where Hansa Line ran into it. These positions were reached at 8.30 A.M., after a total advance of nearly a mile from Thiepval Wood.

The right battalion of the 108th Brigade, the 11/Royal Irish Rifles, was equally successful. Assisted by a smoke screen formed by 4-inch Stokes mortar batteries of the Special Brigade R.E. in the Ancre valley, which covered the advance from the view of the German machine gunners on the northern bank of the river, the battalion reached the part of Hansa Line immediately north of the Thiepval—Grandcourt road in close touch with the 109th Brigade, south of that road. The remainder of the 108th Brigade, on either side of the swampy bed of the Ancre, was, however, unable to make progress. German machine guns in St. Pierre Divion, brought up from deep dug-outs there, inflicted terrible losses on the 13/Royal Irish Rifles on the left bank, and the few survivors of the battalion who got through joined up with the 11/R. Irish Rifles in Hansa Line. Had St. Pierre Divion been taken in the first rush, the results of the day might have been different ; for it would then have been possible to push up the Ancre valley and turn the German position.

The 9/R. Irish Fusiliers and 12/R. Irish Rifles on the right bank of the Ancre, were to advance in conjunction

with the 29th Division on their left to Beaucourt station and north of it. The two battalions left their trenches two minutes before zero, and suffered loss whilst going through their own wire. At zero the survivors had six hundred yards of No Man's Land to cross, and men fell continuously all the way. The advance in lines ceased and efforts were made to gain ground by rushes. Fifty yards from the German wire there remained only a few small parties; one after another of these were seen to fall, only a few men actually reaching the front trench, but these pushed on until they fell.¹ A young artillery officer who was in an observing station alongside his major said "Why do they stop there? Why don't they move?" "They will never move more", replied the more experienced officer. Permission was then asked to bring back the barrage; although this was formally refused, the embargo on change of programme was disregarded and fire again turned on to the German front line.

By 8.30 A.M. the reports that had reached the X. Corps headquarters at Senlis² were sufficient to show the general trend of the fight. On the front of the 32nd Division, the right of the 97th Brigade had occupied Leipzig Redoubt and the German front trench adjoining it on a frontage of less than three hundred yards. The left of the 97th and the right of the 96th Brigade had been checked in No Man's Land, and suffered heavily. The left of the 96th Brigade had, however, broken through, small parties of the 15/Lancashire Fusiliers being reported to the north and east of Thiepval village. On the front of the 36th Division two battalions of the 109th and one of the 108th Brigade had successfully carried the German front defences and were advancing on Hansa Line. The other three battalions of the 108th Brigade, astride the Ancre, had failed to make any progress.

At 8.32 A.M. Major-General Nugent asked X. Corps headquarters whether his reserve brigade, the 107th (Br.-General W. M. Withycombe),³ should, according to plan,

¹ It was subsequently discovered that a machine gun which had done much damage was used from the top of a shaft, entered by a tunnel from the bank alongside the railway in the Ancre valley. Like many others, this emplacement was not unmasked until the attack had been launched.

² General Morland himself was in an observatory in a tree at Englebhelmer, 3 miles west of Thiepval Wood, connected with his headquarters by telephone.

³ 8th, 9th, 10th and 15/R. Irish Rifles; the last was attached to the 108th Brigade for the day. The 107th Brigade had proceeded to the front from its assembly place in Aveluy Wood by the right bank of the Ancre,

move through the 109th Brigade against the German 2nd Position, the Grandcourt line, in view of the fact that the divisions on his right and left were not yet up in line, and that consequently both his flanks were already in the air. There was delay in getting a reply, General Morland being in his observation tree at Englebelmer, and during this interval the reports which reached the X. Corps from the III. and VIII. Corps, to the south and north, were unsatisfactory, neither corps having achieved any progress. General Morland therefore, at 9.10 A.M. ordered the 36th Division to delay the attack of the 107th Brigade on the German 2nd Position until the situation on the flanks had become clearer. The 107th Brigade had, however, gone on beyond recall. By 9.15 A.M. the leading lines of its three battalions, in spite of their heavy losses whilst deploying and crossing No Man's Land, were passing through the front units of the 108th and 109th Brigades in Mouquet Switch and Hansa Line. After a short wait there to reorganize, carrying small parties from both these brigades with them, they set off to attack the 2nd Position, the Grandcourt line, six hundred yards ahead. Advancing sooner than was intended, the leading lines of the 107th Brigade were by 10 A.M. within a hundred yards of the 2nd Position, and ran into the British barrage, which was not to lift from that line until 10.10 A.M. Heavy casualties were suffered in consequence, and the extended lines had to lie down on an open stretch of rank grassland, which offered no cover. The war diary of the 9/R. Irish Rifles states, "if it had not been for the barrage we could "have taken the D [Grandcourt] line sitting". The delay, however, was fatal. It gave time for the available Germans,¹ who, in the smoke and dust of battle, had at first been uncertain whether the troops approaching were friend or foe, to man the line and get the range. Thus within a few minutes heavy machine-gun and rifle fire was opened on the Ulstermen from their left rear, from Beaucourt Redoubt, and from Grandcourt. Nevertheless, at 10.10 A.M., as soon as the barrage lifted, some fifty men

and then through rides in Thiepval Wood. The 10/R. Irish Rifles, on the right, where the foliage was thin owing to the bombardment, came under machine-gun fire and lost its commanding officer, Lieut.-Colonel H. C. Bernard, who had disobeyed orders as to remaining at battle headquarters, in order to make sure of the deployment of his battalion.

¹ A recruit battalion of the *180th Regiment*, and, in Grandcourt village, a machine-gun company.

on the extreme right entered the 2nd Position about "Stuff Redoubt" ("Feste Staufen"), which was found unoccupied. Another party entered the position three hundred yards further north, worked up the trench and blocked it towards Grandcourt. On the left, about two hundred men managed to reach the emplacements of a former German battery position in the upper part of Battery Valley, a depression immediately in front of the 2nd Position, and took what cover they could find there. The remainder of the brigade continued to lie in the open grassland under heavy fire. In this precarious position, with both flanks exposed, the brigade held on. As no news came back, about noon the seconds-in-command of the 9/R. Inniskilling Fusiliers and 11/R. Irish Rifles went forward to endeavour to find out the exact situation. When they eventually returned, they both reported that the position gained could not be held unless Thiepval was captured, and that ammunition was running short.

Almost at the moment that the 107th Brigade was leaving the British front line, reports of the 109th and 108th Brigades gaining their objectives had arrived at brigade headquarters on the west side of Thiepval Wood and at the divisional report centre at Martinsart (behind Aveluy Wood). Soon after, Major-General Perceval (49th Division), who was at the moment with Major-General Nugent and had heard from him of the failure of the 32nd Division to reach Thiepval, suggested that his whole division should be employed to support the 36th and exploit its success. Feeling that there was not a moment to be lost, he himself went to Englebelmer, two miles away, to urge this course on General Morland. The corps commander, he found, had just ordered his division to send one brigade to replace the 107th Brigade in Thiepval Wood, where it was to be ready to support either the 36th Division or the left of the 32nd Division, as required. He declined General Perceval's suggestion, being more interested in helping the latter division, as will be seen.

FURTHER FIGHTING ON THE FRONT OF THE 32ND DIVISION

In the meantime preparations were being made by the 32nd Division to clear the Germans from the Thiepval spur between Leipzig Redoubt and Thiepval village. At 9.10 A.M. Major-General Rycroft ordered the 96th Brigade, opposite the village, to push forward supports round the

northern edge to reinforce the survivors of the 15/Lancashire Fusiliers, who were reported both by artillery and air observers to be in and beyond the village.¹ He added that the reserve battalion, the 2/R. Inniskilling Fusiliers, could be used for this purpose. Br.-General Yatman had already assembled the two left companies of the 16/Lancashire Fusiliers at "Johnson's Post," the easternmost corner of Thiepval Wood (the other two were with the 16/Northumberland Fusiliers), and had given them orders to advance through the northern edge of Thiepval and gain touch both with the 15/Lancashire Fusiliers in the village, and with the right of the 36th Division about "Crucifix", at the southern end of Schwaben Redoubt. At 9.15 A.M., as soon as these companies left Johnson's Post, violent machine-gun fire from Thiepval fort swept their ranks. After making several vain attempts to cross No Man's Land and suffering heavy casualties, they were compelled to report their failure to Major-General Rycroft, and for a time action in this part of the battlefield came to a standstill.

On the right of the division, the 14th Brigade (Br.-General C. W. Compton), the reserve brigade detailed to pass through the others and capture the German intermediate position, Mouquet Farm and Mouquet Switch, had during this time moved forward according to timetable from shelters near Aveluy and Authuille in two columns, and reached Authuille Wood. No counter-orders reaching them and believing that all was going according to plan, at 8.45 A.M. the leading battalion of the left column, the 1/Dorset, moved forward in artillery formation preceded by lines of skirmishers. But on leaving the shelter of the wood it was at once assailed by heavy fire from the Nord Werk, on its right flank, of the same machine guns that had so thinned the ranks of the Border Regiment a quarter of an hour earlier. As a result of this fire, Lieut.-Colonel J. V. Shute was wounded, and only about six officers and sixty men of the two leading companies were able to reach Leipzig Redoubt, where they joined the elements of the 97th Brigade already established there. The other two companies of the Dorset were unable to get forward, and remained in the wood and the neighbouring trenches of the British original front line. Lieut.-Colonel J. M. A. Graham, commanding the 19/Lancashire Fusiliers, which

¹ These may have been detachments of the 15/Lancashire Fusiliers, but, whoever they were, they subsequently joined up with the right of the 36th Division south of Schwaben Redoubt. See page 403.

was following the Dorset, seeing the situation, asked the brigade trench-mortar section (4-inch Stokes), which was near at hand, to place a smoke curtain across No Man's Land to cover the right of his battalion. Having obtained this assistance, he directed his three leading companies to continue the effort to reinforce Leipzig Redoubt. They moved out into No Man's Land in waves of thirty or forty at a time, but, in spite of the smoke curtain, they suffered very heavy casualties, and only about two officers and forty men reached the redoubt. Finding no officer un-wounded, Captain G. Hibbert of the Lancashire Fusiliers assumed command, and he sent back word by runner that, as the redoubt was congested with a mixed collection of men, and dead and wounded, no further reinforcements should be sent. Fortunately two Russian saps had been run out towards the redoubt, one to serve as a trench, the other as a tunnel; these were now opened out, and sure communication was established through them.

The right column of the 14th Brigade, having seen what had happened on its left, had waited in Authuille Wood. On the receipt of Captain Hibbert's message, Br.-General C. W. Compton ordered its battalions to stand fast and not to leave the shelter of the wood until further orders.

At 11.40 A.M. Major-General Rycroft discussed the situation with the corps commander by telephone. He explained the position of his brigades as far as was known, and suggested that renewed efforts should be made to get round the northern edge of Thiepval, and thence, working south behind the village, to take in reverse the German position along the spur, including Thiepval village and the Wonder Work, and to cut across "Zollern Graben" and other communication trenches leading to Courcellette (3 miles east of Thiepval). He further suggested that part of the 49th Division, in corps reserve, might be employed in this operation to follow up the 2/R. Inniskilling Fusiliers, which was already preparing to work past the northern end of Thiepval village. The 14th Brigade in Authuille Wood would co-operate by reinforcing the British troops already in Leipzig Redoubt, and thence, simultaneously with the movement behind Thiepval, would attack both Hindenburg and Lemberg Trenches from the south and west. He asked that an artillery barrage, including fire of heavy howitzers, might be placed on the further side of Thiepval spur, particularly on the

Wonder Work, the trenches across Nab Valley and the Nord Werk.

General Morland agreed to this plan, and the bombardment by the X. Corps artillery was ordered to begin at 12.5 P.M. and to cease at 1.30 P.M., when the infantry attack was to develop. The advisability of including the front face of Thiepval village and the chateau in the bombardment was also discussed, but Br.-General Yatman (96th Brigade) asked that it might be deferred, on account of the 15/Lancashire Fusiliers which was still believed to be in the neighbourhood of the village.

Nothing resulted from this somewhat complicated scheme. The bombardment, spread over so large an area, was indefinite and ineffective; in no way did it diminish the resisting power of the Germans along the Thiepval spur position itself. Two companies of the 2/R. Inniskilling Fusiliers, with various parties of men of the 96th Brigade, moved out from Thiepval Wood at 1.30 P.M. against the north-west corner of the village; but again the machine-gun fire from Thiepval fort and the ruins of other buildings at once increased to such an intensity that, after heavy casualties, the effort was abandoned. On the right, the unengaged half of the 2/Manchester of the 14th Brigade, having moved from Authuille Wood by communication trenches, approached Leipzig Redoubt from the left of the line held by its other companies, thereby escaping the enfilade fire from the Nord Werk. By 1.45 A.M. it had, with little loss, reinforced the troops of the 97th Brigade in the redoubt with two companies. But attempts to bomb forward to Hindenburg and Lemberg Trenches were again checked by German bombing parties who had blocked the communication trenches, and little progress was made. The trenches about the Leipzig Salient were now so packed with British troops that it was difficult to move along them; a deadlock ensued throughout the afternoon, and it proved a difficult and slow process to discover the actual situation either on the flanks or in front of the redoubt.

ACTION OF THE 49TH DIVISION IN CORPS RESERVE

The 49th Division had marched during the night from its billets in the Contay—Senlis zone, five miles behind the battle front, and reached its assembly trenches in Aveluy Wood at 3 A.M. These trenches were in three groups, a group for each brigade, in the eastern part of the wood

on the slope of the right bank of the Ancre. Here, hidden from view, the three brigades awaited orders. At 7.30 A.M. the period of intense bombardment gave way to a prolonged rattle of machine-gun and rifle fire, denoting that the assault of the 32nd and 36th Divisions had been launched. At 8.55 A.M. (warning message, 8.35 A.M.), the 146th Brigade (Br.-General M. D. Goring-Jones) was ordered, as already mentioned, to move to Thiepval Wood in readiness to support either the left of the 32nd or the right of the 36th Division, as required. The brigade moved northwards in column along the railway which follows the Ancre valley, in dead ground, and abreast of Thiepval Wood crossed the reedy swamp of the valley bottom by two duck-boarded causeways: the 1/5th and 1/6th West Yorkshire by South Causeway, the 1/7th and 1/8th West Yorkshire by North Causeway. The movement was observed by the Germans, and came under machine-gun fire from the German trenches north of Hamel. This fire forced the men to cross by small parties at a time, and caused a slight delay, but by 11.35 A.M. the battalions had completed the passage, and reached the assembly trenches in Thiepval Wood.

The second brigade of the 49th Division, the 147th (Br.-General E. F. Brereton), was ordered at 10.55 A.M. (warning order 10.5 A.M.), to cross the Ancre to replace the 14th Brigade, which had moved forward into Authuille Wood to support the operations in the Leipzig Salient. The brigade crossed the Ancre swamp by two undamaged bridges near Authuille, the move being completed with few casualties by 12.45 P.M. The battalions then took shelter in the two groups of dug-outs, originally occupied by the 14th Brigade, north-east of Aveluy and south of Authuille respectively, on the left bank of the river.

When therefore Major-General Rycroft (32nd Division) suggested to the corps commander that part of the 49th Division should be used in a movement round the north of Thiepval, the division was already much scattered: the 146th Brigade in Thiepval Wood, the 147th between the Ancre and Authuille Wood—where it remained for the rest of the day—and only the 148th Brigade (Br.-General R. L. Adlercron) was still in Aveluy Wood. General Morland, however, ordered one battalion of the 148th Brigade to be placed at the disposal of the 108th Brigade (36th Division), on the extreme left of the corps front, opposite St. Pierre Divion, and the 1/5th York & Lancaster was sent from Aveluy Wood along the right bank of the

Ancre to Hamel. By corps instructions, Major-General Perceval (49th Division) at once went to 32nd Division headquarters, east of Bouzincourt, to discuss with Major-General Rycroft the method of employing the 146th Brigade. The latter suggested that it would be best to place the brigade at the disposal of the 36th Division, in order to exploit the success gained on the front of that division by attacking southwards from about Schwaben Redoubt along the intermediate line (Mouquet Switch) behind Thiepval. It was decided, however, to take no immediate action until further information had been received regarding the attack of the 96th Brigade (16/Lancashire Fusiliers and 2/Inniskilling Fusiliers), reported to be developing against Thiepval village; for it seemed that it was more artillery rather than more infantry that was wanted.

At 2.26 P.M. Br.-General Yatman (96th Brigade) reported that the attack of his left against Thiepval village had failed, and that the 2/Inniskilling Fusiliers was about to be moved further north into the 36th Division zone to cross No Man's Land opposite the cemetery, and attack the village from the north. It was then agreed by telephone between Major-General Rycroft and X. Corps headquarters that this renewed attack should be combined with a frontal attack on the village by the 146th Brigade from Thiepval Wood; further, that the rectangle of German trenches on the western side of the village, including the chateau and Thiepval fort, should be bombarded by all available heavy howitzers for half-an-hour, from 3.30 to 4 P.M., when the infantry would assault. The orders for this operation were issued from X. Corps headquarters at 2.45 P.M.

Again from lack of sufficient guns, the bombardment was not effective, and even whilst it was in progress a number of Germans could be seen above the parapet of their front trench and among the ruins of Thiepval village, evidently ready to meet another onslaught. Owing to the congestion in the British front trenches, the 2/Inniskilling Fusiliers was unable to move northwards to the 36th Division zone, and stayed where it was. The order to attack at 4 P.M. reached Br.-General Goring-Jones (146th Brigade) at 3 P.M., and he acted on it without a moment's delay; but the battalion commanders had to be informed and his own orders issued. This did not leave time for the assaulting companies to get into position, and at 4 P.M. only the 1/6th West Yorkshire, on the left about Johnson's Post,

with one company of the 1/8th, was in its place. The leading lines then moved out from the wood across No Man's Land in column of route. Even after the day's firing the German wire hereabout was mostly intact, and rapid machine-gun fire from Thiepval fort, from the ruins of the western cottages of the village, and from the intact machine-gun emplacements at once swept the ranks of the Yorkshiremen. They quickly lost half their strength, including Lieut.-Colonel H. O. Wade, wounded; and those who survived returned as best they could to the cover of the wood, where they were reorganized as brigade reserve. In the circumstances, it seemed a waste of life to send forward more troops, and therefore the attack by the remaining companies and by the 1/5th West Yorkshire was, after some confusion and difficulty, stopped, as the men were moving forward in attack formation. Br.-General Goring-Jones—in view of information that the Germans were about to launch a counter-attack—then ordered his battalions to man the front trenches in Thiepval Wood, which they knew, having held them in the preceding February. But on the urgent request of a major of the 36th Division, who showed him a brigade order in which it was stated that two battalions of the 146th Brigade were attacking to help the 36th Division, he instructed the 1/7th West Yorkshire to send forward two companies. The explanation of the statement was that at 3.58 p.m., just before the hour of the attack of the 146th Brigade, General Morland had instructed the 49th Division by telephone to place any battalions of the brigade not already employed in the attack on Thiepval at the disposal of the 36th Division, whose front troops were reported to be withdrawing from Hansa Line and Schwaben Redoubt under pressure of a German counter-attack. This instruction was not sent on to the 146th Brigade as it was obviously too late to stop or change the destination of any of the battalions.

It was still General Morland's belief that the 2/R. Inniskilling Fusiliers was near Thiepval cemetery in a position to attack the village from the north, and also that many of the 96th Brigade, particularly troops of the 15/Lancashire Fusiliers, were in the eastern part of the village. When therefore he heard that the frontal attack of the 146th Brigade had been held up, at 5.10 p.m. he ordered two battalions of the 148th Brigade, his reserve, still in Aveluy Wood, to be put at the disposal of the 96th

Brigade. Br.-General Yatman was to continue the effort to capture Thiepval, and there would be a further bombardment as soon as the time of the attack was notified by him. Subsequently a telephone conversation between General Morland and Major-General Rycroft (32nd Division) took place, as a result of which it was finally decided that the 146th Brigade and the remainder of the 148th Brigade should be placed at the disposal of the 36th Division. No orders were given as regards the 147th Brigade, still in the Authuille and Crucifix Corner shelters. Owing to the confusion, it was not until nearly 9 P.M.—after a barrage had been put down on the northern part of Thiepval and St. Pierre Divion, whence flanking fire was coming—that one-and-a-half battalions of the 146th Brigade, the 1/5th and the remainder of the 1/7th West Yorkshire, moved out from Thiepval Wood to assist the 36th Division.

Meanwhile Br.-General Yatman had been able to unravel the actual situation opposite Thiepval village. He found that the survivors of the 2/R. Inniskilling Fusiliers and 16/Lancashire Fusiliers were back in their starting trenches, and that no British troops were either in the village or the cemetery. At 6.15 P.M. therefore he telephoned to Major-General Rycroft that, in his opinion, a frontal attack against the village, even if undertaken with two battalions, could not succeed; nor did he consider it feasible to push forward troops from Johnson's Post across No Man's Land to the cemetery to gain touch with the right of the 36th Division about "Crucifix". He also expressed his doubts as to the 36th Division being still around Schwaben Redoubt, as the corps seemed to think. On this being reported, General Morland suggested that the attempt to capture Thiepval should be made under cover of darkness. He emphasized the importance of covering the right flank of the 36th Division, open now, as it had been all day, to attack from Thiepval, and of gaining touch with companies of the 15/Lancashire Fusiliers still believed to be in the eastern part of the village. Br.-General Yatman, after conferring with Br.-General Adlercron (148th Brigade), decided to carry out the enterprise at midnight, with the 1/4th and 1/5th K.O.Y.L.I.

At 10.30 P.M. General Morland definitely ordered an attack on Thiepval, but Br.-General Yatman replied that it was too late to change his plans or to issue fresh orders on the subject. At 11.30 P.M. reports were received to the effect that the 36th Division had abandoned the German

intermediate line, and was moving back from Schwaben Redoubt to its original front trenches. General Yatman thereupon cancelled the intended operation, and the 1/4th and 1/5th K.O.Y.L.I. returned to Aveluy Wood. The piecemeal employment of the 49th Division by X. Corps headquarters had accomplished nothing.

Late at night Br.-General Yatman called upon the 146th Brigade for a company to fill a gap on the left flank of the 96th Brigade. Br.-General Goring-Jones regretted he could not comply, as from the latest information to hand the effective strength of his brigade had dwindled to little more than that of a company.

FURTHER FIGHTING ON THE FRONT OF THE 36TH DIVISION

The 36th Division had by a splendid effort broken in between the enemy strongholds of Thiepval and St. Pierre Divion and carried in its first assault the entire Thiepval plateau; further its reserve brigade, the 107th, had pushed ahead through the two leading brigades against the German 2nd Position, which some of its men had reached. The general formation of the division then resembled a head and shoulders thrust into the German position, the head represented by a line round Schwaben Redoubt, the shoulders by the Thiepval—St. Pierre Divion trench line on either side, with a hand stretched towards Stuff Redoubt. Here in a perilous position, on the open plateau, taking shelter where possible in the enemy trenches and dug-outs, the remnants of the battalions spent the rest of the day, under constant artillery and machine-gun fire from three sides; for, owing to the failure of the divisions on the right and left, the enemy was able to concentrate all his efforts on the Ulstermen. In the lulls of the firing, the position was partly consolidated, strongpoints were begun by the R.E. sections, and the trenches leading to the front and flanks blocked. It was obvious that until Thiepval village was captured no further advance was practicable. Moreover, as the enemy had only the narrow front of penetration by the Ulstermen to deal with, he was able to put down a severe artillery and trench-mortar barrage on Thiepval Wood, the fighting base of the 36th Division, showering it sometimes, like the other woods, with lacrymatory shell, and reducing it to naked tree trunks. The difficulties of communication back across the original No Man's Land increased: from Thiepval and St. Pierre

Division the enemy gradually built up a barrier of bullets, the machine guns in Thiepval in particular maintaining constant fire down the Thiepval road, a sunken track leading towards Hamel through No Man's Land, subsequently known as Bloody Road, owing to the mass of dead heaped up in it at the end of the day. The value of constructing strongpoints had been fully appreciated, and the corollary that the enemy strongpoints must be captured, but it had not been realized that the German works would prove of such enormous resisting strength, and be practically unharmed by British shells. Thiepval and St. Pierre Division had done the work they were intended to do—shoot in the back and flanks any attackers who might break in between, and force them to retire under a cross-fire of machine guns. Even for single messengers the passage of No Man's Land was practically impossible, so that most of the men sent forward singly or in groups from Thiepval Wood with ammunition and supplies for the units in Schwaben Redoubt became casualties; whilst as fast as signal wires were repaired they were cut again in many places. The pioneer battalion attempted to dig communication trenches forward from Thiepval Wood, but it was impossible to do so by daylight.

Accordingly, whilst General Morland was concentrating his efforts on the capture of Thiepval village by direct assault, the 36th Division remained unsupported and stationary, its numbers diminishing, its grip on the Thiepval plateau weakening as the day wore on. Ammunition was running short, and all the companies were asking for reinforcement. During the morning officers' patrols had been sent by the 107th Brigade from the Crucifix road-junction towards Thiepval and Mouquet Farm. They were driven off by fire and bombs from the village, but reported that Mouquet Switch was all clear as far as they had gone, that is, to within five hundred yards of Mouquet Farm. It may be that a great opportunity offered. What opposition would have been encountered, one cannot know; but a successful advance in strength down the Mouquet Switch towards Mouquet Farm would have taken in reverse the entire German position along the Thiepval spur, including Thiepval village.¹ The instructions that no officer of the battalion or brigade staffs was to go forward with the assaulting troops now had dire consequences. No provision

¹ The Germans expected that an enveloping movement of this kind would be carried out. See Schwaben.

had been made for such a movement in the rehearsals, no reserves were sent up to carry it out, and probably not one of the company officers knew of the happy effect produced at Loos by the 2/Welch of the 1st Division moving down in rear of the enemy's defences.¹ At any rate nothing was done.

The British delay in taking advantage of the favourable situation created by the success of one portion of the assault was, as on so many other occasions, utilized by the enemy, although not with his usual decision and celerity.² What happened at Schwaben Redoubt will best be gathered from the enemy's account. About midday a heavy bombardment was opened on it, and shortly after 2 P.M. two infantry attacks developed. The right³ attack in two portions coming down the Ancre valley from Grandcourt, took in flank the Ulstermen lying out in Battery Valley, and compelled them to retire, which, on the evidence of artillery observers trying to cover them with a barrage, they did with steadiness and in good order. But the majority were killed as they withdrew across the open, or were cut off and taken prisoners. The attackers then moved on, and reached the lower part of Hansa Line at 3 P.M., whence they sent bombing parties along the trench up the hill in the direction of the redoubt. They succeeded in clearing it to within six hundred yards of their objective, but were then checked.

The enemy left attack⁴ approached from the other side, from Goat Redoubt in the 2nd Position and the Zollern Graben. After killing or capturing on the right the Ulstermen who were in Stuff Redoubt or lying out in front of the 2nd Position, where they were out of sight of Schwaben Redoubt owing to the lie of the ground, the Germans continued on; but they were met by machine-gun and rifle fire as they came into view, and stopped about two hundred yards from the redoubt. During the next three hours they made several attempts to storm the work, assisted by the bombardment which still went on, only to be repulsed with heavy casualties, although with each successive attack they steadily drew nearer.

¹ See "1915" Vol. II. pp. 219-20.

² For the cause of this see Note at end of Chapter.

³ The recruit battalion of the *180th Regiment*, and two machine-gun companies. The drafts for regiments were at this time trained at the front in battalions so as to be immediately available.

⁴ By five companies of all three battalions of the *8th Bavarian Reserve Regiment*.

By this time the casualties of the Ulster Division had become extremely heavy, many battalions having lost all the officers with them; and, owing to the impossibility of sending carrying parties across the original No Man's Land, bombs, ammunition belts and water for the Vickers guns were all very short; indeed the guns were only kept going by the use of rifle cartridges. As the evening drew on the resistance in Schwaben Redoubt began to weaken, and walking wounded and stragglers to drift back. Soon after 5.30 P.M. messages were received to the effect that two battalions of the 146th Brigade (49th Division) were moving up to assist, and that aeroplanes had reported the enemy's counter-attack to be only in very weak strength. As related above, two companies of the 1/7th West Yorkshire were actually on the way, but they seem to have gone too much to the left and, finding no one, took possession of the trenches in the reserve line north-west of Schwaben Redoubt. It was not until nearly four hours later that the remainder of the two battalions started out from Thiepval Wood.

No help appearing, the senior surviving officer in Schwaben Redoubt, a major who had conducted with great personal gallantry the defence of the southernmost corner of the redoubt near the Crucifix road junction, came to the conclusion that, with hand-grenades running short and of range inferior to the enemy's, with both flanks in the air, and with the enemy still in Thiepval village and St. Pierre Divion, the position, a target for all available German guns, had become untenable. When, therefore, about 10 P.M. the German infantry attacked again simultaneously from north, east and south, and almost succeeded in reaching the redoubt,¹ in order to avoid being surrounded he gave the order for retirement to the old German front position. The withdrawal was carried out in good order without interference by the enemy until the Ulstermen were well clear, when they were followed by rifle fire. The possibility of breaking the German front, but the impossibility of holding the captured ground when of small area, if the Germans were not inclined to permit it, had been once more demonstrated.

Part of the 146th Brigade (1/5th West Yorkshire, two companies of the 1/7th West Yorkshire and two companies of the 1/8th West Yorkshire), sent forward from Thiepval Wood about 9 P.M., began to reach the redoubt at this

¹ Two battalions of the 185th Regiment of the corps reserve had arrived.

time, but it was too late to alter the decision to retire, and by 10.30 P.M. the whole work had been abandoned. The majority of the survivors were withdrawn to Thiepval Wood under cover of darkness, only a few small parties remaining in the German original front and support lines, with the detachment of the 1/7th West Yorkshire still north-west of Schwaben Redoubt.¹

SITUATION OF THE X. CORPS AFTER NIGHTFALL

The withdrawal of the 36th Division from Schwaben Redoubt decided the corps commander to put an end to any further efforts to capture Thiepval village. The remainder of the night was spent in reorganizing the scattered units; whilst the men of the 96th and 97th Brigades still lying out in No Man's Land were able to get back to the British lines under cover of darkness.

On the front of the 32nd Division the position in the Leipzig Salient—the only gain of the day which was retained—was strengthened with engineer assistance, and its defence was now taken over by the 2/Manchester (14th Brigade) and two companies of the 2/K.O.Y.L.I. (97th Brigade). The 17/Highland L.I. and the parties of the 16/Highland L.I. (97th Brigade) were withdrawn. Several enemy bombing attacks against the flanks of the salient were repulsed. The front of the 96th Brigade, opposite Thiepval village, was handed over to two of its battalions, the 16/Lancashire Fusiliers and 2/Inniskilling Fusiliers.

In the 36th Division, orders were issued at 11.30 P.M. for the recapture of Schwaben Redoubt by units of the 146th and 148th Brigades (49th Division), supported by the survivors of the 36th Division. These orders, however, were subsequently cancelled, as the brigadiers were agreed that it would be impossible, even if the redoubt were retaken, to hold it in daylight, unless Thiepval village were also in British possession. The front trench along the north-eastern edge of Thiepval Wood was re-garrisoned by units of the 36th and 49th Divisions. It was not known at 36th Division headquarters that any men remained in the German position, and it was not until next morning that preparations were made to reinforce the small parties which still held out in the German front line and west of Schwaben Redoubt. The two battalions

¹ Here it remained until withdrawn on the 3rd July. Corporal G. Sanders, who led the survivors, received the V.C.

of the 108th Brigade which had occupied the trenches on the north bank of the Ancre throughout the day, after their failure to get forward to Beaucourt, were informed at midnight that they would be relieved by the 29th Division (VIII. Corps).

The total of the casualties of the three divisions of the X. Corps on the 1st July had been over nine thousand, more than half of them in the Ulster Division.¹

The collection of the large number of wounded was a long and painful process, not completed until the 3rd July. The artillery and the engineers and pioneer battalions—the two last-named had themselves suffered heavily in trying to keep communications open and water supply pipes repaired—gave assistance during the night, blankets being used in the absence of sufficient stretchers. But here, as elsewhere, there was no difficulty in caring for and removing the wounded once they reached the divisional dressing stations.

Owing to the congestion of the roads it was impossible to bring rations up as usual by regimental transport to the east side of the Ancre, and most of the water points had been damaged. The difficulties of supply were increased by the enemy enfilading the Ancre valley with a high-velocity gun brought up at night on the Grandcourt—Beaucourt railway just far enough to fire southwards. Thus the troops went short both of food and water.

NOTE

THE GERMANS OPPOSITE THE X. CORPS ²

The sector opposite the 32nd Division was held by *I.* and *II.* Battalions of the 99th Reserve Regiment of the 52nd Reserve Brigade, each with three companies in the front line.³ Regimental headquarters were in Mouquet Farm. The success of the defence is attributed "essentially" to

"the wonderful effect of the machine guns, which, without

¹		Killed.	Wounded.	Missing.	Prisoner.	Total.
32nd Div.	{ Officers	53	99	6	—	3,949
	{ Other ranks	1,230	2,453	102	6	
36th Div.	{ Officers	79	102	7	1	5,104*
	{ Other ranks	1,777	2,626	206	164	
49th Div.	{ Officers	5	41	—	—	590
	{ Other ranks	126	412	5	1	

* Includes 142 casualties, not available in detail, to other ranks of certain machine-gun and trench-mortar companies.

² See *Somme-Nord*, i. pp. 46-9, Schwaben, and "Bav. Regt. No. 16".

³ The 99th Reserve a four-battalion regiment: the other regiment of the brigade, the 119th Reserve, was north of the Ancre.

"exception, thanks to the well built machine-gun emplacements, "were all able to go into action when the attack began". The *3rd Company, 180th Regiment*, which was in Leipzig Redoubt, was practically exterminated in hand-to-hand fighting. The defenders of Thiepval were sheltered in the cellars of the chateau and of the houses in the village, which had been enlarged and improved, and they emerged in time to meet the attack, some of the men half-dressed. The British 96th Brigade is described as coming on in "solid lines without gaps, in faultless order, led by its officers "carrying little flags and sticks. Wave after wave was shot down "by well aimed fire . . . a wall of dead British was piled up on the "front".

Opposite the 36th Division the German line was held by the *III. Battalion of the 99th Reserve Regiment* and the *I. and III. of the 8th Bavarian Reserve Regiment* (attached to the *52nd Reserve Brigade*), two companies being in Schwaben Redoubt, with the *II. Battalion* in reserve.¹ The artillery in the 36th Division sector had achieved better results than it had in the 32nd.

"The position had suffered quite exceptionally under the long "bombardment; the trenches had been practically wiped out, "wire swept aside, and dug-outs mostly battered in. The *9th "Company of the 99th*, west of Schwaben Redoubt, suffered particularly severe losses. There the enemy assault therefore found "favourable conditions." The attack advanced with such rapidity that the machine guns were able to fire only a few rounds; one machine gun in the redoubt was knocked out by a direct hit shortly before the attack. It is claimed that the redoubt was entered from the rear.

News of the break-through soon reached Major-General von Soden, commanding the *26th Reserve Division*, it having been observed from Beaucourt Redoubt. Immediately, at 8.5 A.M., he issued orders to the *II. Battalion, 8th Bavarian Reserve Regiment*, his sole divisional reserve, with a machine-gun company and a platoon of an automatic rifle company, to counter-attack and retake Schwaben Redoubt. The battalion had been at Iries (5 miles north-east of Thiepval) since 5.30 A.M., and only received the order at 9 A.M. Lieut.-General von Stein (*XIV. Corps*) did not get the report of the break-through until 9.40 A.M., and directed the *26th Reserve Division* to counter-attack at once without waiting for the *II. Battalion of the 8th Bavarian Reserve Regiment*. Meanwhile the commander of the *51st Reserve Brigade (180th and 121st Reserve Regiments)*² had grown impatient and ordered all companies not engaged, two each of *I. and III. Battalions of the 8th Bavarian Reserve Regiment* and the *180th Recruit Battalion*, to counter-attack from Goat Redoubt and Grandcourt; but he had no sooner done so than Lieut.-Colonel Bram, the officer commanding the *8th Bavarian Reserve Regiment*, arrived, and at 11.15 A.M. the latter was placed in charge of the counter-attack. There was a terrible state of confusion, owing to lack of communications, and great difficulty in getting the movement under way. Contact could not be established with the Grandcourt group (*180th Recruit Battalion*) or with the

¹ The position of the *8th Bavarian Reserve Regiment* was ascertained after the sketches, derived from Somme-Nord, had been printed.

² The *121st Reserve* was in the line north of the Ancre opposite the 4th Division of the VIII, Corps.

II. Battalion of the 8th Bavarian Reserve Regiment, delayed on its way from Irlès by artillery fire. Finally Lieut.-Colonel Bram, shortly after 1 P.M., ordered the counter-attack to be begun by the companies of the *I. Battalion of the 8th Bavarian Reserve Regiment* already at Goat Redoubt; but two companies of the *II. Battalion* soon arrived to support them, and the Grandcourt group also started.

When, by order of the divisional commander¹ the assault on Schwaben Redoubt was repeated at 5 P.M. the survivors of the Goat Redoubt detachment did not take part, owing to a false report that the Schwaben had been evacuated. The attack at 6.15 P.M. seems to have been occasioned by the arrival on the left of a small contingent of two groups of the *99th Reserve Regiment*, actually sent up for reconnoitring purposes to find out how far the British had progressed. After the failures, the artillery bombardment was increased, and towards 10 P.M. "the batteries began to smash the last remains "of the fortifications of the high-standing redoubt". The Germans, now supported by two battalions of the *185th Regiment*,² again pressed on, working up all the trenches round the redoubt. They failed to enter it, but shortly afterwards they saw "thick lines "moving westwards from the redoubt on a broad front towards "the place where the enemy originally broke through. The doubt "whether they were our own troops was solved by light balls sent "up from Thiepval. British steel helmets were recognized. . . . The "Schwaben Redoubt was German again."

According to the narrative, the total number of battalions employed east of the Ancre against the X. Corps was only $8\frac{1}{2}$, and two of these did not arrive on the scene until after 10 P.M. The number of enemy machine guns cannot be ascertained.

The German losses are not given.

¹ The order ran: "The Englishman still sits in Schwaben Redoubt. He must be driven out of it, out of our position. The attack is to be pushed with all energy. It is a point of honour for the division to recapture this important point to-day. The artillery is to co-operate with all possible strength."

² These battalions were in corps reserve at Beugny (12 miles E.N.E. of Thiepval). General von Stein put them at the disposal of the *26th Reserve Division* at 11 A.M., but the leading battalion arrived at divisional headquarters at Courcellette (3 miles east of Thiepval) only at 6.30 P.M., and it was 10 P.M. before it got to the German 2nd Position.

CHAPTER XVII

THE SOMME

1ST JULY 1916

VIII. CORPS¹

(Maps 1, 10 ; Sketches A, 23)

Map 1. THE upper waters of the Ancre flow westward to Hamel
Sketch A. (where as already mentioned it makes a southern bend) through a narrow valley, with the villages of Miraumont, Grandcourt, Beaucourt and St. Pierre Divion on its banks. On the northern side of the bend are a series of large spurs projecting south-eastwards towards the river : the Auchonvillers spur (with an eastern under-feature known as Hawthorn Ridge) ; the Beaucourt spur which runs down from Colincamps ; and the Grandcourt spur which has the village of Serre at its northern end. Between the three spurs are shallow valleys : in that which separates the Auchonvillers and Beaucourt spurs lie Beaumont Hamel village and the road to it from Auchonvillers. This valley has a branch, called " Y Ravine ", which cuts into the southern side of Hawthorn Ridge. The other valley,

¹ VIII. Corps (Lieut.-General Sir A. G. Hunter-Weston) :

29th Division (Major-General H. de B. de Lisle), 86th, 87th and 88th Brigades ;

4th Division (Major-General Hon. W. Lambton), 10th, 11th and 12th Brigades ;

31st Division (Major-General R. Wanless O'Gowan), 92nd, 93rd and 94th Brigades ;

48th Division (Major-General R. Fanshawe), 143rd, 144th and 145th Brigades.

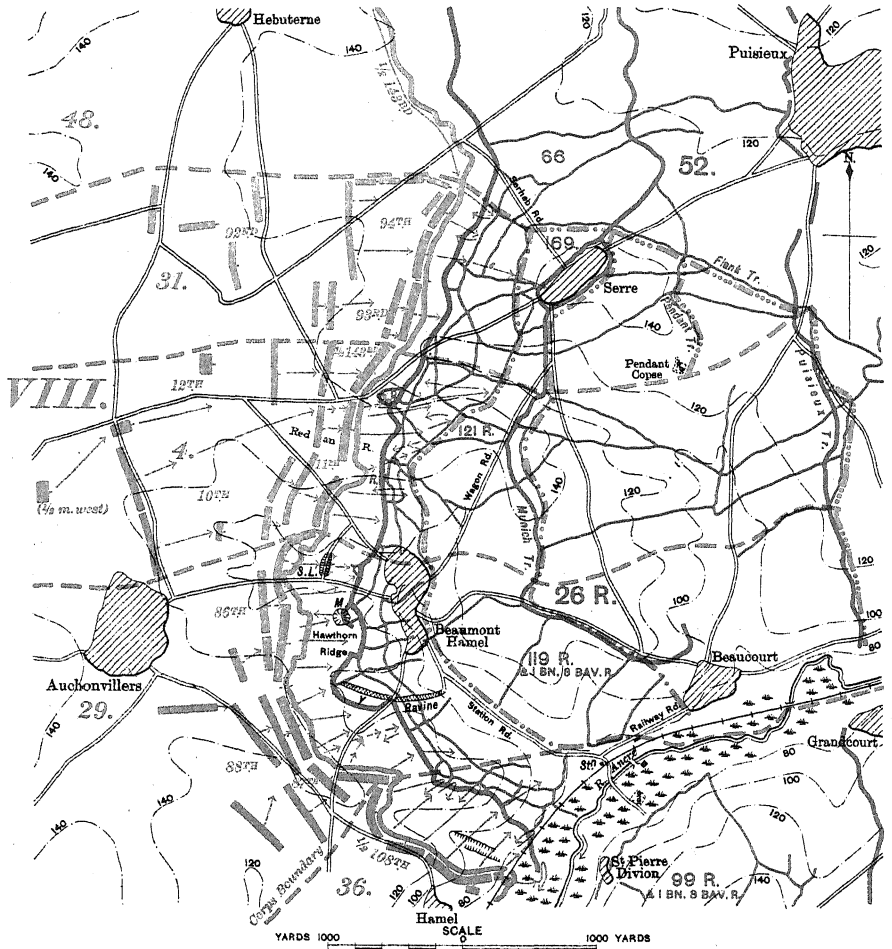
G.O.C. R.A., Br.-General T. A. Tancred ;

„ Heavy Artillery, Br.-General D. F. H. Logan ;

Chief Engineer, Br.-General G. S. Cartwright.

Lieut.-General Sir A. G. Hunter-Weston had commanded the 29th Division and VIII. Corps at Gallipoli, and, after sick leave, had returned to France (he had commanded a brigade of the 4th Division there in 1914) in March 1916.

THE SOMME, 1916.
VIII. CORPS ATTACK ON THE 1ST JULY
BEAUMONT HAMEL & SERRE.



NOTE.

Positions at zero.....	First Objective.....
The Attacks.....	Second.....
Attacks by reserves.....	Third.....
Divisional Boundaries.....	Fourth..... (31st Div)

Loggments (1st July) ○○○○

CORPS VIII. Divisions 29, 4; Brigades 82nd, 107th, 92nd
M. = Mine Crater, S.L. = Sunken Lane, R. = Redan, Q. = Quadrilateral.

known as the Beaucourt valley, is marked by the beginning of the Beaucourt—Puisieux road and passes southward of Serre.

The front of the VIII. Corps facing Beaucourt—Serre had therefore a succession of ridges and valleys before it, and the ends of Y Ravine, Beaumont Hamel valley and Beaucourt valley, trending westward, penetrated into it. The Colincamps—Beaucourt spur, where it crossed the front line was known as Redan Ridge.

The German front line ran first on the eastern slope of Auchonvillers spur, passed round the head of Y Ravine to Hawthorn Ridge, crossed the shallow Beaumont Hamel valley, and continued across to the Beaucourt spur (Redan Ridge), and over the slight depression, the head of Beaucourt valley, between this and the small knoll of the Grandcourt spur on which Serre stands. The intermediate line, known as Munich Trench, started from Beaucourt Redoubt above Beaucourt and going north included Serre village; the 2nd Position ran from Grandcourt to Puisieux, with the 3rd Position, as elsewhere, three miles behind it.

No Man's Land was wide in the southern sector, averaging 500 yards, but only 200 yards in the northern; it was open and bare of cover, except for a sunken lane, running north from the Auchonvillers—Beaumont Hamel road, and a small bank between this lane and the German line.

The German front position was a formidable one. It was well traced with a number of minor salients and flanks, and a large flanking bastion in the shape of the head of Y Ravine. There was natural cover available for supports and reserves in the succession of valleys behind it, besides unusually good artificial cover in dug-outs and cellars of the villages, to which secure entrances had been made on the reverse slopes. The miniature fortress of Beaumont Hamel completely commanded the valley parallel to the front which the VIII. Corps must cross in an advance,¹ and the Beaucourt ridge overlooked the whole with excellent observation for artillery. The battle-ground formed a kind of amphitheatre: the VIII. Corps seemed confronted with tiers of fire and was under complete observation by the enemy, so that even its field artillery suffered from the German counter-batteries, as, though well dug in, the flashes of the guns were visible. Its own position, sloping to the front, gave it no more than command of the German front line and support trenches; observation—and most of the

¹ Beaumont Hamel was not captured until the 13th November 1916, and then only with the aid of tanks and a new form of gas projection.

artillery observers had to be near the front line—was limited by the ridges beyond; there were thus many places close to the front on which ground observation was impossible. Moreover, the convex shape of the slope on the British side made it difficult to bring heavy gun fire on the enemy front position, and there were therefore parts of it which were hardly touched by the preliminary bombardment.

Map 10.
Sketch
23.

The corps had three of its four divisions and two battalions of a brigade of the fourth, in line. On the right, the 29th Division, of Gallipoli fame, held the eastern face of the Auchonvillers spur, with Beaumont Hamel in the valley in front of it, its right immediately north-east of the Hamel—Auchonvillers (St. John's) road, and the left near the head of the Beaumont Hamel valley. The 4th Division, of the original B.E.F., continued the line across the upper, east and west, portion of the Beaucourt spur to beyond the Maily Maillet—Serre road. Brought up to strength with the finest of recruits—for the last time from the battalions' own recruiting areas—the division was as "fighting fit" as it was at any time of its existence. The 31st Division (New Army) on the left, lay along the forward slope of the dip between Serre and Colincamps (2½ miles west of Serre), facing the former village, which stood undestroyed—many of its houses still had their roofs on—amid a mass of trees, conspicuous on its knoll, a thousand yards away, completely overlooking the position of the division.

The plan of attack was that the 29th and 4th Divisions should advance due eastwards into and across the Beaumont Hamel valley on to the Beaucourt spur, where lay the German intermediate line. Thence they were to press on to the German 2nd Position. The 31st Division, on the left, as the advance progressed, was to form a defensive flank, including the village of Serre, pivoting on its left, which was to stand fast at John Copse, whilst its right, swinging forward, kept touch with the 4th Division. The 48th (South Midland) Division, T.F., was to be in corps reserve at Bus les Artois; but two battalions, the 1/7th and 1/5th R. Warwickshire, of its 143rd Brigade (Br.-General B. C. Dent),¹ were in the line on the left next to the VII. Corps. From the two-mile front which they held no attack was to be made, although preparations for one were to be simulated, and the enemy wire cut. On the

¹ The other two battalions of the brigade were attached to the 4th Division, and attacked with it.

day of battle these two battalions were not to advance, but smoke was to be discharged from their trenches shortly before zero hour, as on other parts of the line. Nevertheless, no assembly trenches were dug, and no passages cut through the British wire, so that the inertness of this sector must have been evident to the enemy.

The 29th and 4th Divisions were allowed three and a half hours—not long enough as later experience proved—in which to reach the German 2nd Position, an advance of four thousand yards. On arrival there they were to send parties with Lewis guns a short distance forward to a sunken road which they were to consolidate for defence. The 31st Division would find for the general line of its defensive flank an existing German communication trench, known as Flank Trench, which led from Puisieux Trench past the north of Serre village to the German front trenches.¹ Since the width of No Man's Land varied, the leading lines were to leave the front parapet at such times before zero as would enable them to reach a position one hundred yards from the German trench by zero.

The VIII. Corps orders² laid down six lifts for the artillery: off the front trench at zero; off the "first objective", at 15 or 20 minutes after zero, varying with its distance from the front line; off the second objective at 40 or 45 minutes after zero (but at 1 hour 20 minutes for the flank near Beaucourt); and 3 hours 30 minutes after zero off the third objective, Puisieux Trench—at which hour as already mentioned the infantry was to reach it—with intermediate lifts at 1 hour 35 minutes and 2 hours 40 minutes. These

¹ The German force opposing the VIII. Corps consisted of the *119th Reserve* and *121st Reserve Regiments*, all Württemberg troops, of the *26th Reserve Division*, and the *169th Regiment of the 52nd Division*, their sectors corresponding roughly to those of the three attacking divisions of the VIII. Corps. Part of the *66th* of the *52nd Division* was in reserve behind Puisieux. The boundary between the *26th Reserve* and *52nd Divisions* was just one hundred yards north of the line of demarcation between the 4th and 31st Divisions. Each regiment had two battalions in the front defences, with the third battalion in the intermediate line. The main German artillery positions were on the reverse slope of the Beaucourt spur in rear of Munich Trench, and also on the reverse slope of the Grandcourt spur in rear of Puisieux Trench.

² The heavy artillery of the corps consisted of five groups, the 1st, 4th, 16th, 17th and 36th, comprising:

Howitzers: three 15-inch; two 12-inch; twelve 9·2-inch; sixteen 8-inch; twenty-four 6-inch;

Guns: six 6-inch; thirty-two 60-pdrs.; eight 4·7-inch.

A "groupe" of 75-mm. of the French 37th Artillery Regiment was attached.

This works out at about one heavy gun per 44 yards. The divisional artillery had a field gun per 20 yards.

times applied to the field artillery. In each case the heavy artillery was to lift 5 minutes earlier and straight on to the objective. A definite attempt to get a creeping barrage formed by the divisional field artillery was ordered, the words used being: "At the commencement of each infantry attack the divisional artillery will lift 100 yards and continue lifting at the rate of 50 yards a minute to the objective, firing three rounds per gun at each step."

It was added in explanation:

"The rate of advance of the infantry has been calculated at 50 yards a minute.

"Infantry must not arrive before the times shown on the map [the times given above], as the artillery will still be firing on these points. It is the intention of divisional artillery to assist the infantry forward by lifting very slowly 50 yards each minute, *i.e.* at the same rate as it is calculated the infantry will advance.

"The times once settled cannot be altered. The infantry therefore must make their pace conform to the rate of the artillery lifts. If the infantry find themselves checked by our own barrage, they must halt and wait till the barrage moves forward.

"The success or otherwise of the assault largely depends on the infantry thoroughly understanding the 'creeping' method of the artillery."

These instructions were repeated in the divisional orders.

To the 4.5-inch field howitzers of the division was left the destruction of machine-gun nests and shelters near the front; unfortunately their power was insufficient for the purpose, and their consequent failure may have contributed to the ill-success of the VIII. Corps.

Each division in front line was ordered to have two 18-pdr. batteries ready to move forward at short notice, and routes for the purpose were reconnoitred. No portion of the divisional field companies R.E. was to take part in the assault; one section of a company was as a rule placed at the disposal of the commander of each assaulting brigade, but it was not to be ordered forward until the objective had been gained. The remainder of the R.E. were held back for work on and improvement of forward roads and water supply, as well as for consolidation of strongpoints at night.¹

In addition to the usual arrangements made to keep up

¹ The 29th Division attached one whole field company (1/1st West Riding, 1/3rd Kent and 1/2nd London) to each of its three brigades; but, owing to the heavy fixed duties mainly in connection with communications

signal communication with the assaulting columns by visual, runners, screens, flares and signalling to contact aeroplanes, a French type of lamp, which had a wide beam, and therefore did not require accurate aligning, was employed; and bombers carried red and yellow flags to show where the front line of their battalions were.

ASSAULT OF THE 29TH AND 4TH DIVISIONS

The preparations on the front of the 29th Division included the excavation of three shallow tunnels under No Man's Land: one to be opened up as a communication trench to the sunken lane, and the others dug to within thirty yards of the German front trench. The extremities of the latter two, at 2 A.M. on the morning of the assault, were opened up to the surface as emplacements for batteries of Stokes mortars.¹ A mine of 40,000 lbs. of ammonal had also been prepared and charged by the 252nd Tunnelling Company R.E. under Hawthorn Redoubt, a strongpoint in the German front line on the crest of Hawthorn Ridge, immediately opposite Beaumont Hamel village, commanding the head of the valley. This mine had important and direful consequences. The G.O.C. VIII. Corps originally wished to fire it four hours before zero, so that the redoubt, which flanked No Man's Land, should be blown up and the crater consolidated and occupied before the assault, but long enough before the latter to ensure that any general alarm on the enemy's side should have died down. G.H.Q., on the advice of the Inspector of Mines, forbade this, on the grounds that British troops had never yet "made a good show" at occupying a

and water supply, only a small portion of each company was available; the 4th Division attached only one section (7th, 1/1st Durham and 1/1st Renfrew); the 31st Division attached three sections (210th Field Company) to the 94th Brigade, which hoped to consolidate its objectives by daylight, keeping the rest of the divisional R.E. (211th and 223rd) in reserve, as the 93rd Brigade preferred to wait until night before bringing up its engineers.

¹ Two communication tunnels, known as "Cat" and "Rat", were also made on the 4th Division front, and the exits, ten yards from the enemy, were opened at 11 P.M. on the 30th June. A Lewis gun was mounted in each at 7.25 A.M. Both guns were hit by machine-gun fire within ten minutes, and German bombing parties occupied the ends, which were then blocked.

An attempt to construct similar tunnels on the 31st Division front was detected by enemy patrols, who blew them in when about half-way across No Man's Land; but a sap to form a defensive flank was tunnelled between the front trench and the enemy trenches on the left. It was blown open on the morning of the 1st, and known as "Russian Trench".

crater, whereas the Germans were extremely proficient in that art, and would therefore at zero probably be found in possession of the crater. The Inspector of Mines insisted that zero was the proper time. On the 15th June 1916 the Fourth Army had issued an order that all mines were to be fired between zero and eight minutes before zero, and, as a kind of compromise, the VIII. Corps suggested ten minutes before zero, and this was agreed to and sanctioned by G.H.Q., although eight or ten minutes would equally give the enemy warning. It seems to have been in the minds both of Sir Douglas Haig and General Rawlinson that, even if the mine—the only one north of the Ancre—did give the alarm, it might be to the advantage of the attacks of the XIII. and XV. Corps on the right. Their success was all-important, and it might be helpful if the attention of the enemy could be drawn to the situation north of the Ancre before they were launched. It is said that some apprehension was felt in the 29th Division that if the mine were fired at zero the attacking infantry might be injured by falling fragments. As a matter of fact, although some dust remains in the air, all material that might inflict injury comes down, as is demonstrated by photography, within twenty seconds of the time of firing, and no further cracks in the ground, a most alarming feature of the explosion, are formed.¹ The permission to fire the mine at 7.20 A.M. still allowed arrangements to be made in accordance with the original idea of occupying the crater before the main assault, but the decision to do so at once created difficulties. It was obvious that the heavy artillery barrage could not be continued on Hawthorn Redoubt and the neighbouring trenches whilst the infantry was seizing the crater. The whole VIII. Corps heavy artillery, not merely that supporting the 29th Division, was therefore ordered to lift at 7.20 A.M., ten minutes before the assault. At this hour “the howitzers firing on the first line lifted to “the reserve trenches, and at 7.25 A.M. were joined there by “the howitzers which had been firing on the support trench.”² The thin 18-pdr. shrapnel barrage of the field

¹ This was well known in France from the experience in the minor actions earlier in the year. Thus at the action of the St. Eloi craters (p. 182), 30 seconds', and finally 60 seconds', interval had been allowed, but in the end the infantry started actually at zero. In the instructions for the Mesines offensive in 1917, it was stated “all material comes down within “twenty seconds”.

² Report of the G.O.C. Heavy Artillery, VIII. Corps. The war diary entry is: “The assault was launched at 7.30 A.M., and the artillery lifted

artillery¹ was to lift at zero off the front line, but in the 29th Division, "in order to avoid a pause at 0000 [zero], "at—3 [minutes] in each field battery, one section [of the "two engaged] will lift on to the support line, where it will "remain until 0002." Thus on that division's front not only would there be for ten minutes no heavy artillery fire, but for three minutes only half the 18-pdr. fire.

At 7.20 A.M. the mine under Hawthorn Redoubt was blown, the heavy barrage lifted, and the Stokes mortars in the advanced emplacements, and four in the sunken lane in No Man's Land, to which two companies of the 1/Lancashire Fusiliers pushed forward, opened a hurricane fire on the German front trench, giving confirmation to the Germans, if any were needed, that the assault was about to take place. Under cover of this fire, the leading companies of the assaulting infantry began to leave their trenches and form up in No Man's Land. Two platoons of the 2/Royal Fusiliers, with four machine guns and four Stokes mortars, rushed forward to occupy the mine crater. They reached the near lip, not without a number of casualties, and at once came under heavy machine-gun and rifle fire from the German trenches on either flank and from the far lip of the crater, which the Germans had immediately occupied.²

The explosion of the mine ten minutes before the assault undoubtedly prejudiced the chances of success,³ as it warned the Germans to be on the alert. It immedi-

"at 7.20 and 7.25 in accordance with operation orders." The VIII. Corps operation orders of the 15th June state that the orders to the artillery were "issued to artillery only". No copy can be found. That the barrage lifted before the time expected was noticed by a number of infantry officers.

¹ The field howitzers were firing on special targets. See page 428.

² The German regimental account ("Res. Regt. No. 119") states: "During the intense bombardment there was a terrific explosion which for the moment completely drowned the thunder of the artillery. A great cloud of smoke rose up from the trenches of *No. 9 Company*, followed by a tremendous shower of stones, which seemed to fall from the sky over all our position. More than three sections of *No. 9 Company*, were blown into the air, and the neighbouring dug-outs were broken in and blocked. The ground all round was white with the debris of chalk as if it had been snowing, and a gigantic crater, over fifty yards in diameter and some sixty feet deep [actually 130 feet in diameter and 58 feet deep] gaped like an open wound in the side of the hill. This explosion was a signal for the infantry attack, and everyone got ready and stood on the lower steps of the dug-outs, rifles in hand, waiting for the bombardment to lift. In a few minutes the shelling ceased, and we rushed up the steps and out into the crater positions. Ahead of us wave after wave of British troops were crawling out of their trenches, and coming forward towards us at a walk, their bayonets glistening in the sun."

³ Somme-Nord, i. p. 32, states that the Germans "were warned of the coming attack by the firing of the mine".

ately brought down the enemy barrage, and within five minutes it seemed that every enemy machine gun along the front was shooting incessantly. The divisions were caught forming up. Even before the heavy barrage lifted at 7.20 A.M., Germans appeared in the front line; and after that hour, with hardly a British shell or bullet striking the parapets, most of them fired standing in the remains of the trenches. Others sprang out to the front, some into shell holes, rifles and machine guns in hand. They received the leading infantry lines with very heavy fire directly these tried to advance across No Man's Land to their assault position one hundred yards from the German front line; whilst the party on the far lip of the mine crater, armed with machine guns and light trench mortars, simply shot right and left as it pleased.

The lack of surprise, however, cannot be attributed entirely to the mine being fired at 7.20 A.M. Lanes had been cut in the British wire and bridges laid over the rear trenches some days before. A bombardment had been fired every morning, beginning at 5 A.M., for a week. With the Germans the only question was, which day would be zero day. The mine announced not only the day, but almost the minute. Directly it was fired, without any appreciable pause, the enemy machine-gun fire became terrific; for the simultaneous lifting of the heavy gun barrage made it perfectly safe for the Germans to man their defences. And the British creeping barrage moved on at zero, to the exasperation of the infantrymen, who were left to their fate.

The bombardment, as a whole, was considered to have been successful, the wire effectively cut, and the enemy defences demolished; in some units there was a little anxiety because their raids had been unsuccessful. It turned out that the counter-battery work had failed to make much impression; and the first indication of this fact was the shelling in the early hours of the 1st July of the trenches of the 31st Division, which were crowded with men. A hit on a 6-inch water-main flooded the trenches of the 4th Division.

The enemy had a further surprise in store. The corps had been given to understand that there were only 55 heavy guns in position to oppose it; yet at zero the Germans opened a number of new batteries which had not previously fired, and had not therefore been located. A total of 66 batteries (including guns on the unattacked front immediately north of the VIII. Corps, which fired in semi-enfilade) is reported to have come into action against the three divisions of the

VIII. Corps. The volume and accuracy of their fire disorganized the attack at the very outset.

Across the front of the 87th Brigade (Br.-General C. H. T. Lucas), on the right, ran Y Ravine, with only its edge, not its hollow, visible from the British line. The German front trench followed first the edge of the Beaumont Hamel valley and then the lip of the ravine, thus forming in front of the brigade a deep re-entrant, which ensured cross fire. Both here and along the whole front of the 29th Division, owing to the convexity of the slope, the German wire was not generally visible from the British trenches, and much of it was found uncut.¹

The 1/R. Inniskilling Fusiliers, on the right, attacking south of the ravine, moved forward down the slight slope in admirable order, in spite of heavy casualties, Lieut.-Colonel R. C. Pierce being among the killed. But the greater part of the men who reached the German front defences were held up by uncut wire. Half-a-dozen parties here and there managed to get through it, then across the front trench and even beyond it down into the valley: they were not, however, in sufficient numbers to make good. Fired at from behind by machine guns, brought up from dug-outs which they had overrun without "mopping up", all were either killed or taken prisoners. The 2/South Wales Borderers, on the left opposite the ravine, was unable to reach the German position (except some of the left company who were shot on the German wire), owing to the intensity of the fire from three German machine guns—all that was visible of the defenders—which, unhindered by barrage or covering fire, raked its lines. By 7.35 A.M. nothing remained of the Borderers but some scattered individuals lying within a hundred yards of the German trench.

The German field batteries behind Beaucourt ridge at about 2,000-2,500 yards' range and the heavies in rear of them placed a severe and most accurate barrage along the British front, support and reserve trenches, almost as soon as the rear companies of the leading battalions advanced. From this shelling and the machine-gun fire, the supporting battalions, the 1/K.O.S.B. and 1/Border Regiment, also suffered heavily as they came up to the front trench, and whilst crossing the bridges over it into No Man's Land, Lieut.-Colonel A. J. Ellis of the

¹ It has been stated that, the 29th Division having been reconstituted after Gallipoli, many of the battery commanders were inexperienced, and could not manage the difficult task of cutting wire with shrapnel.

Border being severely wounded. They had advanced over the open, timed to enter No Man's Land at 8.5 A.M., according to programme, all the battalions in support and in reserve moving in accordance with a time-table fixed by the corps. It being obvious that the German machine guns had not been subdued, both commanding officers had suggested a pause for further bombardment; but, misled by the enemy firing white flares, which were to have been the British signal that the first objective had been reached, the brigadier ordered them to proceed. The lanes cut through the British wire were rather narrow and difficult to find, the men "bunched" badly, and, the barrage having gone on, the German machine gunners, already ranged on the passages, caused further heavy losses, until the dead lay literally in heaps at these places. The survivors nevertheless continued their advance from shell hole to shell hole until only a few small isolated parties were left. Finally these were compelled to come to a halt well in front of the German position, which was not entered anywhere. Very soon after 8 A.M. the advance of the 87th Brigade had melted away, and was at a complete standstill. When troops meet with unexpected resistance, the quickest and most effective way to help them is by artillery fire; but owing to the rigid orders regarding the barrage all power to modify the distribution of fire had been voluntarily abandoned, and the barrage went on, leaving the infantry to its fate.

The assault of the 86th Brigade (Br.-General W. de L. Williams) which was to carry the village of Beaumont Hamel, hidden in the bed of the valley, fared no better, fire being opened as soon as the men left the trenches five minutes before zero. The 2/Royal Fusiliers, on the right (less the half company that had gone to Hawthorn Redoubt mine crater), suffered very heavy casualties, including Lieut.-Colonel A. V. Johnson wounded. Thirty or forty men, diverging to the left, entered the mine crater and held on there, but the few who penetrated into the German front trench were killed. The attack of the 1/Lancashire Fusiliers, on the left, was led by two companies (with a special bombing party one hundred strong, two machine guns and four Stokes mortars) which had gone forward by the sap to the sunken lane half-way across No Man's Land. Although supported by a simultaneous advance of the rest of the battalion from the British front trench, their attack, as a whole, failed not many yards

from the sunken lane: in fact the Lancashire men were mown down directly they showed above the dip in which the lane lies, and only a party of about fifty reached the low bank beyond it. Here again, as soon as the leading battalions of the 86th Brigade advanced, the German artillery placed a barrage on the British front trenches. Returning wounded, afoot and on stretchers, delayed the advance of the supporting battalions, the 1/Royal Dublin Fusiliers and 16/Middlesex,¹ which were ordered to move along the communication trenches. They crossed the parapet, however, shortly before 8 A.M., and, as they advanced, they could see much of the wire entanglement still uncut, and the various gaps in it choked with dead or wounded. Heavy machine-gun fire, particularly from "The Bergwerk",² on the Beaucourt ridge immediately behind the northern end of Beaumont Hamel, at once swept them down. Except for some 120 of the 2/Royal Fusiliers who made their way to the Hawthorn mine crater, none of the 86th Brigade reached the German position, and in trying to reorganize the advance, the brigade-major, the staff-captain and a second brigade-major were all wounded.

Following the Gallipoli practice, all the infantrymen of the 29th Division, in order to assist the artillery in spotting the front line, wore a triangle cut from a biscuit tin, which was sewn on the haversack, carried on the back. With the sun's rays shining, the plaque certainly showed up the position of the men lying on the ground, but as it was thought to have increased the casualties, it was never worn again.

The reports of the fighting that now reached divisional headquarters unfortunately exaggerated the strength of the parties of the 87th Brigade which had been seen by observers moving down into the valley to the German support line; while the report made by a brigade that white flares had been seen gave false confirmation to many wild rumours. General de Lisle, under the impression that his right brigade had gone on unchecked to its objective, and that the supporting battalions were only temporarily held up by a few machine guns,

¹ Originally a Public Schools battalion, which had already given some 1,450 men to be commissioned, it had come into the division to replace the 1/R Munster Fusiliers, transferred to the 16th Division. Every officer but one was killed or wounded on the 1st July.

² That is "The Mine". It was a system of caves and underground passages which had been excavated in days long past to obtain hard chalk blocks for building purposes, and used as refuges by the inhabitants in time of war. There were many such in the Somme area, and they provided splendid shelter for the German supports and reserves.

ordered his reserve brigade, the 88th (Br.-General D. E. Cayley) to move up its two leading battalions behind the 87th Brigade, leaving the others still at his disposal. After assembling them in a trench along the Hamel—Auchonvillers road, the forward trenches being blocked, Br.-General Cayley was to send them to attack on a frontage of one thousand yards between the divisional right boundary and the western extremity of Y Ravine. There would be no artillery support, but they would be covered by a barrage from the 88th Machine Gun Company. At 9.5 A.M. only the 1/Newfoundland Regiment,¹ the left battalion, advanced over the open. It did so independently by brigade orders, as the start of the 1/Essex on its right had been delayed by the complete congestion of the trenches with the bodies of dead and dying, in places piled one on the other, through which it was attempting to move.

No sooner had this isolated and doomed attack of the Newfoundlanders left cover than their ranks were swept with bullets from the German position around Y Ravine. Dropping dead and wounded, as an artillery observer reported, at every yard, nevertheless the battalion pressed on, never faltering. The majority of the men were hit before they had gone much beyond the British wire, but some got across No Man's Land and actually reached the German trench and disappeared into it before they were finally shot down. The battalion suffered over seven hundred casualties, and was literally annihilated, losing every one of its officers, actually three more than the number it should have taken into action. The 1/Essex coming up later, also suffered very heavily as soon as it left the front trenches, both from artillery on the right and machine-gun fire, particularly on the left. The fourth company was held back. Nevertheless, here too a few men reached the German position before they were killed. The survivors of both battalions remained lying out in No Man's Land.²

¹ The regiment was composed entirely of native-born Newfoundlanders. The 1st Battalion (the 2nd was draft-finding) landed at Suvla in September 1915 to join the 88th Brigade of the 29th Division, and accompanied the division to France. In all, 6,339 men were accepted for service in it, 4,984 being sent overseas; 1,232 were killed, 2,314 wounded and 174 taken prisoner.

		Killed.	Wounded.	Missing.	Prisoner.	Total.
1/Essex	{ Officers	3	11	1	—	229
	{ Other ranks	57	156	1	—	
Newfoundland Regt.	{ Officers	14	12	—	—	710
	{ Other ranks	219	374	91	—	

At 10.5 A.M., as soon as General de Lisle had heard of this disaster and of the severe casualties suffered by the two leading brigades,¹ he directed that for the moment no more troops should be sent forward. The artillery barrage, by now across the Beaumont Hamel valley and on the fourth objective, was brought back, but only three or four hundred yards, as no one knew exactly where our men were; and, although a new artillery programme was issued, the results of it helped the infantry but little.

The 4th Division also sustained disastrous losses in its assault. On the front of this formation it was reported that the wire was well cut and the trenches well battered. Unfortunately the enemy's deep dug-outs had not been touched. Some of the entrances had been hit, but, as every dug-out had several, this was of small importance. The 11th Brigade (Br.-General C. B. Prowse) led the way from its assembly trenches, deep "slits" off the communication trenches, with three battalions in front line and three in support,² on the whole divisional frontage of fifteen hundred yards. It was to capture the 1st and 2nd

1		Killed.	Wounded.	Missing.	Prisoner.	Total.
86th Bde. :						
2/Royal Fus.	{ Officers . . .	6	15	2	—	561
	{ Other ranks . .	158	334	46	—	
1/Lanc. Fus.	{ Officers . . .	8	10	—	—	483
	{ Other ranks . .	156	298	11	—	
16/Middlesex	{ Officers . . .	24	8	—	—	549
	{ Other ranks . .	177	301	10	29	
1/Dublin Fus.	{ Officers . . .	6	10	—	—	305
	{ Other ranks . .	70	219	—	—	
M.G. Coy. and T.M.	{ Officers . . .	1	14	—	—	71
	{ Other ranks . .	7	37	12	—	
		613	1,246	81	29	1,969
87th Bde. :						
2/S.W.B.	{ Officers . . .	9	6	2	—	372
	{ Other ranks . .	141	212	2	—	
1/K.O.S.B.	{ Officers . . .	11	8	—	—	552
	{ Other ranks . .	145	388	—	—	
1/Innis. Fus.	{ Officers . . .	9	11	—	—	568
	{ Other ranks . .	236	308	3	1	
1/Border Regt.	{ Officers . . .	10	6	—	—	575
	{ Other ranks . .	173	362	22	2	
M.G. Coy.	{ Officers . . .	—	—	2	—	22
	{ Other ranks . .	2	7	11	—	
		736	1,308	42	3	2,089

Including the casualties to divisional troops, the total for the division on 1st July was 223 officers and 5,017 other ranks

² Its own four and the 1/6th and 1/8th Royal Warwickshire lent from the 48th Division, in corps reserve.

objectives, after which the 10th and 12th Brigades were to pass through it and assault the 3rd. Even during the final intense bombardment German machine guns had fired intermittently; but at 7.20 A.M., almost as the heavy artillery lifted, actually whilst the infantry was beginning to form up in No Man's Land in front of its trenches, the German machine-gun fire grew continuous. Deadly enfilade fire came from Ridge Redoubt on Redan Ridge in the centre of the front line opposite the division, and frontal fire not only from the defenders of the front line, but over their heads from reserves in the trenches on the Beaucourt spur, where they seem to have been massed in anticipation of a coming attack. At the same time the enemy batteries, both heavy and field, as elsewhere, placed a barrage on No Man's Land, subsequently lifting it on to the British front trenches. This barrage was put down in "crumps" on a small length of trench, and after about ten minutes shifted to another. So severe were its results that for fifty yards behind the front no solid ground was left, nothing but a wilderness of shell holes. At 7.30 A.M., as soon as the final advance began, a few bold German machine-gunners put their weapons on the remains of the parapet and kept sweeping the line. The 1/East Lancashire, on the right, and the right of the 1/Rifle Brigade, in the centre, suffered especially, although the Riflemen were at the wire directly the shrapnel barrage lifted. The two machine guns on the German parapet fired till the last moment, while another two in Ridge Redoubt, never silenced on this day, swept all No Man's Land and the front line systems. They not only shot down the leading battalions, but slaughtered the supporting ones, and prevented reinforcements and supplies from crossing. The wire having been well cut by the field artillery, those of the leading platoons who survived reached the German front trench. Some even penetrated to the support trench, only to be at once surrounded and killed or taken prisoners: only two men returned. The other lines were unable to reach the German trenches, and took what cover they could. The left company of the 1/Rifle Brigade, and the right of the 1/8th Royal Warwickshire, together with the supporting companies, were on the swell of ground formed by Redan Ridge, where, although exposed to enfilade fire from Ridge Redoubt, they received little direct fire. They were now able to penetrate separately into the German position, and enter the "Heidenkopf"

better known as the Quadrilateral Redoubt.¹ Crossing the front line they gained the support trench beyond it on a frontage of six hundred yards. The left of the 1/8th Royal Warwickshire at first made good progress, and also entered the German front trench; but, its left flank exposed by the failure of the troops of the 31st Division, it encountered heavy machine-gun fire, especially from the direction of Serre, in front of which village it was suspected that the Germans had concealed or camouflaged machine guns under the remains of some burnt haystacks. The rear lines were stopped, and only small parties of the front lines reached the German support trench.

At 7.40 A.M., according to the time-table, the three supporting battalions of the 11th Brigade began to move across No Man's Land. On the right, the 1/Hampshire, like the greater part of the 1/East Lancashire in front, was unable to reach the German lines, and, taking cover in the mass of shell holes between the opposing fronts, became mixed with the latter battalion. In the centre, the 1/Somerset Light Infantry was forced to incline to the left, for Redan Ridge, which should have been crossed, was now continuously swept by machine-gun fire; but, pressing on, the survivors reinforced the companies of the Rifle Brigade and Warwickshire in the Quadrilateral. Small parties of the Rifle Brigade and Somerset L.I. then fought their way on for another quarter of a mile to the furthest trench of the German front position, and occupied three hundred yards of it. On the left the 1/6th Royal Warwickshire, moving up in support of its sister battalion, passed

¹ The Quadrilateral, named "Heidenkopf" after a local commander, lay on the Serre—Maily road. It was the remnant of a former German line which once ran through Matthew Copse and Touvent Farm. In previous fighting the Germans had been pushed back closer to Serre, but the Heidenkopf had held firm, and consequently now formed a pronounced salient in No Man's Land. The Germans had realized that in the event of a general offensive the work, owing to its prominent position, could no longer be permanently held, and they had therefore mined it with the idea of blowing it up as soon as the British entered. On the morning of 1st July the Heidenkopf was only defended by one machine gun and by a few engineers who were to fire the mine. At the moment of assault, however, the machine gun jammed, and, by some error, the engineers blew the mine too soon, with the result that they and the machine-gun crew were blown up with the redoubt before the British reached it. The effect of the explosion was greater than calculated, for it blocked up many of the German dug-outs near by, so that the assaulting infantry were able to overrun the whole position of *No. 3 Company*, the right company of the *121st Reserve Regiment*, which held this sector of the defences. Schwaben.

One effect of the mine was to obscure all view of Serre and Puisieux from the front line for quite a long time.

the Quadrilateral, and the right companies of both Warwickshire battalions then went on and gained touch with the advanced position of the Rifle Brigade and Somerset L.I. ; but the companies on the left, suffering heavy losses from the fire of the camouflaged machine-guns near Serre, were unable to make any progress.

From the Serre direction, too, came a bombing counter-attack on the Quadrilateral. It was evident that the 31st Division had not reached the village, and from the battle headquarters of the infantry brigadiers of the 4th Division, some four hundred yards behind the front line, offering a view from Beaumont Hamel to Serre, the falling back of the 29th Division was actually witnessed. But the exact situation of the leading battalions of the 4th Division was not known, as the signal for "stopped by uncut wire", one white flare, and that for "objective gained", three white flares, proved too much alike to be decisive.

In the meantime the 10th Brigade (Br.-General C. A. Wilding), and the 12th Brigade (Br.-General J. D. Crosbie), moving from the reserve trenches across the open in artillery formation, were approaching the British front line, timed to leave it at 9.30 A.M. In view of the manifestly heavy losses of the 11th Brigade, signal messages had been sent at 8.35 A.M. from divisional headquarters directing the 10th and 12th Brigades, notwithstanding the corps timetable, to refrain from crossing the front line to the assault until the situation became clearer. These instructions did not, however, arrive in time for the leading battalions of either brigade, which were a little ahead of the clock, to be stopped ; but those in rear were held back.¹ About 9.30 A.M., therefore, another considerable advance—four and a half battalions in extended lines on a front of fifteen hundred yards—began from the British front line, the 2/Royal Dublin Fusiliers and 2/Seaforth Highlanders of the 10th Brigade on the right, and the 2/Essex and 1/King's Own with half of the 2/Lancashire Fusiliers (12th Brigade) on the left. The leading companies of the Dublin Fusiliers at once came under heavy fire not only from Ridge Redoubt and the adjacent trenches, but from Beaumont Hamel, and only a few men reached the German position. The commanders of the rear companies, seeing the situation and discovering that most of the East Lancashire and Hampshire were immediately ahead of them

¹ The messages did not reach brigade headquarters till about 9 A.M., and then had to be sent by runner, as the battalions were on the move.

in No Man's Land, halted their men in the front trenches. The Seaforth and the Lancashire Fusiliers, by inclining to their left, got some shelter under the north side of Redan Ridge, and were able to avoid the machine-gun fire from Beaumont Hamel. Crossing the German front line south of the Quadrilateral, they pressed on and reinforced the advanced units of the 11th Brigade. As they approached they were received with shouts of welcome which were at first mistaken by them for cries of defiance from the enemy and caused a momentary pause. But some of the 10th Brigade went on and even entered Munich Trench, five hundred yards beyond. The 2/Essex and 1/King's Own, advancing on the original frontage of the left wing of the Rifle Brigade and the 1/8th Royal Warwickshire, suffered heavily from artillery fire in No Man's Land, and two small mines were fired under the King's Own. Nevertheless they crossed the German position, Major J. N. Bromilow (King's Own) being killed, and Lieut.-Colonel Sir George Stirling (Essex) severely wounded soon afterwards, and they sent reinforcements to the furthest trench occupied by the 11th Brigade. Small parties of the same battalions, too, entered Munich Trench and passed beyond it to the edge of Pendant Copse; in fact it was reported to the division that some infantry had been seen entering Serre. Observation of troops, on account of smoke and dust, was extremely difficult, and although two contact patrol aeroplanes displayed amazing daring, flying along the front sometimes only fifty feet above the troops under heavy small-arm fire, no definite information could be obtained. It seemed certain that a considerable portion of the 4th Division had successfully broken through the German front position, and this was confirmed by reports from the 31st Division on the left. It is now known that a large number of men who had thus penetrated the enemy's front were shot down by Germans, who came in behind them from the trenches on either side, which the 29th and 31st Divisions on the right and left had failed to capture.

ASSAULT OF THE 31ST DIVISION TOWARDS SERRE¹

The 31st Division was to form a defensive flank facing north-east, keeping in touch with the left of the 4th Division. This entailed an advance on the right of some three thousand

¹ The original 31st Division was formed in November 1914. In April 1915 it was broken up into independent brigades for draft-finding purposes,

yards. Major-General Wanless O'Gowan detailed for the operation the 93rd Brigade (Br.-General J. D. Ingles), and the 94th Brigade (Br.-General H. C. Rees, commanding temporarily in the absence of Br.-General G. T. C. Carter-Campbell), retaining the 92nd Brigade (Br.-General O. de L. Williams); the last remained in reserve in the support trenches all day.

The heavy artillery bombardment on this sector of the enemy front had not been successful, but the wire had been effectively cut and blown into thick heaps, and the defences much damaged. Still the Germans from their excellent observation posts in the partially destroyed village of Serre overlooked the British position. At 7.20 A.M., as elsewhere on the VIII. Corps front, when the first waves of infantry clambered over the parapet, and began passing through the narrow passages in their own wire to lie out in No Man's Land preparatory to the advance, heavy machine-gun fire was opened on them. The German batteries, heavy artillery from a hollow south-east of Puisieux, and field guns from about Serre, here also laid an accurate barrage on the British front trench, extending to fifty yards in front of and behind it. In spite of the British counter-battery fire and the hurricane fire of the Stokes mortars during the last ten minutes before zero, there was no falling off in the volume of the enemy reply. In fact, at 7.30 A.M., as soon as the leading waves rose, his fire increased in intensity, and Germans were seen to man the front trench, some standing up clear of it, whilst others, carrying machine guns, ran out into the shell craters in No Man's Land in order to fire more effectively. Here also the barrage had passed on, and there were no guns available to deal with the enemy.

Only a few isolated parties of the 31st Division were able to reach the German front trench, where they were in the end either killed or taken prisoner. The extended lines started in excellent order, but gradually melted away. There was no wavering or attempting to come back, the men fell in their ranks, mostly before the first hundred yards of No Man's Land had been crossed. The magnificent

and a new 31st Division formed from the original 38th. Its infantry came from Hull (4 battalions), Leeds, Bradford (2), Accrington, Sheffield, and Barnsley (2), with one Durham battalion (the first raised at the expense of a county). The pioneer battalion was the 12/K.O.Y.L.I. (miners).

The division was concentrated at Ripon and its first commander was Lieut.-General E. A. Fanshawe. It was sent from England to Egypt in December 1915, but was almost at once ordered to France, where it landed in March 1916. It had not yet been in action.

gallantry, discipline and determination displayed by all ranks of this North Country division were of no avail against the concentrated fire-effect of the enemy's unshaken infantry and artillery, whose barrage has been described as so consistent and severe that the cones of the explosions gave the impression of a thick belt of poplar trees.

On the front of the 93rd Brigade, the 15/West Yorkshire, leading, was almost annihilated by frontal fire and deadly enfilade fire from the sides of the re-entrant it was attacking. All the officers (including Major R. B. Neill, commanding, who was severely wounded), became casualties in the first few minutes, and the survivors of the lines of companies lay down in No Man's Land. The 16/West Yorkshire, with one company of the 18/Durham L.I., detailed to take Pendant Copse, on its right, advanced from the support line across the open and suffered very heavily even before reaching the front trenches. Major C. S. Guyon was killed, and only a few men crossed over into No Man's Land; but some of the Durhams actually entered Pendant Copse. The 18/West Yorkshire, in support, was unable to make any headway. The 18/Durham L.I. (less one company), in reserve, was kept back.

The 94th Brigade,¹ assaulting on a two-battalion frontage, with the 11/East Lancashire (whose Lieut.-Colonel, A. W. Rickman, was killed) and the 12/York & Lancaster, encountered from the outset an almost equally heavy fire. Much of this came from the left flank, where the German position to the north, which was not being attacked, had not been neutralized, as was expected, by a smoke-screen. Nevertheless, the right company of the East Lancashire broke into the German front line. Reports from various observation posts stated, about 8.30 A.M., that a party of this company² had been seen first lying down in line and later advancing into Serre village, and at 9.15 A.M. an artillery observing officer, specially detailed to watch the progress of the infantry, reported that he distinctly saw some eighty to one hundred men rise from a trench near Serre and disappear into the village. About this time the Germans were reported to be shelling the village,³ but it is clear that, whatever temporary success it may have gained,

¹ A company of the 12/K.O.Y.L.I. (Pioneers) was attached to each attacking brigade, and the company with the 94th followed its first wave.

² Distinguishing marks were worn by each unit taking part in the attack, such as coloured badges or ribbons, sacking covers to the steel helmet, etc., so that units could be identified.

³ See below; probably the fire of the 170th Brigade R.F.A.

the whole of this party was either killed or taken prisoner within a few hours. A number of men of the right company of the 12/York & Lancaster also succeeded in entering the German front trench, and a few eventually entered Serre.¹ The bulk of the battalion was held up in No Man's Land, where it occupied the Russian sap which had been made and opened up to afford flank protection; but many men reached the German wire entanglement only to find that, in spite of gaps, it still formed a sufficient obstacle to prevent them from reaching the German trench under fire.

Efforts made to reinforce the party of the East Lancashire reported to be in Serre village were of no avail; the gap in the German front trench where the East Lancashire had broken through had been filled by Germans, who came out of the dug-outs to mount machine guns after our men had passed on. Here, as on the front of the 93rd Brigade, the supporting battalions suffered heavily from the German artillery barrage, which was at once put down when they made any movement and was obviously directed by observation. The leading companies of the 13th and 14th York & Lancaster were badly mauled by it, the supporting companies stopped short; orders were therefore given to suspend the attack.

About 9 A.M. the Germans opposite the 93rd Brigade appeared to be concentrating for a counter-attack, and, regardless of divisional orders, at the instance of Br.-General Ingles, the 170th Brigade R.F.A. brought back its fire to disperse them. A little later the rest of the 12/K.O.Y.L.I. (Pioneers) was moved up to support the 93rd Brigade. The situation in the trenches of the 31st Division, after the initial attack had failed, with a heavy 5.9-inch barrage falling on them and almost continuous machine-gun fire sweeping them, certainly invited counter-attack. Fortunately the enemy in front remained quiet for the rest of the morning, and by noon fire had almost come to an end. At intervals Germans showed themselves above the parapet of their front trench to snipe the men lying out in front of the wire entanglements, but they were checked by machine-gun fire from the British trenches. Similarly, any movement in or over these trenches was spotted by the enemy and artillery fire fell on them.

¹ Bodies of men of the 12/York & Lancaster were found in the north-west corner of the village when it was entered during the unsuccessful attack of the 3rd Division, with the 31st Division on its left, on the 13th November 1916.

ENDEAVOURS TO RENEW THE ASSAULT OF THE
VIII. CORPS

The first reports received at corps headquarters at Marieux (10 miles west of Serre)¹ were most encouraging and rose-coloured. It seemed certain, as was indeed the case, that the 4th Division had broken through; although it was not realized for some time that the assault as a whole had gone amiss. The first unfavourable sign was the total absence of prisoners. Then news, scanty and uncertain, began to trickle in. Throughout the day the information received from the front, particularly as regards the situation at Serre, was poor in spite of the measures ordered to ensure a good supply. So many senior regimental officers were killed or wounded that the usual channels of communication failed. It was most difficult to decide what course of action to take, with the result that a great deal of the fire of the heavy artillery was wasted on back areas.

At 10.25 A.M., however, General Hunter-Weston, the corps commander, though he still hoped to exploit the success which had been achieved, came to the conclusion that any thought of attacking the German 2nd Position, Puisieux Trench, must for the moment be abandoned. He ordered that all efforts should be directed to gaining and consolidating the German intermediate position, Munich Trench. To support the centre and left of the 4th Division, reported in that locality, he directed that the remaining two battalions (4/Worcestershire and 2/Hampshire) of the 88th Brigade, in 29th Division reserve, and the right of the 4th Division should carry out a combined converging attack through Beaumont Hamel village and across the head of the valley. By this time the artillery brigade commanders had brought the fire of most of their batteries back without orders, having seen, from their observation posts, when their barrage was a thousand yards ahead, that the enemy in places was obviously in his front trenches. The divisional artillery was therefore ordered to begin a fresh bombardment of the German line in the sector selected, and lift at 12.30 P.M.; the heavy artillery to turn its fire on to the front line at 12 noon and lift at 12.25 P.M. At 12.30 P.M. the infantry was to attack: the two battalions of the 88th Brigade against Station Road and Beaumont Hamel from the south-west, and the 10th Brigade (4th

¹ There was a corps observation post, with a General Staff officer in it, in Jacob's Ladder, just south of Hamel.

Division) eastwards against a frontage of one thousand yards immediately north of the village. From 11 A.M. onwards, however, owing to the enemy barrages, signal communication forward to the front trenches—in spite of all cables being buried 6 feet deep for 5,500 yards behind the front line—became as uncertain as communication back from the fighting front; and there were heavy casualties among runners who attempted to take messages across to the units in the German position.

The difficulties which the runners encountered also prevented supplies of hand-grenades and ammunition being carried up. On the front of the 29th Division the garrison in the Hawthorn Redoubt crater, short of ammunition and assailed by trench-mortar bombs, hand-grenades and machine-gun fire from both sides, was driven out before noon, and an effort made shortly afterwards by the 1/Lancashire Fusiliers, reinforced by the "10 per cent reserve" from the front line, to advance from the sunken lane broke down under machine-gun fire. On the front of the 4th Division by this time the troops which had broken through and reached Munich Trench and even a trench beyond it, were much reduced in numbers. Running short of hand-grenades, and driven to rely on rifles only, as could be seen from artillery observation posts, they were gradually forced to retire, the enemy, soon after 11 A.M., working forward and round the flanks by the use of shell craters with which the whole of this ground was now scarred. At the same time strong parties of enemy bombers attacked down the trenches from the north, and from near Serre, against the flank and rear of the British advanced troops. A little before 11 A.M. the remaining two companies of the 2/Lancashire Fusiliers and a company of the 2/Duke of Wellington's (12th Brigade) had been able to reinforce the garrison in the Quadrilateral and the adjacent front trenches, but otherwise little assistance could be given. Thus by noon the remnants of the advanced troops, short of bombs and ammunition, were falling back to this redoubt.¹ The 4th Division was now considerably disorganized, and its trenches crowded with wounded, the 11th Brigade, and the two battalions of the 143rd with it, alone having lost 90 officers and 1,948 other

¹ It was at this period of the fighting that Drummer W. Ritchie, 2/Seaforth Highlanders, gained the V.C. He repeatedly stood up on the German parapet and sounded the "charge" in order to encourage successive parties of men without leaders, who were falling back to the British trenches, to go forward again.

ranks out of approximately 4,500 of all ranks who had gone into action.¹

In these circumstances, although Lieut.-General Hunter-Weston contemplated using his reserve division, the 48th, to back up the 88th and 10th Brigades, and moved it up to Mailly Maillet, two miles behind the battlefront, the renewed attack ordered had much less chance of success than the original assault. Nor could it be organized in time. Owing to the greatly congested state of the trenches, the order for the attack did not reach the two battalions of the 88th Brigade until 1.30 P.M. The hour of assault was postponed, and at 1.45 P.M. the orders for their taking part in the operation were cancelled. Instructions were issued for the reorganization of units of the 29th Division and the clearing up of the front trenches.

The attack of the 10th Brigade in like manner failed to materialize. The Seaforth Highlanders, already in the German trenches, and such men of the leading companies of the Dublin Fusiliers who were with them, were to take part; but the message to the Highlanders never reached them, and the rest of the Dublin Fusiliers had lost so heavily that they could not be reorganized in time for attack. At 1 P.M. the 1/Royal Warwickshire, a supporting battalion of the 10th Brigade, was ordered to take the place of the Dublin Fusiliers with a company of the 1/Royal Irish Fusiliers in support; but every attempt to cross the British front trenches into No Man's Land was met by intense enemy machine-gun fire and further attempts were abandoned. After dark, however, the company of the Royal Irish Fusiliers crossed over to the Quadrilateral. At 2.55 P.M. Major-General Lambton reported to corps headquarters that his division had suffered heavy casualties, and that no further attack was possible that day.² He ordered the scattered units of the 11th Brigade to be collected and re-formed as a divisional reserve, and the 10th and 12th

¹ Including the Brigadier, Br.-General C. B. Prowse (died of wounds), who, as no information came back, left his headquarters to find out what was happening, and was hit; and of the six battalion commanders who fought under him: Lieut.-Colonels Hon. L. C. W. Palk (Hampshire), J. A. Thicknesse (Somerset L.I.), D. Wood (Rifle Brigade) and E. A. Innes (1/8th Royal Warwickshire), were killed; and J. E. Green (East Lancashire) and H. Franklin (1/6th R. Warwickshire), wounded.

		Killed.	Wounded.	Missing.	Prisoner.	Total.
10th Bde.	{ Officers . . .	28	25	2	—	55
	{ Other ranks . . .	222	643	25	18	908
11th Bde.	{ Officers . . .	73	60	12	—	145
	{ Other ranks . . .	1,118	1,753	112	56	3,034
(6 battalions)						

[Continued on next page.]

Brigades to take over the defence of the British front line, the 12th Brigade being also entrusted with the defence of the German trenches about the Quadrilateral still in British hands. At the same time, the field batteries occupying offensive positions near the front line were ordered to withdraw after dark to previously prepared positions further back.

On the left, in view of the continued rumours that Serre village was in the hands of British troops, the 31st Division, at 12.15 P.M., had ordered the 94th Brigade to make another effort to get forward and confirm this success. Br.-General Rees replied that it would be better to postpone any further action until more definite news was received; but this, owing to all communication with parties in the German position being cut off, never came. At 4.7 P.M. an aeroplane observer reported that Serre village and adjacent portions of Munich Trench and Pendant Trench (thought to be held by the 4th Division) were unoccupied, and that there were only small British parties in the trenches between the German front line and Serre. The 94th Brigade was nevertheless again ordered to prepare an attack with any available men against the German front on the left opposite John Cope, with a view to establishing communication with the British parties supposed to be in the neighbourhood of Serre. After subsequent consultation, however, with the commanders of the 93rd and 94th Brigades, Major-General Wanless O'Gowan came to the conclusion that these two brigades, in view of their heavy losses¹—to which, late in the day, was added Lieut.-Colonel M. N. Kennard, a

		Killed.	Wounded.	Missing.	Prisoner.	Total.
12th Bde.	{ Officers . . .	34	49	1	1	85
	{ Other ranks . .	405	1,008	53	13	1,479
Divisional Troops	{ Officers . . .	1	—	—	—	1
	{ Other ranks . .	7	25	13	—	45
		1,883	3,563	218	88	5,752

		Killed.	Wounded.	Missing.	Prisoner.	Total.
93rd Bde.	{ Officers . . .	37	53	4	—	94
	{ Other ranks . .	561	1,144	24	1	1,730
94th Bde.	{ Officers . . .	29	24	2	—	55
	{ Other ranks . .	676	824	37	7	1,544
12/K.O.Y.L.I. (Pioneers)	{ Officers . . .	1	3	—	—	4
	{ Other ranks . .	45	109	5	—	159
Other Divisional Troops	{ Officers . . .	—	3	1	—	4
	{ Other ranks . .	—	9	1	—	10
		1,349	2,169	74	8	3,600

cavalry officer commanding the 18/West Yorkshire—and the mixture of their units in the trenches, were not fit to undertake any further offensive operations that day. He reported his opinion to VIII. Corps headquarters at 6 P.M., and General Hunter-Weston thereupon directed the front trenches to be cleared up and the units reorganized. At the same time, he ordered two battalions of the 92nd Brigade, in divisional reserve, to be moved forward to deliver an attack, under cover of darkness, at 2 A.M., for the purpose of clearing up the situation and gaining touch with any British troops still within the German defences. Later however, at 9.50 P.M., after further consideration, this attack also was cancelled. The wisdom of this decision cannot be questioned; for it would have been nearly impossible to bring up organized troops until order had been restored in the communication trenches and front position. Success, too, even if gained, would probably have been in vain; for during the night a number of wounded and unwounded men returned from No Man's Land and from the German lines, and, from their statements, it was gathered that, although so far all counter-attacks had been repulsed, there were no longer any men of the 31st Division left in the German defences capable of holding out against a renewed attack.

Thus at the end of the day the VIII. Corps had nothing to show for its very heavy losses except a footing in and near the Quadrilateral, and this had to be abandoned next morning.¹ There had been no surprise, except what the enemy achieved in his display of guns and machine guns; the bombardment had made little impression on the German defences, having been too much distributed in depth; and counter-battery work had failed. The enemy's machine guns, when the barrage moved on prematurely, emerged to mow down the attacking infantry, their fire causing such heavy losses in officers that the general movement was disorganized; the second line of battalions was

¹ The sector of the German front line about the Quadrilateral was held tenaciously throughout the afternoon by men of the Lancashire Fusiliers and Seaforth Highlanders, and parties of the 11th Brigade, under Lieut.-Colonel J. O. Hopkinson of the Seaforth; but, although they were reinforced after dusk by a company of the 1/Royal Irish Fusiliers (10th Brigade), they were gradually driven back, and by midnight only the company of the Irish Fusiliers remained in the German front line, the others having been ordered to evacuate it, to avoid a disaster. This company, which did not receive the order, withdrew successfully at 11.30 A.M. on the following morning, bringing back its wounded and three German prisoners.

engaged too soon, and it was impossible to stop its advance ; and the various parties of British, principally of the 4th Division, who managed to cross the enemy's front defences were in many cases shot down from behind by Germans who appeared from dug-outs which had not been " mopped up ". Finally, owing to the enemy's barrage, it had been impossible to exploit the breach made in his defences by the 4th Division, and the failure of the division on either side made it impossible, as in the case of the 36th Division, to hold on to the ground gained.

Under cover of darkness the battle front of the VIII. Corps was cleared and the defence reorganized ; but the front line had been so obliterated that it could only be held by posts, with a continuous defence in the support, or the third line. On the right, facing Y Ravine and the head of the Beaumont Hamel valley, the 29th Division arranged to hold the front with the 88th Brigade and the survivors of the 86th. The 87th Brigade moved back into divisional reserve, but only until the next night, when it went into the line again to take over the part of the 36th Division front north of the Ancre. In the centre, across the swell of ground between the Beaumont Hamel and Beaucourt valleys, the 4th Division held the front, including the Quadrilateral, with the 10th and 12th Brigades, whilst the 11th Brigade was withdrawn into divisional reserve. On the left, before Serre, the remnants of the 93rd and 94th Brigades, 1,436 all ranks, were reorganized, the 18/Durham L.I. and 13/ and 14/York & Lancaster holding the front defences. The 92nd Brigade was marched back to Bus les Artois to join the corps reserve.

The 48th Division (less the 143rd Brigade, two battalions of which had held defensively the northern sector of the corps front north of John Copse throughout the day, and two had attacked with the 4th Division) remained in the Mailly Maillet area, to which it had moved, in a position of readiness throughout the day and the following night.

The clearing of the battlefield of the VIII. Corps, apart from the great number of casualties (over fourteen thousand, heavier than in any other corps) presented many difficulties. The trenches were crowded with dead and wounded, and whilst lying in them and in No Man's Land many of the wounded were further injured or killed by the German barrages; all day and well into the night there was a stream of walking wounded to the collecting station at Acheux, which was difficult to control. During the pause after midday,

until 4 P.M. when British guns reopened fire, the Germans allowed stretcher-bearers to work in No Man's Land, but from that hour until about 10.30 P.M. machine-gun and field-gun fire prevented any movement. All through the night artillery, engineers, the field ambulance bearers (although it was not their proper work) and battalion parties assisted to bring in the wounded. As it was impossible to carry stretchers up the communication trenches owing to their being very narrow and having many traverses, the trenches were bridged and they were borne over the top. But even the advanced dressing stations were shelled, particularly a bearer post near Auchonvillers, known as the "White City", where in a hollow road a number of dug-outs had been cut in the chalk. Here Lieut.-Colonel C. Howkins, R.A.M.C. (T.F.), was severely wounded. On the morning of the 2nd there was an informal truce, and the enemy offered no objection to the collection of wounded, provided parties did not come too close to his wire. The work was resumed at night, the searchers being sometimes guided by the cries of the wounded, but some of these kept still as death for fear of being picked up by the Germans. The dead were also brought in as far as possible; but not till forty-eight hours after the evening of the 1st July could it be said that most of the wounded had been removed, and another twelve hours elapsed before No Man's Land could be reported cleared.

NOTE

THE GERMANS OPPOSITE THE VIII. CORPS¹

The German account of the fighting on the VIII. Corps front agrees generally with the British. Considerable stress, however, is laid on the damage done by the bombardment: "Entanglement " wire torn to pieces, trenches filled up, and most of the shelters " (*Unterstände*, not the mined dug-outs, *Stollen*) crushed in. Crater " touched crater. Only a few miserable remnants of walls of Beaumont Hamel remained." As soon as the British left their parapet, the Germans manned what remained of the trenches and opened fire. They had been sheltering in " great, deep-mined dug-outs " like tunnels, painfully constructed during the winter of 1914- " 15. Whole companies found shelter in them." In the sector of the *119th Reserve Regiment*, besides the dug-outs in Beaumont Hamel, there were others in Y Ravine (called by the enemy "Leiling Schlucht"), and south of the village the great "Leiling" and "Bismarck" mined dug-outs. In the sector of the *121st Reserve Regiment*, opposite the 4th Division, the British arrived

¹ Somme-Nord, i., and Schwaben.

so quickly that there was not time for all the men to climb out of the deep dug-outs. At Hawthorn Redoubt, the mine blew up "more than 3 sections", and the shelters of 1½ platoons were crushed in, so that barely two sections escaped. The rest of the company in question was in a large mined dug-out, but the four entrances were covered up by the explosion, and the inmates imprisoned until the British retired. Nothing is said about the British breaking through anywhere; but it is admitted that "the situation at the mine crater became extremely critical. If the enemy broke in there, the whole position of the *119th Reserve Regiment* was gone." A counter-attack by two platoons, which worked from crater to crater, combined with grenade fighting, finally drove the British back. It is claimed that "in an hour, with the exception of the ground gained in Heidenkopf Redoubt (the Quadrilateral), the position was clear of the enemy . . . and in the course of the night the redoubt was cleared after bitter close fighting". The *169th Regiment*, opposite the 31st Division, also made a counter-attack with two companies, and expelled the attackers who had entered the front system, taking 34 prisoners—the only ones mentioned.

The losses on the 1st July of the three regiments engaged are given as:—

		Killed.	Wounded.	Missing.	Total.
<i>119th Res. Regt.</i>	{ Officers . . .	8	3	—	} 292
	{ Other ranks . . .	93	188	—	
<i>121st Res. Regt.</i>	{ Officers . . .	7	9	—	} 560
	{ Other ranks . . .	192	282	70	
<i>169th Regt.</i>	{ Officers . . .	5	4	—	} 362
	{ Other ranks . . .	136	215	2	

CHAPTER XVIII

THE SOMME

1ST JULY 1916

VII. CORPS¹

(Maps 1, 11 ; Sketches A, 24)

PART of Sir Douglas Haig's plan was to lengthen the front of attack by a subsidiary offensive against Gommecourt. For this he had renounced the idea of recapturing the portion of Vimy ridge lost on the 21st May, having decided that, with the troops available, he had not sufficient forces to undertake both enterprises.² The operation against Gommecourt was allotted to the VII. Corps of the Third Army (General Sir Edmund Allenby). Between it and the left of the main attack against Beaumont Hamel and Serre, carried out by the VIII. Corps, there would be left a two-mile gap, from which no attack was to be made owing to lack of troops. This, as we have seen, was held by two battalions provided by the VIII. Corps.

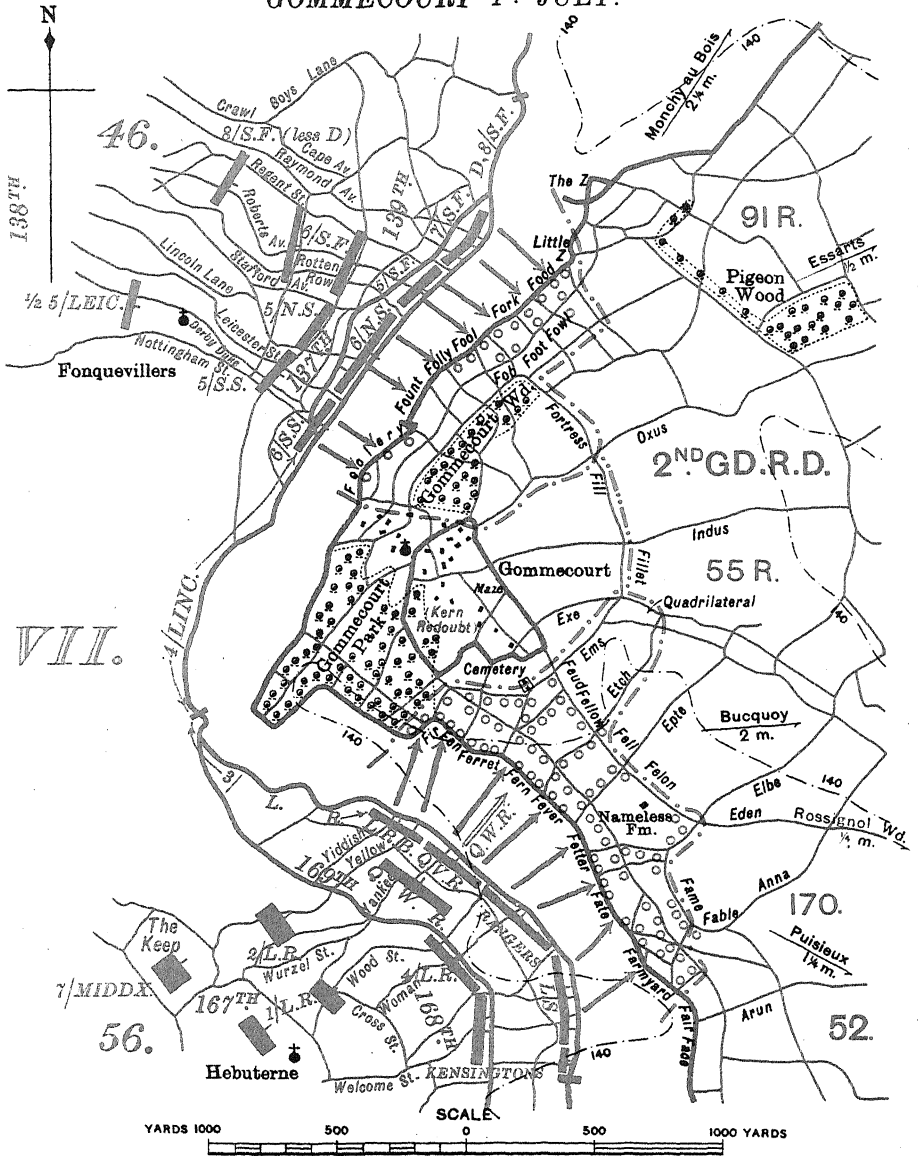
It was not until the 28th April that General Snow had received orders that an offensive against Gommecourt would be required at the end of May, a date subsequently postponed to the end of June. During the first week in May the 56th and 46th Divisions arrived in the VII. Corps area to carry out the operation. By the morning of the 10th

¹ VII. Corps (Lieut.-General Sir T. D'O. Snow) :
56th Division (Major-General C. P. A. Hull, died 24th July 1920), 167th, 168th and 169th Brigades ;
46th Division (Major-General Hon. E. J. Montagu-Stuart-Wortley), 137th, 138th and 139th Brigades ;
37th Division (Major-General Lord Edward Gleichen), 110th, 111th and 112th Brigades.
G.O.C. R.A., Br.-General C. M. Ross-Johnson ;
" Heavy Artillery, Br.-General C. R. Buckle ;
Chief Engineer, Br.-General J. A. Tanner (killed 23rd July 1917).

² See page 223.

they had taken over the trenches allotted to them, part of a very wide front hitherto held by the 37th Division, which then closed on its left. It was, however, asking very much that two divisions new to the ground should attack at two-months' notice defences of the strength of Gommecourt, unless a complete surprise without much previous preparation were intended. The enemy salient was in reality a small modern fortress. It required siege operations, or, at any rate as events proved, bombardment by super-heavy guns to destroy its dug-outs, as well as a great amount of trenchwork to get within assaulting distance, besides an ample supply of labour for carrying up stores and munitions. For mining there was obviously no time. It must, however, be distinctly borne in mind that in Sir Douglas Haig's plan nothing depended on the capture of Gommecourt. The object of the attack was "to assist in the operations of the Fourth Army by diverting against itself the fire of artillery and infantry which might otherwise be directed against the left flank of the main attack near Serre". There was no intention of exploiting the capture of Gommecourt by sending a force southwards from the village to roll up the German line or clear the ridge leading south-east behind it. No troops were provided or available for such a purpose. A success at Gommecourt would merely shorten the British line by cutting off an enemy salient. It seems improbable that G.H.Q. realized the strength—and that strength enormously increased by flanking artillery defence—of the Gommecourt salient. If an attack is to be made merely in order to hold enemy troops and prevent their employment elsewhere, a weak or vulnerable part of the enemy's front should be chosen, not the strongest. Further, Gommecourt was particularly easy of defence, and from the shape of the ground it was a most difficult place from which to disengage troops in the event of partial failure or incomplete success. Neither General Snow of the VII. Corps nor his Army commander were men of half measures. If the enemy's attention was to be attracted to Gommecourt in order to ensure the success of the Fourth Army, they were ready to take all risks, but they did go to the length of suggesting that a threat from Arras would be more effective and less costly. This, however, would not have prevented the enemy from using the guns which he had in the vicinity of Gommecourt against the northern flank of the VIII. Corps.

THE SOMME, 1916.
VII CORPS ATTACK ON
GOMMECOURT 1ST JULY.



Positions before the assault.....
 The Attacks at zero (7.30 a.m.).....
 Advance of reinforcing battalion..... Q.W.R.

First Objective.....
 Second Objective.....
 Temporary Lodgments.....

British names for German trenches (in black)

Fen, Ferret, etc.

Sir Douglas Haig having decided in favour of the attack on Gommecourt, the divisions of the VII. Corps were at once set to work on preparations and training on the same lines as those of the Fourth Army. Ill-luck seemed to attend on the preparations, and it seemed an evil presage to the troops that an enemy aeroplane at once flew over the practice ground marked out to represent unmistakably the Gommecourt defences. Lack of sufficient labour units necessitated the employment of all the attacking battalions of the 46th Division and many of those of the 56th, whose sector was not so water-soaked, in the most exacting fatigues up to the very eve of the assault. Probably barely a man of the former division enjoyed a full night's sleep for a week previous to the attack; and there was scarcely a day or night when the rain did not fall consistently and heavily, and working parties were not soaked to the skin.

The ground had an important bearing on events. Map 1.
Sketch A. Gommecourt village stands at the junction of four low ridges with flat tops, which make the outline of a St. Andrew's Cross, its four arms stretching towards Essarts, Rossignol Wood, the western edge of Hébuterne, and the eastern edge of Fonquevillers. The German line on the north-western face of the salient ran slightly below the crest of the western side of the Essarts ridge, with a shallow valley in front of it, on the other side of which was the British line. Behind this line the ground was nearly level, so that the Germans had complete observation for more than two thousand yards over the VII. Corps area (except over a small portion hidden by the ruins of Fonquevillers and the trees near that village) and the 46th Division had in consequence to dig numerous long and deep communication trenches. On the south-western face of the salient, almost as far south as Nameless Farm, the British and German trenches were nearly on the same level, with a dip, in which there was a hedge, between them; beyond this point both were on the western side of the wide valley between Rossignol Wood and Hébuterne, the British thus being on a forward and the Germans on a reverse slope. The enemy artillery observation posts were on the eastern side of the valley. The approaches on the British side in the 56th Division area were completely hidden from ground view right up to Hébuterne, but were under observation of the German balloons. The chief British observation posts were on the eastern edge of this

village and the ridge running south of it. The slope of the valley provided natural drainage, which the very gentle gradients in the 46th Division sector did not.

Map 11.
Sketch
24.

The defences of Gommecourt were, in consequence of their salient position and a previous unsuccessful French attack on them, stronger probably than any others on the German front, and were specially well provided with deep dug-outs,¹ there being a number of them in the park, where a dense mass of trees still furnished complete cover from view. The eastern portion of Gommecourt village was organized as a large closed work, known as "The Maze", and called by the Germans "Kern Redoubt". As a measure of security the enemy had covered the salient by three retrenchments, known as the 1st and 2nd Switch Lines and the Intermediate Line. These were crossed by numerous communication trenches, and the two systems taken in combination provided a series of defence lines available to block and encircle the British in whatever direction they might penetrate. The garrison of the salient was on the 1st July three regiments (nine battalions), with one in reserve.²

As finally settled, the plan for the capture of the Gommecourt salient consisted of two convergent attacks against its haunches (first objective). These secured, the attackers were to proceed and join hands in the German 1st Switch Line behind the village, and thus isolate it. The programme gave the infantry thirty minutes from zero to reach this second objective. On the 2,000-yards of front facing the village and park, between the two attacks, there were to be no offensive operations; but wire was to be cut and smoke released as elsewhere. The clearing of the park, the village and the Maze was not to be attempted before zero plus three hours, until which time the fire of the super-heavy and heavy howitzers was to be kept on these targets. There was not sufficient time to undertake mining operations, as No Man's Land was wide, and silent mining under the German trenches was impossible except at fifty or sixty feet, a depth which would much delay the removal of

¹ Usually forty feet below ground, lighted with electricity, and provided with kitchens and other amenities. They had several entrances, and were interconnected, passages leading back from the front to the rear lines.

² 170th of the 52nd Division, 55th Reserve and 91st Reserve of the 2nd Guard Reserve Division. To the north was the 111th Division. The 52nd and 111th Divisions contained three infantry regiments each (two in the line and one in reserve), the 2nd Guard Reserve Division four, the 77th Reserve being north of Gommecourt and the 15th Reserve in reserve.

spoil.¹ This was a most unfortunate circumstance, for the explosion of a large charge against the warren of deep dug-outs in Gommecourt Park, or under the Maze, might have proved a determining factor in the action.

The 56th Division was to make the right attack, the 46th the left, while each division furnished a battalion—1/3rd London (two companies) and 1/4th Lincolnshire were detailed—to fill the intervening gap.

One of the difficulties of attack was the width of No Man's Land, which varied from eight hundred yards in front of the 56th Division to 400-500 in front of the 46th Division. In the case of the former a new line, 350 yards to the front, as well as one communication trench, was, by a well-planned operation, dug by the 167th Brigade, with the 416th (Edinburgh) Field Company R.E. and a company of the 1/5th Cheshire (Pioneers) attached, along the whole divisional front of attack on the night of the 26th/27th May. Warned that such an operation so close to the enemy involved serious risk, Major-General Hull decided that it must be taken. Nearly three thousand men were engaged within four or five hundred yards of the enemy, after the operation had been carefully practised under Br.-General F. H. Burnell-Nugent for four days and nights. Two nights before it took place small parties of the London Rifle Brigade were sent to remain out night and day, to keep off patrols. On the next night the line was pegged out and stringed. To support the operation if things went wrong the whole corps artillery stood ready; and to cover the noise and distract the enemy's attention carts full of empty biscuit tins were driven up and down in Hébuterne. The same covering party, two companies of the London Rifle Brigade, was used each night until the work was finished; it was in case of need to use the bayonet only. The completion of 2,900 yards of trench and 1,500 yards of communication trench was effected at a cost of 8 men killed and 55 wounded. On the first night (26th/27th) a shallow trench was dug throughout, with parts deepened for detached posts; and Major-General Hull himself went round it on the morning of the 27th. To prevent the enemy destroying the new trench, which the chalk soil of the area made vividly conspicuous, the R.F.C. kept a plane in the air all day to deal with any German aviators who attempted to carry out photography or registration, and arrange-

¹ A deep mine at Messines, with a 700-yards gallery, took the best part of a year.

ments were made for counter-battery fire on any enemy guns which endeavoured to register. No interference, however, took place.¹ The Germans made no attempt to destroy the new work; although by bursts of fire on subsequent nights they sought to disturb the working parties which completed the trench and added support and other communication trenches. This advance still left No Man's Land 400-500 yards wide. It was intended to reduce it by a further push forward, but this proved impossible owing to the bad weather, which interfered with work and made it necessary for all available labour to be diverted to the upkeep of existing fire and communication trenches.

The situation of the 46th Division was somewhat different. No Man's Land being only 400-500 yards wide, the assaulting troops might be able under the final barrage to creep to within assaulting distance. But before the trenches lay a tangle of thick barbed wire, twenty yards wide, left by the French. To cut gaps through this was no easy task, and the brigade commanders were in favour of making a trench about a hundred yards in front of it. This, however, was not begun until the first week in June, after Russian saps had been run out to its site. The ground in the shallow depression between the opposing front trenches proved however soft and soggy, and little work was done on the first night owing to the mud encountered. On the following nights artillery fire prevented the trench from being dug to its full depth, so that it did not provide more than 3 to 4 feet of cover. Some communication trenches run out to it later were similarly left at $2\frac{1}{2}$ to 3 feet deep. Then in the bad weather before the battle the trenches fell in and became waist-deep in mud and water, so that on the day of assault some portions of the advanced trench—also of the assembly trenches behind the front line and parts of the communication trenches near them—could not be used by fully equipped troops. Regimental runners stripped themselves to shorts and boots before trying to pass along them. Yet to achieve even these inadequate results the men had been overworked by heavy digging and carrying, and were “dog-tired”. As it was obviously impossible to dig another series of trenches nearer to

¹ The idea at the time was that the German dawn reports must have already gone in, stating “situation unchanged”, and, when it got lighter, and the new lines of chalk parapet were seen, no one dared inform higher authority what had happened.

the enemy, it was finally decided that before zero the troops should crawl out under the barrage to about two hundred and fifty yards from the German trenches. During the night of the 30th June/1st July, the 1/4th Lincolnshire (46th Division), holding the portion of the line facing Gommecourt Park between the attacking fronts, dug a shallow trench in front of its position. This so far proved of use that it attracted shells which might otherwise have been directed on its front line or the attacking troops.

In the weeks available, the plan of attack was thought over and elaborated with the greatest care, and at one of the many rehearsals on the dummy trenches smoke was used to accustom the troops to move through it. The employment of gas was considered, but, in view of the difficulty of combining the digging of new trenches with the construction of cylinder emplacements and the labour involved in carrying up the cylinders, the idea had to be abandoned.

The 37th Division, on the left of the corps line, holding $4\frac{1}{2}$ miles as far as Ransart ($5\frac{1}{4}$ miles N.N.E. of Gommecourt), was not to attack, but to take such measures as would induce the enemy to believe that it would do so. Early in June it made an advanced trench, as the 56th and 46th had already done; for No Man's Land on its right was a thousand yards wide, narrowing to five hundred, and obviously too wide for assault. Some smoke and gas were to be released from time to time on its front, and wire-cutting was to be carried out. During the five days previous to Z Day, it was to concentrate trench-mortar and machine-gun fire south and north of the Monchy salient, increasing in intensity as Z Day approached. Its artillery in particular was to shell vulnerable points and the roads and approaches to Essarts, and part of it was to be prepared to support the 46th Division. Finally, five minutes before zero hour, smoke was to be released. All these measures were duly carried out, but the labour involved, particularly the transport of the gas cylinders, was so heavy that even batmen, grooms and other specially employed men had to be impressed to help.

In consequence of the nature of the operation, the VII. Corps, with Sir Douglas Haig's approval, made no attempt to hide or disguise the preparations for the attack—in fact, carried them out ostentatiously with the deliberate intention of attracting attention. The result was immediate and satisfactory; for in mid-June, after the

new advanced trenches had been dug, the *2nd Guard Reserve Division*, which was in reserve, was interpolated in the line between the *52nd* and *111th Divisions* to hold the Gommecourt salient. Thus, without any attack, the VII. Corps had diverted a division and the six heavy batteries attached to it, which might have been employed elsewhere to stem the main attack.¹ When, four days before the assault, Sir Douglas Haig asked General Snow how he was getting on, the commander of the VII. Corps was able to reply, "They know we are coming all right".

During the bombardment the whole of the artillery in the corps, except some 18-pdr. batteries detailed for wire-cutting, had worked under the command of the G.O.C. corps artillery; but at zero hour on the day of attack, the divisional artillery, except three batteries of 4.5-inch howitzers retained for counter-battery work, reverted to divisional control.² The howitzers and guns available proved altogether inadequate to deal with the German artillery, all of whose heavy batteries were beyond the range of the British 60-pdrs. and 6-inch howitzers, and still more of the old 4.7-inch guns, and therefore inaccessible to counter-battery work, except by the few super-heavy weapons. The enemy had concentrated against the front of attack the guns of the *2nd Guard Reserve Division*, the *52nd Division*, and the greater part of those of the *111th* (to the north of Gommecourt), including a large number of attached heavy guns. Both the *46th* and *56th Divisions*, however, suffered specially from enfilade fire from artillery not on the corps front: the latter from batteries to the south-east near Puisieux (3 miles south-east of Gommecourt) on the VIII. Corps front; and the former even more from the very numerous guns on the *37th Division* front, in and around Adinfer Wood, some in concrete casements, as was discovered in 1917, which fired a continuous rain of 5.9-inch howitzer shells. The German barrage put down on No Man's Land was more severe than in any other

¹ The batteries are enumerated in *Somme-Nord*, i. p. 250.

² The corps heavy artillery consisted of Nos. 19, 35, 39 and 48 Heavy Artillery Groups, the first two firing on trenches and villages, the latter two being employed as counter-batteries:

Howitzers: two 15-inch; two 12-inch; twenty-four 9.2-inch; twenty-eight 6-inch;

Guns: two 9.2-inch; two 6-inch, twelve 60-pdrs.; twelve 4.7-inch.

Taking the front as 4,000 yards, this gives a heavy per 47 yards, with a field gun per 27 yards.

sector.¹ The manner in which the enemy managed to concentrate gun fire from a wide front on to the place where it could be most usefully employed, deeply impressed British staff officers; but even had this not been accomplished, the attack of the VII. Corps, taking place on the extreme left, with a gap on its right of two miles, would have suffered from all the disadvantages of an offensive on a narrow front. It was the German artillery which proved the main factor in the successful defence.

One special feature of the bombardment of the sector opposite the 46th Division requires mention: the G.O.C. directed that the enemy front trench should not be shelled, but fire kept on the support and reserve lines, as he desired to keep this trench intact for use by his own troops.

The lifts of the VII. Corps artillery were arranged to conform with the plan of attack; half the guns in the two Heavy Artillery Groups which were firing on the defences to be attacked were to lift two minutes before zero, and the rest at zero, to the eastern half of the inner flanks of the first objective (Ems and Oxus Trenches, south and north respectively of Gommecourt village). They were then to switch for fifteen minutes on to the second objective, after which the barrage was to be shifted forward to cover the consolidation of that line. The artillery firing on Gommecourt village and park was, however, to continue its task, as already mentioned, until three hours after zero.

The 18-pdr. batteries of both divisions had very short lifts, almost amounting to a creeping barrage. In the 56th Division the guns lifted at zero to the reserve trench, and fired on it for four minutes, and just beyond it for six minutes; then swept the communication trenches for twelve minutes, and, shifting inwards, dealt with the second objective for eight minutes. In the 46th Division, the lifts were: at zero to the support trench; at plus 3 minutes to the reserve trench; at plus 8 they covered the reserve trench till plus 20; at plus 25 they lifted to the second objective, on which they fired until plus 30.

On the front of the VII. Corps, as on that of the VIII., there was no surprise whatever: "The new British assault trenches, the pushing forward of saps, the frequent

¹ The 2nd Guard Reserve Division had 6 heavy batteries attached, and the 52nd, 8½; the allotment to the 111th is not available. (Somme-Nord, i. pp. 248-251.) Apparently the enemy, averaging 4 guns to a battery, had a slight inferiority in heavy guns on the actual front of attack, but this does not take into account those firing from the flanks, from Puisieux and Adinfer, which occasioned the heaviest losses.

“ bombardment of important points, the appearance of heavy trench-mortars, and the increasing artillery fire, which from time to time rose to ‘ drum-fire ’, left no doubt as to the intention of the enemy ”.¹ As if expecting the attack on the 1st July, the German artillery at 4 A.M. on that day began shelling the front positions in which the assaulting troops might be expected to be assembled, and continued to do so until 6.25 A.M., when the intense bombardment caused them to give attention to the British batteries. But as the hour of assault approached some German guns again opened on the trenches and shelled them so consistently that the leading troops of the 56th and 46th Divisions were glad to advance in order to escape their fire.

ASSAULT OF THE 56TH DIVISION²

The 56th (1st London T.F.) Division was to attack on a 900-yard front from the southern edge of Gommecourt Park south-eastwards. Major-General Hull placed the 168th Brigade (Br.-General G. G. Loch) and 169th Brigade (Br.-General E. S. D’E. Coke) in the front line. He held the 167th (Br.-General F. H. Burnell-Nugent), less two battalions, in reserve round Hébuterne, the 1/8th Middlesex and half of the 1/3rd London being assigned the duties of occupying the front line when the attacking brigades left it and of supplying working and carrying parties.

The objective of the 168th Brigade was the German third trench (Fame—Felon),³ and strongpoints were to be established on the two flanks and in the centre near Nameless Farm. It was also to dig a trench across No Man’s Land to protect the right flank. The 169th Brigade was to do more. It was first to reach the third trench (Fell—Fellow—Feud) up to Gommecourt cemetery, on the left of the 168th, and establish three strongpoints on its own left flank near the cemetery, in the south-western part of the

¹ “ Res. Regt. No. 91 ”, p. 209.

² This Territorial division was assembled in France in February 1916. All the infantry battalions were already serving there, having gone out in the autumn of 1914 or early in 1915 to be attached to various Regular brigades to strengthen them, and they had taken part in much fighting. The divisional troops, except one field company R.E. from Edinburgh, and the Pioneers, 1/5th Cheshire, were London Territorials.

³ It should be noticed that the enemy trenches were given names by the VII. Corps on a system: first, on the right, words beginning with Fa, then blocks of Fe, Fi, Fo. The communication trenches had river names beginning with A, E, I, O to correspond. Thus behind Felon Trench was Elbe communication trench.

Maze and at the southern corner of Gommecourt Park. Then it was to swing forward its left to the Quadrilateral, a large strongpoint behind the 1st Switch Line, east of the Maze, and later to push out and gain touch with the right of the 46th Division where the Indus communication trench cut the 1st Switch (Fillet—Fill), thus completing the line behind Gommecourt.

The assault of the 56th Division was carried out with the greatest dash, and the failure to capture the Gommecourt salient cannot in any way be attributed to the gallant regiments composing it, for they did practically all that was asked of them. The assault of the 168th Brigade was led by the London Scottish and the Rangers, with the Kensingtons and 1/4th London in support; that of the 169th Brigade by the Queen Victoria's Rifles and London Rifle Brigade, with the Queen's Westminster Rifles in support. The last-named battalion was to pass through the line and capture the Quadrilateral. The 1/2nd London was in reserve. Each brigade had attached to it a section of a field company R.E. (2/1st London and 2/2nd London respectively), and a company of the pioneer battalion (1/5th Cheshire). At 7.20 A.M. smoke was discharged from the left of the line, and in five minutes it was down along the whole front. At 7.25 A.M., under cover of this, in spite of a heavy enemy barrage falling at the moment on the first and second trenches and the communication trenches, the leading companies clambered over the top and advanced steadily into No Man's Land, to form up on tapes laid there. At 7.30 A.M. they rose and moved to the assault. The wire had, as a rule, been well cut—the worst places had been dealt with by Bangalore torpedoes on the previous night, but the enemy was untiring in repairing the damage by means of "concertina" wire and new strands. Some parties had to file through gaps and others went astray in the smoke cloud, but only the Victoria's, and the Queen's Westminster following them, seem to have been definitely delayed by uncut wire. The Londoners were too quick for the enemy by a few seconds and, with comparatively little loss, were in the German front line before they could be seriously opposed. The first objectives, the three front German trenches (or rather what remained of them, for they were nearly unrecognizable,¹ with the exception of Nameless Farm, were secured. The first two trenches were easily overrun; but the third,

¹ "Regt. No. 170", p. 93.

manned by German riflemen closely packed on the fire step and assisted by machine-gun fire, was only gained after a fire fight and party rushes, attacks up the communication trenches finally breaking the German resistance. Nameless Farm was never captured; it had long lain derelict, but its cellars gave protection to the garrisons of a shell-hole position on its site and of the portion of the trench behind the farm; the German defence of it was determined, and without doubt this greatly contributed to tire out the attackers and deplete their supply of bombs.

The progress of the assault was well reported by signals to airmen and by runners to battalion headquarters, and at 9.30 A.M. boards exhibited in the three German trenches showed that they were nearly all in the possession of the 56th Division, and that the work of consolidation was proceeding; whilst nearly three hundred unwounded prisoners were sent back of whom about eighty were killed by German shell fire in crossing No Man's Land. After this unfortunate occurrence the hundreds of prisoners taken were herded into their own deep dug-outs. The barrage was in fact so severe that the Kensington company detailed to dig the trench to protect the right flank could not do so, and most of the large party of bombers detailed in orders to go forward at 9.30 A.M. to assist the Queen's Westminister in the next stage of the action, the capture of the Quadrilateral, became casualties in No Man's Land. Several parties of the Queen's Westminsters in vain attempted to reach the Quadrilateral from the third trench; but one party of bombers, led by an officer of the 1/5th Cheshire, pushing on via the cemetery, succeeded in doing so, only to meet destruction there. By this time the assaulting battalions, and two companies of the 1/4th London (168th Brigade) and the Queen's Westminsters (169th), which had gone across to support them, were entirely cut off by the enemy barrage which had been put down on the lost front trenches and No Man's Land. Several attempts to send forward bombs and ammunition only led to the annihilation of the carrying parties, and soon from every side counter-attacking troops were moving towards the 168th and 169th Brigades, whose line, owing to losses, was no longer a continuous one.

ASSAULT OF THE 46TH DIVISION¹

The assault of the 46th Division was carried out by the 137th Brigade (Br.-General H. B. Williams) and the 139th Brigade (Br.-General C. T. Shipley). In the front line of the former, on the right, were the 1/6th South Staffordshire and 1/6th North Staffordshire, with the 1/5th South Staffordshire and 1/5th North Staffordshire in support, the 1/5th Lincolnshire (attached from the 138th Brigade) being in reserve and providing carrying parties. In the 139th Brigade, the 1/5th and 1/7th Sherwood Foresters led, the 1/6th was in support and the 1/8th in brigade reserve. The 138th Brigade (Br.-General G. C. Kemp),² less two battalions, was in divisional reserve. To each of the assaulting brigades was attached a whole field company R.E. (1/2nd and 2/1st North Midland), and the pioneer battalion (1/1st Monmouthshire) was detailed to improve and dig communication trenches.

The first object of the division was to form what the operation orders called "a defensive flank", but actually a "pocket", in the German position north of Gommecourt, its trace running from the enemy front trench along the Fonquevillers—Gommecourt road to the north-eastern end of Gommecourt, thence along Oxus communication trench for five hundred yards, and then back in a "dog-leg" via Fortress, Foreign and Ouse Trenches to the British line. Ten strongpoints were to be established in the new line.

The second object was to join hands with the 56th Division in the 1st Switch Line by working southwards from Oxus Trench along Fill Trench. At 10.30 A.M., three hours after zero, on the conclusion of the bombardment, the clearing of Gommecourt village was to be taken in hand.

The first of the six waves was to start from the advanced trench; but on the right its condition was so poor that the 1/6th South Staffordshire preferred to use the original

¹ See page 22, f.n. 1.

² 1/4th and 1/5th Lincolnshire and 1/4th and 1/5th Leicestershire. The 1/4th Lincolnshire was holding the portion of the front line between the attacks of the 46th and 56th Divisions, and the 1/5th Leicestershire was sent to the 137th Brigade to dig a communication trench across No Man's Land parallel to the Fonquevillers—Gommecourt road after the attack had succeeded. This trench, starting from the ruins of a "Sucrerie", was begun, but could not be proceeded with on account of the German gun fire.

front line, leaving it well before zero to reach the assault position. Assembly trenches had been dug one hundred and fifty yards behind the front line; but, as already mentioned, they had been damaged by water, and were unusable. Moreover, the ground between them and the front line was covered with a confused mass of old French trenches, so tapes were put out and pegged down on the previous night to give the second and subsequent waves their alignment. At four minutes before zero the second wave was to move out from the front trench and take up position eighty yards behind the first. The other lines were then to leave their trenches and follow over the open.

Ill-luck attended the attack of the 137th Brigade from beginning to end. The smoke-cloud formed was at first very dense, so dense that many men lost their way in it and as a result the advance was not uniform and simultaneous; but within half an hour it had blown back and dispersed. The Germans were fully on the alert,¹ and the muddy state of the ground near the front line and in No Man's Land delayed the attackers—who, by their opponents' account "advanced quietly as at manœuvres"²—so that they were only halfway across No Man's Land when the defenders came up out of their dug-outs. The wire, when reached, was found either intact or repaired, or as some officers reported, cut but not cleared away, merely smashed up and twisted.³ Almost before the British artillery lifted the Germans manned the parapet and shell holes; "at the same moment

¹ It seems possible that the digging of the long new trench by the 56th Division was regarded as a feint, and that an attack was expected only from the northern side of the salient, which strategically offered advantages and the possibility of sweeping down the German lines towards the main attack.

² "Res. Regt. No. 91", p. 210.

³ "Res. Regt. No. 91" (pp. 209-212), against which the 46th Division attacked, states, "At the places where the British intended to break into our front line the wire was shot to pieces and swept away . . . repairs to the wire were undertaken wherever the bombardment permitted, but the trenches were completely levelled and filled up. [This does not agree with the unanimous accounts of officers who got into the German front trench, which was intact, too wide to jump and too deep to get out of without assistance.] Only the dug-outs were still intact, contrary to the expectation of the enemy." The repulse of the 46th Division is attributed to "the annihilating barrage fire of the artillery" and close fighting with hand-grenades.

The war diary of the 55th Reserve Regiment, which defended Gommecourt village and park, states that at the hour of attack the front was "ripe for assault, wire swept away and trenches smashed in, but shell holes were occupied at exactly the right moment, and the attackers were received with hand-grenades. The barrage fire called for began "at once."

“the annihilating barrage fire of the German artillery “began”¹. On account of this fire the third wave was ordered to file up the communication trenches instead of advancing over the open, an instruction being added, which led to much confusion, that all “down” trenches were “up” trenches until 9 A.M. But before this wave got clear of the advanced trench, the enemy barrage came down on No Man’s Land, and steadily increased in intensity, a number of guns away to the north joining in. Particularly effective machine-gun fire came from a pronounced spur held as a salient in the German line north of the left of the attack, and known as “The Z”, so that practically none of the rear lines got across. Part of the first three waves even remained in our front line trenches or lay down in No Man’s Land. The leading lines of the 1/6th South Staffordshire and 1/6th North Staffordshire, though particularly galled by flanking fire from saps and shell holes to the south, reached the enemy wire, where they were mostly shot down, or wounded by hand-grenades. Only a few determined men succeeded in entering the front trench through gaps, but, receiving no support owing to the failure of the rear waves to come on, these were soon driven out again or destroyed.

The 139th Brigade did better. The first three waves of Sherwood Foresters, with considerable casualties, reached and broke into the German front trench; some parties advanced to the second,² but there was some loss of direction on the left, as air observers reported British soldiers in the Z and “Little Z”, and this is confirmed from German sources. Their rumoured presence there prevented guns from being turned on to deal with the flanking fire coming from the Z. Here also the succeeding waves were met by heavy fire: the fourth wave never moved forward as a whole, and only small portions of the fifth and sixth got beyond the advanced trench. Touch with the leading lines was completely lost: the ample means of visual and mechanical communication arranged—telephone, flags, lamps, discs, shutters, pigeons, flares and rockets—all broke down owing to casualties, and no runner could get through. The only signal that came from the front was the lighting of two flares in the second German trench, reported at 11 A.M. from the air.

¹ “Res. Regt. No. 91”, p. 211.

² “Regt. No. 91”, p. 212, admits that some of the British reached the second trench in the northern sector of the 46th Division attack.

Behind the Sherwood Foresters who had effected an entry the enemy issued from his deep dug-outs, which should have been dealt with by the rear lines. Manning the parapet, these Germans prevented reinforcements from crossing No Man's Land, and all along the line they could be seen bombing the shell holes in which the men of the 46th Division had taken refuge near the German wire.

By 9 A.M. Br.-General H. B. Williams was definitely certain that the assault of the 137th Brigade had failed. He realized that this failure must inevitably lead to increased pressure on the 139th Brigade and the 56th Division, and therefore determined to renew the attack with the 1/5th South and 1/5th North Staffordshire, and with the 1/5th Leicestershire (attached), which formed his rear waves and had been held up. Measures were taken to get the barrage brought back. A second attack by troops already engaged, however, is always hard to organize, and in this case the difficulties in the way of reorganization were many. There was no chance of drawing the men back into the open, they had to be sorted out in the crowded trenches, which being full of mud a foot deep, made all movement slow. Many men were already missing—the 1/5th North Staffordshire could report only two hundred present—and in all units there was a shortage of officers. Very soon after brigade orders had been issued to prepare for an advance, the two Staffordshire lieutenant-colonels (R. R. Rayner and W. Burnett)¹ were wounded, the fall of the latter not becoming known for some time, so that further delay ensued, and this was fatal to any chance of success. The organization of the attack was finally placed in the hands of Lieut.-Colonel C. H. Jones, commanding the 1/5th Leicestershire, and the brigade-major and staff-captain of the brigade were sent to assist him in his hard task of arranging the men to form four waves. An unforeseen difficulty then supervened; the men had been carefully trained for weeks to play definite parts in the assault, and it was not easy to make them realize that these rôles must now be forsaken and something different done. For instance, a party told off to carry concertina wire could not for some time be got to understand that they must drop their loads and help to form an attacking wave. To make matters worse, the rear lines and carrying parties, unable to advance, were blocking the trenches, which, owing to their muddy condition

¹ The latter died of wounds two days later.

and the enemy bombardment, could only be cleared with great difficulty.

The task of the 139th Brigade was somewhat different to that of the 137th. It had effected a lodgment in the enemy's front, and the problem was to reinforce the troops there and send them bombs and supplies. Br.-General Shipley considered that this could not be done without another smoke barrage, for there was not even shell-hole cover, except in the hundred yards in front of the British trenches, and again at 50-70 yards in front of the German line, the 300-400 yards stretch in the centre of No Man's Land being absolutely bare. He therefore decided to wait until bombs to form a smoke cloud could be procured.

It was soon evident that there was no possibility of an immediate further attack or advance by the individual brigades, and the G.O.C. of the 46th Division decided to make the operation a combined movement. He himself co-ordinated the separate preparations of the brigades, and arranged that the divisional artillery and part of the corps artillery should co-operate; but he did not allot any fresh troops. The advance was to be made at 12.15 P.M., the 137th Brigade attacking afresh, with the aid of smoke, and the 139th sending over one company to stiffen the line and parties carrying grenades and supplies. The corps commander, who visited the 46th Division at this time, approved of the plan. As the 137th Brigade could not be ready by 12.15 P.M., a postponement was made to 1.15 P.M.; but shortly before this hour the 139th Brigade reported that there were still no smoke bombs, and it did not advance. The 137th, not being ready, conformed. The hour was then fixed for 2.45 P.M., when again a postponement was made, as Br.-General Shipley reported that the smoke would not be available until 3.15 P.M., because chaos reigned in the communication trenches. The time of the advance was then fixed by the 46th Division for 3.30 P.M.

Smoke bombs were duly fired from Stokes mortars at 3.20 P.M., and a screen, continuous but not thick, was formed in front of the 137th Brigade, but only twenty bombs could be collected for the 139th Brigade, and the smoke barrier on its front was entirely insufficient to hide movement even for a moment. Br.-General Shipley therefore sent orders for the advance to be stopped. The commander of the 1/6th Sherwood Foresters had already come to the conclusion that it was useless to go on: the enemy was on the alert, and of twenty men on the left

who did go over the parapet, eighteen were cut down by machine-gun fire and shrapnel in the first twenty or thirty yards. On the right, the acting commander of the 1/5th South Staffordshire, who had arranged to make a signal to his men to move into position, was wounded shortly before 3.30 P.M. Thus no signal was given, and the few officers surviving being inexperienced, everyone waiting for someone else to start, no movement took place. The commander of the 1/5th North Staffordshire in the front trench, seeing no advance on either side of him, telephoned to Br.-General Williams for instructions, and was told to "sit tight". Meanwhile the corps commander, having heard that the 56th Division had been forced back, had sent orders to call off the attack of the 137th Brigade, which reached the brigadiers and Lieut.-Colonel Jones at the very moment the troops in the trenches should have started. It would have been mere waste of life to have tried to cross No Man's Land after the hour of 3.30 P.M. had passed; for, warned by the smoke, the Germans had again put down a barrage and the British artillery which had bombarded the German trenches from 3 to 3.30 P.M. had lifted. The thin smoke cloud was rapidly diminishing, and without it, though a 150-yards No Man's Land might have been rushed, to cross 350 yards and more was out of the question. The original attack of the division having failed, the only hope of success lay in an advance by entirely fresh troops, and since the Gommecourt operation was only a diversion it did not seem advisable to employ the last reserves of the VII. Corps, except to assist a definitely new main attack. Before such could take place the confusion and congestion in the trenches would have to be cleared up, and this would take many hours.

No men of the 1/5th and 1/7th Sherwood Foresters, who had made entry in the German position, had come back during the day; but a few returned about 9.30 P.M. after having lain in shell holes in No Man's Land, and they reported the lodgment as still held, but this does not seem to have been the case.¹ The casualties of the assaulting battalions had been very heavy; in the two Sherwood Forester

¹ "Res. Regt. No. 91", p. 212, states that "by about midday, according to the reports of the front companies, the position in its whole entirety was again in our hands." The details of the annihilation of the parties of the Sherwood Foresters who broke into the Z and got as far as the second trench are very circumstantial. One officer and thirty men are claimed as prisoners.

battalions, nearly eighty per cent, including both Lieut.-Colonels D. D. Wilson and L. A. Hind, killed.¹

LOSS OF THE LODGMENT OF THE 56TH DIVISION

The failure of the 46th Division to do more than make a small entry into the German line with its left brigade had, however, disastrous consequences for the 56th. That division had by careful preparations and a fine advance attained nearly all of its principal objective, and now held on, the divisional and brigade staffs buoyed up by the news that the 46th Division would renew its attack. But very soon after the British assault had been launched at 7.30 A.M., it must have become evident to the commander of the *2nd Guard Reserve Division* that he need have no anxiety for the northern face of the Gommecourt salient, and had only the 56th Division to deal with. As the German accounts show,² from north, east and south thirteen fresh companies from the supports and reserves moved down against the lodgment made by the London Scottish, the Rangers, Queen Victoria's Rifles, Queen's Westminster Rifles and the London Rifle Brigade. The method of attack employed by the enemy was intense artillery fire lasting a few minutes, closely followed by bombing attacks. The most deadly fire came in enfilade from a single light gun or pair of guns hidden 3,000 yards to the south-east of the head of Puisieux valley. Owing to the enemy's barrage, the passage of reinforcements and stores across No Man's Land had from the first been hazardous. About 9 A.M. half a company of the Kensington, with a London Scottish machine-gun crew, got over with difficulty to the London Scottish, whose own parties with those of other battalions trying to bring up bombs and ammunition had all been destroyed in No Man's Land. These were the last reinforcements received, as a very gallant attempt of two companies of the 1/2nd London about 2 P.M. merely led to their being mown down by machine-gun fire from the park and by heavy artillery fire from Puisieux. There were so many wounded now lying in No Man's Land that men of the remaining

1	Officers.	Other ranks.
1/6th South Staffordshire . . .	14	205 (out of 500);
1/6th North Staffordshire . . .	13	292 (out of 23 and 740);
1/5th Sherwood Foresters . . .	24	395;
1/7th Sherwood Foresters . . .	18	391 (out of 536).

² See Note at end of Chapter.

companies went out to try and bring in some of them. This was countenanced by a German medical officer, who came out with a white flag and said that there was no objection to the removal of wounded on the British side of the wire, so long as no firing took place. Unfortunately this truce was interrupted by an 18-pdr. shelling the German front trench.

As long as hand-grenades lasted, eked out by the German stick-grenades found in the dug-outs, the Londoners were able to hold their own; but by midday the supply began to run short, as repeated messages "S.O.S. bombs", "S.O.S. bombs", sent back by "shutters" testified. Three times a heavy barrage ploughed through the lines of the men of the 56th Division, strong bombing attacks were made on them from the direction of Gommecourt Park, and under this combined pressure they were gradually forced out of the German third line. Little help came to them from their own artillery; news of the enemy counter-attacks from Gommecourt never reached corps headquarters, and the guns were employed in barraging the enemy communication and switch trenches down which enemy reinforcements could be seen passing all day. The information received from aviators as to the situation was not considered sufficiently definite for close support to be given to the 56th Division's front troops. The four 18-pdr. batteries and howitzer battery, placed at the call of the G.O.C. 169th Brigade after zero hour, were also dealing with counter-attacks coming down the communication trenches. Later when the German front trenches were crowded with troops firing on the men of the 56th Division retreating across No Man's Land, the little ammunition left had to be husbanded, in view of a general counter-attack then appearing imminent.

At 2 P.M. the 168th and 169th Brigades were still holding the second and first lines, and the southern part of Gommecourt Park; but from 1 P.M. onwards parties, chiefly consisting of wounded men, began to return to the British trenches, crawling across No Man's Land. Good counter-battery work and an attack by the 46th Division might now have relieved the situation: yet not only was there no sign of movement on the left, but information came in that, on the right, the attack of the VIII. Corps on Serre had failed, whilst the 31st Division was back in its own trenches. Although there was now no hope for the troops of the 56th Division still in the German lines, they

continued to resist. By 4 P.M. the Germans had retaken the second trench and had one or two footings in the first, and the 169th Brigade collected the last reinforcement, orderlies, clerks and servants, for a final desperate effort to help the Londoners.

At 3.26 P.M. a message was received by General Snow from the VIII. Corps that it was intended to make a renewed attack at night. Having two and a half comparatively fresh battalions in the 56th Division and three and a half in the 46th, he ordered them to be prepared to assist the VIII. Corps by an attack after dark, the hour of which would be notified later. Before night fell, however, the men remaining in the German front lines had been gradually reduced in numbers by bombing, until the lodgment of the 56th Division consisted of a single point in Ferret Trench, a couple of hundred yards from Gommecourt Park, with five officers and 70 men holding it. The wounded were got away and sections were organized with the remaining Lewis guns to hold the rear edge and paradoss of the enemy front trench. Finally, the men were driven from their last position inside the German lines to the shell holes near the wire; but it was not until about 9.30 P.M., when it became dark, that, ammunition having been expended, the last party came back, suffering heavy loss in the withdrawal.¹ The operations of the VII. Corps had left it in the position from which it had started, with only the satisfaction of knowing that it had kept some German infantry and artillery from the main battle. The success of the 56th Division, the more remarkable on account of the failure of the divisions on either side, cost the lives of over thirteen hundred of some of the best infantry in the Armies in France.²

In the evening, the 138th Brigade (with the 1/8th Sherwood Foresters of the 139th attached) took over the front of the 46th Division, and Br.-General G. C. Kemp determined to make a last effort to gain touch with the men said

¹ The war diary of the *55th Reserve Regiment* gives 9.45 P.M. as the time at which complete possession was regained.

² Casualties :

	Officers.	Other ranks.	
London Scottish	14	602	(out of 24 and 847) ;
The Rangers	17	447	(" 28 " 780) ;
Queen Victoria's Rifles	12	448	(" 28 " 671) ;
London Rifle Brigade	19	535	(" 28 " 803) ;
Queen's Westminster Rifles	28	475	(" 28 " 661) ;
1/4th London	16	324	(" 28 " 650) ;
1/13th London (Kensington)	16	310	(" 24 " 500).

to be holding out in the enemy's position. Shortly after midnight he sent the 1/5th Lincolnshire to make the attempt, with the 1/5th Leicestershire as a right flank guard. The battalion advanced up to the enemy wire, but found the German trenches strongly held, the wire uncut, and the Germans very much on the alert, so that innumerable light balls and flares immediately lit up No Man's Land. It was obviously useless to persevere, and every man was ordered to lie down and wait. Eventually, by divisional order, the Lincolnshire fell back after suffering considerable casualties, but bringing their wounded with them out of No Man's Land.

The attempt "to divert against itself forces" which might otherwise "be directed against the left flank of the main "attack near Serre" cost the VII. Corps nearly seven thousand casualties.¹

Owing to fire, the removal of wounded was carried on under difficulties until midnight was past; but as it grew light the 2nd *Guard Reserve Division* again chivalrously gave assistance. Early in the morning of the 2nd the Germans hoisted a large red-cross flag on the parapet opposite the 46th Division. Both sides sent out parties to collect the wounded, and nearly all the British were brought in; there was ceremonial saluting on both sides, but no fraternization. This was not, however, the end of a revival of the old courtesies of war: a couple of days later a German aeroplane dropped a list of the prisoners taken at Gommecourt, and in return a similar list was sent by the same means to the enemy.

NOTE I

THE GERMAN ACCOUNT OF GOMMECOURT ²

The general effect of the British bombardment was good, so that the "front trenches were levelled and the wire shot away", but the losses in men, in consequence of there being plenty of deep dug-outs, were small. The sector opposite the 56th Division was held by the 170th *Regiment*, with four companies and the left company of the

		Killed.	Wounded.	Missing.	Prisoner.	Total.
46th Div.	{ Officers	50	71	14	2	} 2,455
	{ Other ranks	803	1,340	172	3	
56th Div.	{ Officers	53	107	17	6	} 4,314
	{ Other ranks	1,300	2,248	356	227	

² See *Somme-Nord*, i., "Regt. No. 170", "Res. Regt. No. 91", and the captured war diary and report of the 55th *Reserve Regiment*, translated as S.S. 536, "Report of the Defence of Gommecourt on the 1st July 1916".

55th Reserve Regiment in the front line. Here the smoke completely hid the start of the attack, and, owing to the damage done to the entrances of the dug-outs, the men could not get out quickly enough, and were overrun by the Londoners. A counter-attack was at once made by one company of the garrison of the unattacked Kern Redoubt (Maze) ($2\frac{1}{2}$ companies and the infantry pioneer company of the *55th Reserve Regiment*, and a section of engineers), but the British obtained possession of three lines of trenches. Towards 8.45 A.M. the commander of the *170th Regiment*, with the assistance of his neighbours, got a counter-attack going. Against the right flank and right centre of the lodgment were sent seven companies of the *170th Regiment* and two of the *15th Reserve Regiment*, whilst four companies of the *55th Reserve Regiment* bore down on the left centre and left flank. The British had consolidated the position and erected barricades, and little was effected against them until the afternoon hours, when simultaneous bombing attacks of all the companies engaged on the counter-attack gradually drove the Londoners back. Two officers and seventy men were taken prisoners.

Opposite the 46th Division the men of the right of the *55th Reserve Regiment* and the *91st Reserve Regiment* managed to clamber out of their dug-outs in time, and received the advancing lines with heavy machine-gun and rifle fire. "In spite of this the British "pushed through the broken-down wire and smashed-up front "trench, tried to fill up their thinned ranks and press on." A counter-attack from the third trench struck them at the decisive moment. The assaulting British, though they fought stoutly, were, except for a few prisoners (30), annihilated.

The artillery of the *52nd Division* and *2nd Guard Reserve Division* and some batteries of the *111th Division* took part in the defence, those of the *52nd* having a considerable number of guns put out of action.

Nearly fourteen hundred British who had fallen in or in front of the position of the *55th Reserve* and *91st Reserve Regiments* were buried. These regiments claim to have made prisoner, 16 officers and 251 men, and the *170th Regiment*, 6 and 150.

The German losses on the 1st July¹ were :—

	55th and 91st Res. Regts.		170th Regiment.	
	Officers.	Other ranks.	Officers.	Other ranks.
Killed	3	182	9	233
Wounded	10	372	20	252
Missing	—	24	—	136

NOTE II

PREVIOUS FIGHTING NEAR GOMMECOURT²

On the 4th October 1914, during the Race to the Sea, a violent German attack drove General Brugère's Group of Territorial Divisions

¹ British prisoners taken at Gommecourt on the 1st July saw evident signs of heavy losses during the preliminary bombardment in the shape of, literally, "stacks" of corpses, five or six bodies in height, putrefying, whilst awaiting burial.

² Abbreviated from an account kindly furnished by the French Historical Section.

(81st, 82nd, 84th and 88th) on to the line (south to north) Hébuterne—Gommecourt—Hannescamps—Monchy au Bois. On the 5th/6th Gommecourt fell into the hands of the Germans by a night attack, and Monchy au Bois was lost on the 9th. Counter-attacks to retake these localities failed, although the French got within fifty yards of the enemy trenches at Gommecourt and dug in there. The front then settled down, both sides apparently withdrawing a couple of hundred yards, and it was in the same position on the 1st July 1916 as when taken over by the British in July 1915.

The French XI. Corps, to the south of Brugère's Group, attacked Beaumont Hamel unsuccessfully on the 19th November 1914, failing mainly because the wire had been insufficiently cut. The Gommecourt area was not included in the Second Battle of Artois; but a diversion was made on the 7th-13th June 1915 by the French XI. Corps against the German salient then existing near Toutvent Farm (2 miles south of Gommecourt), which resulted in the capture of a sector 2,000 yards wide and nearly a thousand yards maximum depth, at a loss of 10,351 officers and men.

CHAPTER XIX

THE SOMME

RESULTS OF THE 1ST JULY 1916

(Maps 4, 12 ; Sketch 25)

THROUGHOUT the 1st July the Royal Flying Corps maintained command of the air ; in fact it did very much as it liked. One hundred and ten pilots were in the air for a total of 408 hours, yet there were only nine combats. One German machine was driven down and crashed ; two British bombing machines, on the other hand, failed to return.¹ Whilst contact observers did their best to report the progress of the infantry, artillery observers along the whole front searched for targets for the guns and howitzers. Owing to the enormous number of bursting shells, they could, for the most part, do no more than give general corrections to the shooting, but the 12-inch guns were ranged accurately on Bapaume and Achiet le Grand, where German headquarters were known to be². German accounts show that any attempted movement of batteries or infantry columns was at once detected from the air and harassed by gun fire. The balloon observers, linked by telephone with the headquarters of the heavy artillery of the various corps, did not confine their attention to the enemy batteries, but watched and reported the falls and changes of the enemy barrage, and also indicated to the artillery many fleeting targets.

Air reconnaissance, although Bapaume, Cambrai, and Busigny were visited, discovered very little activity on the roads and railways behind the German lines ; a fair number of photographs were taken, including some of the German 3rd Position and Bapaume.

An extensive programme of bombing railways and head-

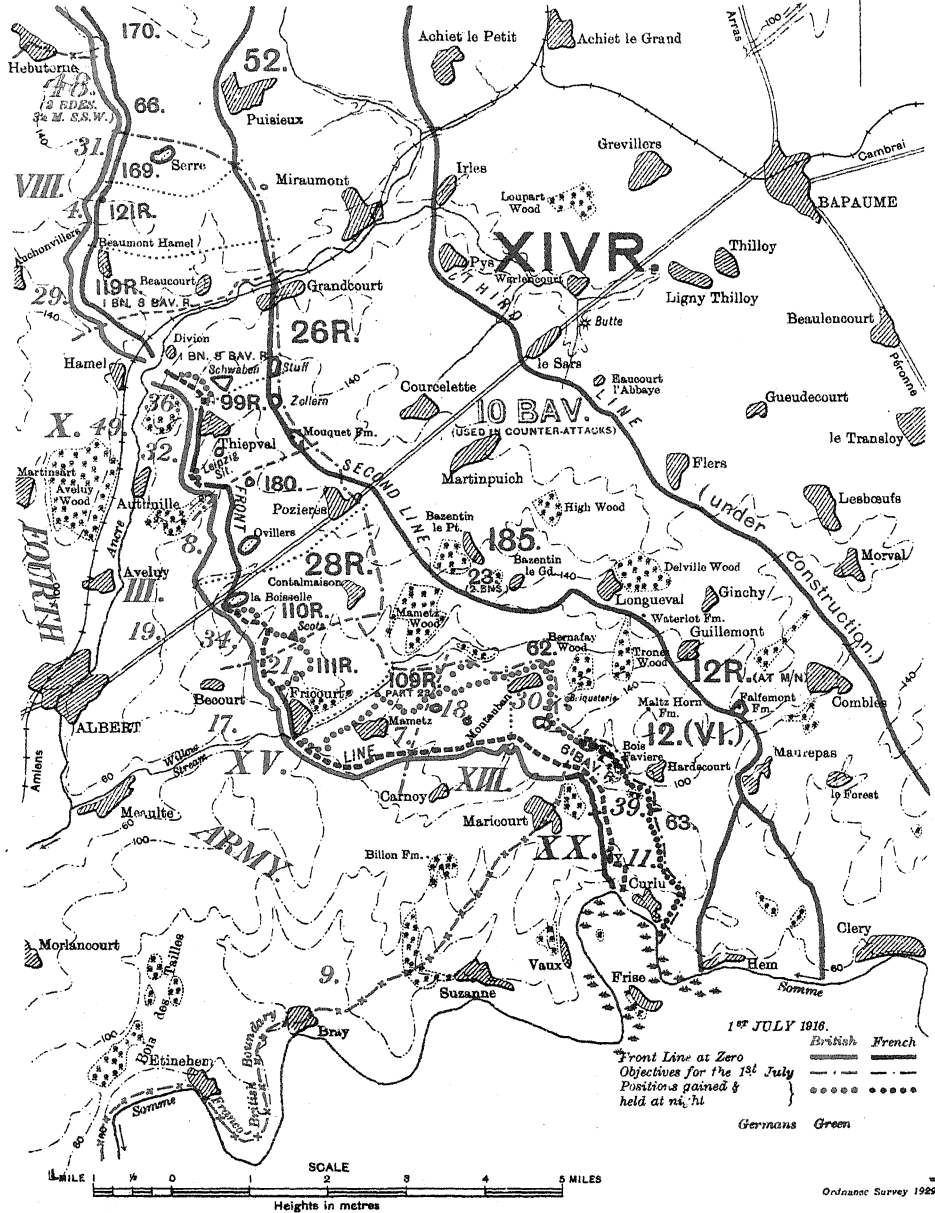
¹ For a detailed account see the official history, "The War in the Air", Vol. II. pp. 209-19.

² See page 374.

quarters was executed by forty aeroplanes, each carrying two 112-lb. bombs, and, in addition to the major bombing, all corps squadron aeroplanes carried 28-lb. bombs, which were dropped on billets, transport, trenches and batteries. The principal railway centres visited were Cambrai, St. Quentin and Busigny. Outside Cambrai an ammunition train was hit, the wagons of which continued to burn and explode for a couple of hours; at St. Quentin an ammunition shed was set on fire, the conflagration spreading to a number of ammunition wagons on the lines nearby. This air activity against material objects no doubt caused the enemy some inconvenience, but it in no way affected the fate of the battle, and it was only the spotting of reinforcements coming up and directing fire upon them which seems to have given him any concern.

At intervals through the day the Fourth and Third Armies sent reports to Advanced G.H.Q. summarizing and consolidating the corps messages received. The first reports indicated a very favourable state of affairs, but as the morning wore on, what had really happened became more and more uncertain, except near Montauban where success seemed assured. Thus the Fourth Army noon bulletin stated: "III. Corps report troops of 34th Division have passed through Peake Woods [it was only a small party]. VIII. Corps report 31st Division are believed to be on the eastern edge of Serre and are consolidating [only a small party at most reached Serre, and it never returned]. Enemy have retaken their front line south of Beaumont [Hamel] and troops that had pushed on to station road are temporarily cut off [the few who had got through never returned]." The 2.40 P.M. bulletin, after good news of the right, continued, "Artillery in rear of Pozières and Contalmaison are retiring. No news of 31st Division [left of VIII. Corps attack]. III. Corps report believe infantry of 34th Division are on western outskirts of Contalmaison [only a small party got so far]. X. Corps report rebombarding of trenches R. 31 b, R. 32 c, and north of X. 2 a [these are south of Thiepval] up till 1.45 P.M. VIII. Corps, no further change reported." The 4 P.M. bulletin said, "Report that we hold Contalmaison unconfirmed. X. Corps report they have no troops in Thiepval, have decided to bombard and attack at 4 P.M. in conjunction with attack from north. VIII. Corps report the situation in Serre is uncertain, but majority of 31st Division back in their own trenches."

THE SOMME, 1916.
THE ATTACK OF THE FOURTH
ARMY ON THE 1ST JULY.
THE SITUATION AT NIGHT.



3100/31.

“ 29th Division have two battalions in station road [no troops got as far as this], remainder back in our front trenches. Projected renewal of attack on Beaumont abandoned for the present. 4th Division are holding front line German trenches from just north of Beaumont.” Captures of prisoners, but not the heavy casualties, were regularly reported by the corps and sent on.

The last bulletin of the day, sent out by the Fourth Army at 6.50 P.M., was as follows: “ XIII. Corps have reached green line [red chain dotted line on Sketch 16] all along. XV. Corps 7th Division continues green line up to X 29 d 57 [White Trench on Sketch 18].¹ Is consolidating north and west sides of Mametz as far as F. 10 b 28. Then gap and holds Papen Trench F. 10 a 6 7 to F. 4 c 10.² 21st Division as before and is pushing reserve brigade via Fricourt Fm. to join up with 7th Division at X 29 d 5 7.³ III. Corps hold from Round Wood via X 21 b 5 4 and X 21 a 7 9 to X 20 b 15.⁴ Officer reports about two battalions 34th Division on western outskirts Contalmaison facing S.E. M.G.’s still in Boisselle and bombardment being arranged. X. Corps report situation still not clear but probably very little of 32nd Division beyond first line. Situation of 36th Division at Crucifix probably the same and no confirmation of withdrawal from intermediate line south of river. North of river situation same. Attack on Thiepval being arranged. VIII. Corps all back in own line except 4th Division [in] German first line and two battalions still believed to be in Serre but cut off.”

Map 12.
Sketch
25.

From the reports of the Third Army it was known at 2.45 P.M. that the 56th Division was doing well, but that the 46th Division had failed; at 4.40 P.M. that the renewed attack of the latter had also failed; at 5 P.M. that the 56th Division was unable to make further progress: only at 7.45 P.M. was it reported that its right brigade was back in the British position and its left brigade in the German front line.

General Rawlinson had remained the whole day in his

¹ For these co-ordinates see squared Map 1A.

² Papen Trench was 400 yards east of Sunken road Trench where the left of the 7th Division actually was. See situation at night on Sketch 20.

³ The south-eastern salient formed by the 21st Division advance was 300 yards from Fricourt Farm. See Sketch 20.

⁴ This is correct as to line, but there was a great gap between the holding near Round Wood—Scots Redoubt and that in Schwaben Höhe. See Sketch 21.

room at his headquarters at Querrieu, in direct and private telephone communication with his corps commanders. What those in the centre and on the left thus told him unofficially, as one comrade to another, seems to have been more disturbing than their official reports. But the situation was by no means as clear to them and to him as it is to the reader to-day. The success of the right wing and of the French was obvious, but the complete failure of three out of the five corps, as well as of the left of the VII. Corps at Gommecourt, was not fully realized for some time. The general tenour of the reports from the corps was hopeful; but they were based on the divisional reports, and these in their turn on subordinate reports, the details of which could not always be reconciled; indeed it was difficult to know which were accurate and which not. The reports from the air were few and unconvincing. No thought of failure had entered anyone's head, the severity of the losses was not known, and during the afternoon of the 1st July there remained still hope that the second attempts which were being made would succeed. The diary entries of General Rawlinson himself were :

7.30 P.M. The VIII. Corps have been pushed back into their own trenches at all points except at the parallelogram ["Quadrilateral"], and a few other points. They are undertaking a fresh attack on Serre with some of the 48th Division. The X. Corps are still in the Schwaben Redoubt but have so far failed to take Thiepval and the Hindenburg Trench. The III. Corps are in Contalmaison [There seems no authority for this in the bulletins] and I think Boisselle [No], but have failed to capture Ovillers. The XV. Corps have taken Mametz and established themselves behind it in touch with the XIII. Corps, but are not in touch on their left with the III. [They were in touch at Scots Redoubt.] They have nearly surrounded Fricourt, but not quite, though I hope they may complete the circle to-night. The XIII. Corps have done the best. They are in Montauban, and have taken and are holding all the objectives allotted to them. The casualties to date are 16,000 [nearly 60,000].

10 P.M. Not much change in the general situation, but I have put Goughy [Lieut.-General Sir H. Gough] in command of the two northern corps to co-ordinate their efforts and see if he cannot push them on again. The XIII. Corps are well established, but I hear a heavy bombardment

going on, so I fancy they are being counter-attacked. I trust they will stick it out. The XV. Corps have failed to get the 21st and 7th Divisions to join hands, so it may be difficult to mop up Fricourt to-morrow. D. H. has placed the general reserve, that is the 38th and 23rd Divisions, at my disposal, with a hint not to use them up too soon.

During the afternoon Sir Douglas Haig visited General Rawlinson. Without giving a definite order, he expressed the wish that the attack of the Fourth Army should be continued on the 2nd: the situation was as yet too obscure for any radical change of plan: the best that could be done for the moment was to keep up the pressure on the enemy, wear out his defence, and, with a view to an attack on his 2nd Position, gain possession of all those parts of his front position and of the intermediate lines still in his hands. In particular, the Commander-in-Chief desired that Fricourt, already enveloped on both flanks, should be captured.

Lieut.-General Sir H. Gough was waiting at Fourth Army headquarters with a small staff ready to take advantage of any gap which might be made and push through the line with the three cavalry divisions and other troops from G.H.Q. reserve, and then turn northwards behind the German front. It seemed to General Rawlinson that there was small chance of such a movement ever taking place, so that General Gough was available for other employment. At 7 p.m., therefore, he telephoned to the Commander-in-Chief suggesting that General Gough should take command of his left wing, the X. and VIII. Corps, which had distinctly failed, in order to reorganize the attack astride the Ancre. This would greatly lighten his task of co-ordinating the attacks of the three corps on the right, only one of which had been entirely successful. Sir Douglas Haig agreed to the suggestion, and accordingly placed the two corps under General Gough as from 7 a.m. on the 2nd July, but without removing them from the Fourth Army. General Gough at once left to visit the corps and ascertain their situation and condition.

No orders or instructions were issued during the day Map 4. by Fourth Army headquarters, except to modify the boundary of the XIII. Corps with the French; to place, about 4 p.m., the 12th Division (Major-General A. B. Scott) at the disposal of the III. Corps, in order to relieve the 8th Division, reported to have suffered very heavily; and

soon after to send the 25th Division (Major-General E. G. T. Bainbridge) forward nearer to the X. Corps. In consequence of this reduction in the Fourth Army reserves, Sir Douglas Haig, at 5 p.m., ordered the 23rd Division (Major-General J. M. Babington) and the 38th (Welsh) Division (Major-General Ivor Philipps), in G.H.Q. reserve around Coisy (20 miles west of Maricourt) and Herissart (12 miles west of Thiepval), respectively, to move forward at 8 p.m. The 23rd Division came into the area behind the XV. and III. Corps vacated by the 12th Division, the 38th replacing the 25th behind the X. and VIII. Corps.

Map 12.
Sketch
25.

At 10 p.m. the Fourth Army issued orders to all corps to "continue the attack", allotting objectives to them for next day, so as to secure a solid footing in the German front by the XIII., XV. and III. Corps, and advance the line of the X. and VIII. No suggestion was made to utilize the successes gained by some to assist in improving the situation of those which had failed. The attacks were to be "made under corps arrangements as early as possible compatible with adequate previous artillery preparation". The comparative ease with which, in broad daylight, the troops had achieved such successes as had been won led certain commanders of units and lower formations in the front line openly to assert that great results might be obtained on the 2nd if sufficient fresh divisions were employed to continue the attack with vigour at the places where it had made progress on the 1st. It must be remembered, however, that the Germans when driven out had retired to their strong 2nd Position—the soundest course to take in the circumstances—and were probably reorganizing to meet an attack there.

The XIII. Corps was simply directed to consolidate its conquests, and to make preparations for an attack, in conjunction with the XV. Corps, on Mametz Wood, which lay to the north-west, in front of the German 2nd Position, on the spur of the main ridge beyond Caterpillar Valley.

The XV. Corps was to capture Fricourt and the wood behind it; push on to Bottom Wood, further up the valley towards Mametz Wood; get in touch with the troops of the III. Corps—believed, in error, to be in Contalmaison—and prepare for the attack on Mametz Wood in conjunction with the XIII. Corps.

The III. Corps, which had only two footings in the German front position, one on the right next to the XV. Corps and the other at Schwaben Höhe, was to renew its

attempt to capture La Boisselle and Ovillers in the front position, secure Contalmaison in the intermediate line, and then to form a flank by connecting up the two latter villages.

The X. and VIII. Corps were asked to capture the whole of the German front position and advance to the intermediate line, and the 25th Division, from reserve, was placed at the disposal of the X. Corps.

The reports of the casualties in the Fourth Army and the VII. Corps of the Third Army rendered at the time gave the number of absentees from roll call, and included a very large number of missing: most of these were subsequently accounted for, many of course having been killed. The figures showed a total of nearly 62,000. Subsequent examination of the Part II. Battalion Orders¹ of the infantry, the heaviest sufferers—the artillery losses were small as the Germans did little counter-battery work—has reduced this total by approximately 7 per cent, due to many of the missing having rejoined.

The original figures, in the diaries, were :—

	Killed or Died of Wounds.	Wounded.	Missing.	Total.
Officers	721	1,531	339	2,591
Other ranks	7,449	34,357	17,419	59,225
	<hr/>	<hr/>	<hr/>	<hr/>
	8,170	35,888	17,758	61,816

The corrected figures are :—

	Killed or Died of Wounds.	Wounded.	Missing.	Prisoners of War.	Total.
Officers	993	1,337	96	12	2,438
Other ranks	18,247	34,156	2,056	573	55,032
					<hr/>
					57,470

For this disastrous loss of the finest manhood of the United Kingdom and Ireland there was only a small gain of ground to show, although certainly the greatest yet made by the British Expeditionary Force: an advance into the enemy's position some $3\frac{1}{2}$ miles wide and averaging a mile in depth; beyond this, merely a few minor holdings; the total number of unwounded prisoners who reached the cages on the 1st July, only amounted to 25 officers and 1,958 other ranks.² Of the magnificent successes achieved by the 30th, 18th, 36th (Ulster), 4th and 56th Divisions,

¹ See Preface.

² The casualties of the Germans for the 1st July alone are not available, as they were returned by 10-day periods (three per month). The losses at

none except those gained by the two first on the extreme right, next to the equally successful French, were permanent. The others were no more than isolated thrusts which, in the absence of support on either side, could not be maintained.

The prime causes of the general failure were the strength and depth of the German position and its stout defence by our opponents, whose divisions were still leavened by a large proportion of their peace-trained troops and professional officers and N.C.O.'s. There was, indeed, little hope of a decisive success until the morale of the German army had been broken and its reserves used up, conditions which were not to be realized for another two years. Many reasons might be given why a greater measure of success was not attained. No attempt was made to select for attack a part of the enemy front which had weak features : indeed the Somme sector may be said to have been the strongest part. The date chosen was due to the condition of affairs at Verdun, not to the state of the preparations on the Somme. Not only were the place and date of the attack selected by the French High Command, when Sir Douglas Haig would have preferred to have made his offensive further north and six weeks later, by which time his reserves would be at a maximum ; but the late hour, and that in broad daylight, had been fixed and insisted upon by General Foch, commanding the Group of Armies on the British right, and General Fayolle, commander of the Sixth Army which was to take part.

Strategic surprise was to a certain extent secured : that is to say, the German Supreme Command were not prepared for an offensive on the Somme, so that they had only local reserves behind the threatened front. It must have appeared unlikely to the Germans that the French, after their four months' struggle at Verdun, would be able to take part in an offensive on the Somme or anywhere else ;¹ nor would the British reserves available seem to the German military mind sufficient to justify a decisive attack on a 20-mile front. For long the German Supreme Command declined

the Somme, 1st-10th July were 40,187, excluding lightly wounded retained in corps area (see Note II. at end of Chapter).

¹ The French employed a very large number of divisions at Verdun, putting them in for a short time and withdrawing them before they were exhausted. The Germans were deceived by this into thinking that they had put " hors de combat " most of the French infantry, and broadcast to the world that the French had lost two or three times as many men as they themselves had ; whereas it is now certain that the losses were practically the same on both sides. (See Preface.)

to believe that if there were an offensive at all it would fall west of Verdun; they were expecting it in Alsace-Lorraine. When all information clearly pointed to an assault in the Arras—Albert region, even to its approximate date, they anticipated that it would strike the German *Sixth Army*, whose southern boundary was three miles north of Gommecourt, clear of the battle altogether. British air superiority at the time and place prevented the enemy from learning much about the mounting of the attack; but his troops in front line were certain that the warnings indicated an attack nearer the Somme, and the German *Second Army* definitely reported that every sign pointed to an assault directed against the Fricourt and Gommecourt salients, and possibly the front between them. No one deduced or guessed that it would come astride the Somme.

Tactical surprise was therefore attained on the right, in the French sector and that of the XIII. Corps; where also, as it happened, the bombardment had been most successful. The VII. Corps, before Gommecourt, having played its part in the preparatory period by attracting an extra enemy division, the assault "à fond" at that spot should have been countermanded by G.H.Q. order. Any chance of surprise which existed on the front between Fricourt and Gommecourt was lost by the enemy overhearing at La Boisselle a British telephone message and by the firing of the mine at Hawthorn Ridge ten minutes before zero. The splendid chance of surprise offered by an assault in the early morning before the enemy machine gunners could see very far—as was to be proved at 3.25 A.M. on the 14th July, much to the astonishment of our Allies—was lost because the proposal for an early start was definitely rejected by the French, who even wished to make zero hour 9 A.M. instead of 7.30 A.M.

The British High Command had relied on the bombardment destroying the enemy's material defences and the morale of his troops. Confirmed in this belief by the information given by General Joffre as to the terrible effect of German fire at Verdun, their plan was framed, its tactics settled, and the troops trained in the sure and certain hope that the infantry would only have to walk over No Man's Land and take possession. The examination of prisoners appeared to indicate that the spirit of the Germans was shaken, and it was expected that the bombardment would have completely broken it, and that most of the machine guns would have been destroyed. But the

expenditure of 1,627,824 shells in the seven days preceding the assault did not accomplish what had been confidently anticipated. The forced extension of the bombardment by two days, owing to bad weather, was unlucky, as it reduced the amount of ammunition available for the final intense shelling, but can hardly have affected the result. The material means available for attack in July 1916 were notably inferior to those developed in the following spring. The number of guns and howitzers was, in particular, inadequate to cope with so deep and wide an objective presenting so many targets; their fire was necessarily so dispersed that many strongpoints and machine-gun posts were never touched. There was an entire lack of gas shell (which was to become the most potent factor in preparing an assault) except for the almost negligible quantity fired by the 75-mm. field batteries lent by our Allies. In quality, too, both the artillery weapons and ammunition were indifferent. Of the heavy guns and howitzers which were available, many were of obsolete or extemporized patterns, and these, as already pointed out, were outranged by the Germans.¹ But this was not all. Some of the ammunition, both heavy and field, was not only defective but dangerous: the enemy's position was littered with unexploded shell from 9.2-inch downwards, and there were many "prematures", which caused casualties among the British troops and sometimes burst the guns. On the other hand, French heavy guns were particularly effective on the XIII. Corps front, and substantially contributed to the success on the right flank. Only on the Montauban front were deep dug-outs found to have been penetrated by shell-fire. The successful manufacture of munitions of war on a large scale can no more be improvised in a hurry than can armies be produced at short notice from thousands of willing civilians.

The problem before the Fourth Army was the storming of breaches in the defences of a fortress, or rather, according to the plan deliberately chosen, the storming of one great breach 13 miles wide with a subsidiary attack at Gommecourt by the Third Army. Practically uniform strength in artillery was employed against it, without regard to the strength and importance of any one particular part.² This fortress, it is true, had been improvised in the field, but at

¹ See page 460.

² For the six corps in order from right to left one heavy gun (or howitzer) per 47, 58, 42, 57, 44, 47 yards, and a field gun per 17, 25, 23, 28, 20, 27 yards respectively.

an expenditure of money, material and labour, extending over a period of nearly two years, which no nation could afford in peace. The defences were better adapted to modern conditions and more formidable than those of any fortress in existence in 1914. It must be confessed that the problem was not fully appreciated at G.H.Q. In the first place, the British troops had not fought their way to within assaulting distance; No Man's Land was often five hundred yards or more wide. It had been recommended, where this was the case, that trenches should be dug nearer to the enemy, just as "parallels", one after the other, had been made in siege warfare in the past; but this had not been insisted upon, with the result that only a few divisions had acted on the recommendation. It was intended that the difficulty should be surmounted by the leading line crawling out under the bombardment so as to be within a hundred yards of the enemy's parapet at zero hour; but this he did not always permit.

The Allies at the Somme (like the Germans earlier at Verdun) were to a great extent still under the illusion that the assault upon strongly fortified works was—to use the words of Field Service Regulations 1912—identical with "the climax of the infantry attack" in open warfare when the attackers, having gradually fought their way forward to assaulting distance, obtained "superiority of fire . . . known by the weakening of the enemy's fire and perhaps the movements of individuals or groups of men from the enemy's position towards the rear". But although there might be some similarity between conditions in the front trench line and the final position before the assault in open warfare, and although the essential condition of superiority of fire seemed to have been secured, there were, as the raids had made clear, no signs of retirement of the Germans. In pre-war practice, the assault was carried out at the highest possible speed: the words of the Regulations were, "rush the position". One part of the attacking troops might start on its own initiative if it thought that the time had come, and the others were "to co-operate as soon as possible". But the assault of the 1st July was to be carried out at a fixed hour, at "a steady pace", and with the direction that "each line of assaulting troops must leave its trenches simultaneously and make the assault as one man". The use of the barrage, the lifting of which was the signal for the assault, may have necessitated this combined movement in the last hundred yards, but

in any case the heavy load carried by the infantryman reduced his speed over the broken ground from a steady pace to a slow walk.

Breaches, all too small, were made in the enemy defences; wire was partially destroyed and the enemy prevented by machine-gun fire from repairing it; parapets were more or less levelled, although the trenches, for the most part, still gave some cover. The first condition for a successful assault of a breach is that there should be, if possible, surprise; this, it was hoped, had been obtained, yet it was by no means the case. The second condition is that the breach should be "practicable", that is, should offer no obstacle which could delay the assailants and stop their rush; the third condition is that all flanking defences should have been destroyed or means taken to neutralize them. These two latter conditions, it was confidently expected, had been obtained; but even if the second had to some extent been secured, the third certainly had not. The enemy machine gunners were at hand waiting below ground to bring up their weapons and open fire—from the breach itself as well as from the flanks. Although the defenders had not a large number of these weapons, not more than the attackers themselves possessed, it was the machine gun above all, favoured by the thickness and lack of elasticity of the British line formation, the slowness of the advance and in some instances the great width of No Man's Land, which broke the assault on the 1st July.

But suppose the enemy, instead of being numbed and demoralized by the seven days' bombardment, were waiting to man his defences; then the only chance of success lay in the leading infantry of the assault crossing No Man's Land and entering the hostile position before its defenders could leave their shelters and use their weapons. It might be a matter of a very few minutes, perhaps seconds; yet, instead of lightly equipped patrols composed of men selected for their speed being sent to lead the way, to deal with the sentries and "bottle" the garrison in its shelters, the formation ordered was infantry waves, which were to advance at a "steady pace". The Germans, carefully trained in leaving their dug-outs quickly, were as a rule on the parapet first.

The superiority in mere numbers, 13 divisions in front line (of which 64 battalions took part, in the first line, in the first assault) against $4\frac{1}{2}$ divisions, did not help; in fact it was a disadvantage and merely resulted in increased casualties. The wave formation adopted—lines about one

hundred yards apart—resulted, on account of the width of No Man's Land, in there being a number of lines exposed at once; and when the leading lines stopped, those in rear, from lack of experience, closed up and "bunched", thus providing even larger targets. After the first few minutes, owing to heavy casualties, the lines disappeared; the further advance was carried out by small parties, which utilized cover and made rushes, in the way Sir Douglas Haig had suggested, but had been rejected by his Army commanders. The French infantrymen, who thought for themselves and disobeyed instructions whenever they judged fit, though nominally advancing in lines, actually went forward in small packets, utilizing cover, as could be seen from the British observation posts on Maricourt ridge.

The first act of the assault was to reach the enemy's position; the second was for the troops which had been successful in reaching it to maintain themselves there. To do this they had not only to contend with machine guns, but with the enemy's artillery, which, leaving the British guns alone, devoted all its attention to stopping the infantry. Except on the right, where the Allied artillery had gained the upper hand, the successful assailants were cut off by an enemy barrage on No Man's Land, and it was impossible to reinforce them or keep them supplied with munitions. Only a few Russian saps had been prepared, which could be opened up to form communication trenches; the parties detailed to dig trenches across No Man's Land were unable to work under the fire that descended on it. The difficulty might to some extent have been met by reducing the width of No Man's Land before the assault as was recommended, but not definitely ordered, by pushing forward "parallels", with communication trenches to them, or by tunnelling "subways" as was done next year at Vimy.

The possibility of failure had not been overlooked. Partial failure could not be dealt with in advance, but Sir Douglas Haig, in the case of complete want of success, had in view the shifting of his reserves northward for an offensive near Ypres. Schemes also had been worked out for the employment of the General Reserve in the case of the enemy making a counter-offensive. The inadequacy of the bombardment, however, had not been foreseen. The deep dug-outs in which the Germans had sheltered came as a surprise to all. But, as M. Clemenceau has said, "prévoir, c'est l'apanage du commandement".

The difficulties of rapidly changing the artillery programme and time-table, in spite of every possible means of communication having been provided, when the orderly up-to-time advance of the infantry ceased, proved almost insuperable: indeed, they continued to be so throughout the war. Even when neither permanent nor fleeting successes were gained, many battalions left without any artillery support, after the barrage had passed on, made the most heroic efforts: parties, ever growing smaller, pushed on in spite of shell and bullets towards the objectives of which they had been told. In some cases a dozen or more men of a battalion actually reached the final objective or got very near to it; but they were of course too few in number to do anything when they got there, or even to remain in the captured position. But there was no attempt either by the divisions which were successful or the smaller bodies that broke through the enemy's 1st Position to turn right or left to help those on their flanks which could not get forward of themselves. Such cases cannot well be provided for in orders, and must be left to the tactical skill of commanders on the spot. It is not perhaps the duty of the leading lines to take such action, and in many cases the succeeding lines could not get across No Man's Land: even where they did so they pressed forward, heroically but blindly, on the tracks of those in front.

It has been suggested that the troops which fought on the 1st July were not sufficiently well trained or led to defeat the Germans.

The German official monograph on "the focus of the battle in July 1916"¹ contains the following appreciation:

"The British Army . . . in the battle of the Somme had not yet reached a sufficiently high tactical standard. The training of the infantry was clearly behind that of the German; the superficially trained British were particularly clumsy in movements of large masses. On the other hand, small bodies, such as machine-gun crews, bombers, and trench-blockers and special patrols, thanks to their native independence of character, fought very well. The strong, usually young, and well-armed British soldier followed his officers blindly, and the officers, active and personally brave, went ahead of their men in battle with great courage. But, owing to insufficient training, they were not skilful in action. They often

¹ Somme-Nord, i. p. 20.

“ failed to grasp the necessity for rapid, independent
“ decision. They were in many cases unequal to dealing
“ with sudden unexpected changes in the situation. Great
“ attacks were carried out in thick, often irregular lines
“ and with small columns following close behind them. To
“ this must be mainly attributed the heavy losses of the
“ British in their attacks, although they were certainly
“ made with the most conspicuous courage.”

This criticism appears in the main to be a fair one. That greater success was not gained was, however, as much due to faulty tactical direction from the General Staff, and to lack of experience in the higher ranks—especially in handling very large bodies of troops and carrying on the semi-siege warfare of the kind forced upon them—as to rawness in the lower ranks. The tactical instructions have been commented on in an earlier chapter. Of the corps commanders on the 1st July only two had commanded as much as a division in peace time, and of the twenty-three divisional commanders in the field only three had commanded as much as a brigade before the war.

Immense progress had been made in the handling of troops in the nine months between September 1915 (the Battle of Loos) and July 1916, but the officers of the New Army, from lack of all-round training, could not be expected to have acquired the power of seizing opportunities; that can only be gained in long years of instruction in peace at company, battalion, brigade and divisional training and Army manœuvres, and in exercises on the ground without troops. Yet it is inevitable that once a modern army is engaged in battle, either in attack or defence, the leading sooner or later should devolve on regimental officers; and neither the battalion nor the company commanders on the British side in the Somme battle had the experience of their adversaries. Finally the leading falls on the N.C.O.'s, who form the backbone of units in Regular armies, but in the New Army knew little more than did the rank and file.

Special instructions had been issued from G.H.Q. directing that officers should be trained how to deal with unexpected situations, and with the highly intelligent class which furnished the officers of the New Armies of 1916 a little instruction went a long way. Later contingents of officers were often better grounded in the theory of fighting, but, as a whole, had not the native qualities which make leaders of men in the same degree as the original early

volunteers.¹ Yet, training in France being limited by the enormous amount of work required in preparation for the offensive, and with the comparatively small number of competent instructors available, it was never possible to bring the officers up to such a degree of efficiency as would enable them to get the utmost out of the splendid material under their command. If they knew the duties of their own rank, they were not, and could hardly be expected to be, in a position to take the place and assume the responsibilities of a higher rank when their seniors fell and all was in confusion instead of running smoothly as it had done in the great set piece in which they had been practised.

Possibly it is as well that the break-through did not succeed, and leaders and troops were not tested against the Germans of 1916 in open warfare.

The New Army of 1916 inevitably fell short of the 1914 standard of training: the shooting of the artillery had not attained precision; in the infantry too much attention had been given to "the bomb and the bayonet", with the result that the standard of musketry was not nearly equal to that of the old Army. In some divisions it was emphatically poor,² but, nevertheless, better than it was to be in the later years of the war. Yet in courage and spirit of self-sacrifice the troops of the New Army did not fall short; indeed, it was the possession of these military virtues in so high a degree, coupled with the use of too dense formations, which was their undoing. A highly gifted American general has written, "Courage is sometimes the only substitute for the skill which comes of experience. It is a fearful price to pay."³ Although these words refer to the United States, we may say that Britain has always paid this price in her wars.

Notwithstanding their inexperience, the men of 1916 came within measurable distance of effecting a "break-through"; and they taught the Germans whom they

¹ The average New Army officer present at the battle of the Somme in July 1916 belonged to the period before the formation of cadet battalions, although many had served in the O.T.C. Many, however, had been gazetted in the winter of 1914-15 without any preliminary training, and the courses and classes in 1915 for those who attended them were not as systematic as, and were in some cases inferior to, those of later years.

² In a rapid-firing contest in one Army before the battle, the winner managed to fire 12 rounds in a minute. In 1914 almost every man in the British Army, including Territorials, had been able to fire 15 aimed rounds a minute, and experts had been known to fire 30.

³ Lieut.-General Hunter Liggett, once commander of the American First Army, in "A.E.F. Ten Years Ago in France".

encountered a lesson which they never forgot. That the New Army could do no more demonstrates once again the nature of war, so clearly indicated in the campaigns of the First French Republic, in the American Civil War, and again in the second phase of the Franco-German War of 1870-1, when the hastily raised and equipped armies of Gambetta could do little against a fully trained enemy. The 1st July 1916 remains witness for all time that neither armies nor munitions can be produced by merely calling for them, and that although the courage and goodwill of all ranks may at tremendous cost compensate to some extent for lack of military skill and experience, nothing can compensate for national unpreparedness for war.

The opportunity for success on the Somme rapidly passed and in little over a fortnight disappeared; the enemy fully aware of his danger, brought up fresh troops and just as many new heavy batteries as the whole total of the British.¹ The battle, without any element of surprise—except the vain appearance of a few tanks and the greater use of gas—or strategic advantage, became a ding-dong struggle of attrition, in spite of the experience gained on the 1st July and duly applied. General Joffre, in this respect at any rate, had got his way.

Munitions and the technique of their use improved, but never again was the spirit or the quality of the officers and men so high, nor the general state of the training, leading and, above all, discipline of the new British Armies in France so good. The losses sustained were not only heavy but irreplaceable. Fortunately it was to turn out that the effects of the battle of the Somme were felt even more severely in the German Army than in the British. The total casualties on the Allied and enemy sides were, after making due allowance for the different ways of reckoning them, probably much the same;² but even if the balance was against the Allies, as might well be the case with such high-mettled but inexperienced troops, the Somme battle destroyed most of what remained of the old German Army, so highly trained in peace time. From 1916, as his own writers admit,³ the enemy's fighting power, morale and discipline gradually but surely waned until the final disappearance of these qualities brought about the collapse of his war-worn legions.

¹ New German batteries, 107 (information supplied by the *Reichsarchiv*); British on 1st July, 106.

² See Preface.

³ See Note I. at end of Chapter.

NOTE I¹

GERMAN VIEWS ON THE SOMME FIGHTING

The histories, many of which are available, of the German formations and units engaged in the battle, practically all speak of the severity of the fighting being largely due to an order issued by Falkenhayn and repeated by General von Below to the troops that "not a foot's breadth of ground must be voluntarily abandoned. "Only over our bodies may the enemy advance." The history of the *27th (Württemberg) Division*, one of the best divisions which fought at the Somme, records :

"A culminating point was reached which was never again approached. What we experienced surpassed all previous conception. The enemy's fire never ceased for an hour. It fell night and day on the front line and tore fearful gaps in the ranks of the defenders. It fell on the approaches to the front line and made all movement towards the front hell. It fell on the rearward trenches and battery positions and smashed men and material in a manner never seen before or since. It repeatedly reached even the resting battalions behind the front and occasioned there terrible losses. Our artillery was powerless against it. . . . In the Somme fighting of 1916 there was a spirit of heroism which was never again found in the division, however conspicuous its fighting power remained until the end of the war."

The history continues that the men of 1918 had not "the temper, the steadfastness and the spirit of sacrifice of their predecessors", and, in evidence of this, states that in August 1916 the division (12 battalions) lost 100 officers and 4,395 other ranks without flinching, whilst in August 1918, when it had 9 battalions, it retired, having lost 95 officers but only 1,908 other ranks.

Regimental histories tell the same story : "the tragedy of the Somme battle was that . . . the best soldiers, the stoutest-hearted men, were lost ; their numbers were replaceable, their spiritual worth never could be."²

Some regimental histories head their chapters dealing with the battle with "The Hell on the Somme".³

Captain von Hentig, of the General Staff of the *Guard Reserve Division*, writes :⁴

"The Somme was the muddy grave of the German field army, and of the faith in the infallibility of the German leading, dug by British industry and its shells. . . . The most precious thing lost at the Somme was the good relationship between the leaders and the led. The German Supreme Command, which entered the war with enormous superiority, was defeated by the superior technique of its opponents. It had fallen behind in the application of destructive forces, and was compelled to throw division after division without protection against them into the cauldron of the battle of annihilation."

¹ The reasons for including Notes I. and II. at this stage of the battle are given in the Preface.

² "Bavarian Res. Regt. No. 16", p. 193. This unit had 1,005 killed in 1916 (593 at the Somme in a fortnight), only 295 in 1917 and 294 in 1918.

³ E.g. "Regt. No. 86", p. 114.

⁴ "Psychologische Strategie des Grossen Krieges."

Colonel Hierl, an acute critic of the war,¹ says of the Somme :

“The loss of ground was of no strategic importance. The importance of the course of the battle must not be measured by that. The great losses in men, the heavy expenditure of material, ate all too deeply into the strength of the German Army. The immense material superiority of the enemy did not fail to have its psychological effect on the German combatants. The enemy commanders may put this down on the credit side of their account as the profit of their attrition procedure. . . . They were right in this [procedure]. The great enemy superiority in war apparatus and men was thus made to pull its weight, whilst the superiority of the German leading and training did not get its proper return, and diminished more and more as the old Army disappeared in the long-drawn-out battle.”

Colonel Gudmund Schmitler, Norwegian military attaché with the German and Austro-Hungarian Armies during the war, has written :²

“If the battle of the Somme in the tactical and strategic sense had no direct importance, its consequences nevertheless were great, particularly from the moral aspect. It gave the Western Powers confidence. Their Armies had accomplished in common an achievement that gave good promise for the future. . . . The confidence of the German troops in victory was no longer as great as before. . . . The old steadfast highly-trained body of the German Army, particularly in the infantry, had for the most part also disappeared. A great part of the best, most experienced and most reliable officers and men were no longer in their places. Within the German army a remarkable decrease of moral force had manifested itself. This was the more marked, as the heavy losses had made it necessary to send to the front a great number of young soldiers, whose training was defective.”

The preface of the official monograph “Somme-Nord” sums up :

“The heavy loss of life affected Germany much more heavily [than the Allies]. Quite apart from the facts that the limited possibilities of replacing such loss were further narrowed down, and that the war industries drew off into service able-bodied men in a constantly increasing degree, the battle of attrition gnawed deeply into the marrow of the defenders. The enormous tension on all the fronts compelled the Supreme Command to leave troops in the line until they had expended the last atom of their strength, and to throw divisions time after time into the same battle. In the circumstances, it was inevitable that the demoralizing influences of the defensive battle should affect the soldier more deeply than was consonant with the maintenance of his lust for combat and his power of devotion : but, more serious still was it that the demand for self-sacrifice greatly exceeded what could be expected of the average man, with the consequence that the fighting was largely left to the best of the troops, and not least to the officers. The result of this was again a terrible death-roll of the men fully-trained in peace time and the finest soldiers, the replacement of whom was impossible. It is in this that the roots of the tragedy of the battle lie.”

¹ In “Der Weltkrieg in Umrissen”, iv. p. 70. The book is used as a text-book in the *Reichswehr* schools.

² “Der Weltkrieg 1914-18.”

NOTE II

ALLIED AND GERMAN LOSSES AT THE SOMME

An exact comparison of the Allied and German losses at the Somme is not possible owing to the different systems on which the casualty lists were compiled. There are available for the German two different sets of figures: one founded on the returns made by units in the field three times a month; and the other compiled since the war in the *Nachweiseamt* (Information Bureau), based on the nominal casualty lists (*Verlustliste*) published during the war. The former exclude wounded who were dealt with in the hospitals in the corps areas, and may be called the net losses. The latter not only include such lightly wounded, but men so lightly wounded that they did not leave their units, who are distinguished as "*l.v.b.d.Tr.*" ("*leicht verwundet bei der Truppe*"). These may be called the gross losses. The French also have two sets of figures. The British figures occupy an intermediate position between the two sets: they comprise all men reported absent from their units at a roll call after an engagement, and for days of battle like the 1st July 1916 include a number of absentees who subsequently reappeared. It has been mentioned in the Preface that for the 1st July those temporarily absent, recorded as "missing", amounted to as much as $7\frac{1}{2}$ per cent over the actual losses. The British totals do not include lightly wounded who did not leave their units; the only officially wounded are those who were treated at a casualty clearing station.

Thus to arrive at a comparison one must add something for the lightly wounded to the German net losses, or deduct something for the "*l.v.b.d.Tr.*" from the gross losses. Definite figures for the Somme period cannot be deduced from the published *Verlustliste*, for after about the middle of June 1916 the date and locality of a casualty were no longer given; from December 1916 the *Verlustliste* were printed alphabetically, with only name, rank, date and place of birth, and category of wound, and little can be learnt from them. The *Nachweiseamt* has stated that 497,000 German casualties were reported for the first time after the Armistice, and some proportion of them should be added to the Somme period. The German losses during the preliminary bombardment should also be added, but are not precisely known.

The French and German casualties at Verdun are more exactly comparable; and, as they give a valuable indication and confirmation, they may be stated here. Popular accounts have represented that the comparative losses of the French at Verdun were nearly "three to two German", and they were put during the war by the Germans as high as five to one.¹ Mr. W. S. Churchill in "The World Crisis" (vol. iii., table opposite p. 52) gives from authoritative sources what must be the gross Verdun losses—as above defined—French, 535,000 and German, 426,519. With the assistance of both the French Ministry of War and the German authorities, Herr Wendt² has investigated these casualties, and he gives the net totals as 362,000 French and 336,831 German for the period 21st February to 20th December 1916, and up to the 8th

¹ "Revue d'Histoire de la Guerre Mondiale", April 1931, p. 183.

² Wendt, pp. 242-3.

August, as 315,000 and 281,333 ;¹ that is to say the losses were not widely unequal.

The unadjusted figures for the battle of the Somme are : British 419,654, and French 194,451, both to 30th November, total 614,105,² and from the British total must be deducted some small percentage for the absentees who returned ; the German are 445,322 (net to 30th December and excluding the 7 days' bombardment).³ The *Nachweiseamt* gross figures for July-October only are 537,919. We have therefore for the Germans the following figures :—

Verdun, gross 426,519 ; net 336,831.

Somme, gross 582,919 ;⁴ net 437,322.⁵

In the former case the lightly wounded account for 33 per cent extra ; in the latter, for 27 per cent.

To obtain some sort of comparison with the Allied total of 614,105 (less some percentage for temporary absentees included, of whom there were over 4,000 on the 1st July alone), there should be deducted from the 582,919 the "*l.v.b.d.Tr.*" and added to it the casualties during the Somme bombardment and a proportion of the 497,000 casualties not reported during the war. These three figures are indeterminate. We may, however, fairly assume that the real total is something under 600,000, just as the Allied total is something just over it. This is what might be expected. Our own infantry losses were very heavy, but the casualties of the better trained German infantry regiments engaged in the early days of the battle recorded in the footnotes in this volume show that exceedingly heavy losses were sustained by them also : regiments (nominally 3,000) losing 2,832, 1,218 (out of 1,800), 1,714, 1,577, 1,215, 1,915, 2,147, 1,809 ("practically wiped out") and 2,641 ; and battalions of other regiments losing 620, 618, 701 ("annihilated"), and others reduced to 152, 138 and "under 200" men.

¹ Reference to the Ministry of War and the *Reichsarchiv* has confirmed his figures.

² British figures are from the returns of the Adjutant-General in France—the figures given in the "Statistics of the Military Effort of the British Empire during the Great War", which are 498,054, are for the whole British front for the period of the battle. The French figures were furnished by the Ministry of War (1931).

³ Wendt, p. 176.

⁴ *Nachweiseamt* gives 537,919 (without November, in which month the losses were, according to Wendt, 45,000).

⁵ Wendt gives 445,322 net (including December, in which month the losses according to him were 8,000).

THE SOMME

1ST JULY 1916

ORDER OF BATTLE OF INFANTRY AND PIONEER BATTALIONS

4TH DIVISION

10th Brigade :

- 1/R. Warwickshire.
- 2/Seaforth's.
- 1/R. Irish Fus.
- 2/R. Dublin Fus.

11th Brigade :

- 1/Somerset L.I.
- 1/E. Lancashire.
- 1/Hampshire.
- 1/Rifle Brigade.

12th Brigade :

- 1/King's Own.
- 2/Lancashire Fus.
- 2/Duke of Wellington's.
- 2/Essex.

Pioneers :

- 21/W. Yorkshire.

7TH DIVISION

20th Brigade :

- 8/Devonshire.
- 9/Devonshire.
- 2/Border.
- 2/Gordons.

22nd Brigade :

- 2/R. Warwickshire.
- 2/Royal Irish.
- 1/R. Welch Fus.
- 20/Manchester.

91st Brigade :

- 2/Queen's.
- 1/S. Staffordshire.
- 21/Manchester.
- 22/Manchester.

Pioneers :

- 24/Manchester.

8TH DIVISION

23rd Brigade :

- 2/Devonshire.
- 2/W. Yorkshire.
- 2/Scottish Rifles.
- 2/Middlesex.

25th Brigade :

- 2 Lincolnshire.
- 2/R. Berkshire.
- 1/R. Irish Rifles.
- 2/Rifle Brigade.

70th Brigade :

- 11/Sherwood Foresters.
- 8/K.O.Y.L.I.
- 8/York & Lancaster.
- 9/York & Lancaster

Pioneers :

- 22/Durham L.I.

17TH (NORTHERN) DIVISION

- | | |
|---|--|
| <p><i>50th Brigade :</i>
 10/W. Yorkshire.
 7/E. Yorkshire.
 7/Green Howards.
 6/Dorsetshire.</p> <p><i>51st Brigade :</i>
 7/Lincolnshire.
 7/Border.
 8/S. Staffordshire.
 10/Sherwood Foresters.</p> | <p><i>52nd Brigade :</i>
 9/Northumberland Fus.
 10/Lancashire Fus.
 9/Duke of Wellington's.
 12/Manchester.</p> <p><i>Pioneers :</i>
 7/York & Lancaster.</p> |
|---|--|

18TH (EASTERN) DIVISION

- | | |
|---|--|
| <p><i>53rd Brigade :</i>
 8/Norfolk.
 8/Suffolk.
 10/Essex.
 6/R. Berkshire.</p> <p><i>54th Brigade :</i>
 11/Royal Fus.
 7/Bedfordshire.
 6/Northamptonshire.
 12/Middlesex.</p> | <p><i>55th Brigade :</i>
 7/Queen's.
 7/Buffs.
 8/E. Surrey.
 7/R. West Kent.</p> <p><i>Pioneers :</i>
 8/R. Sussex.</p> |
|---|--|

19TH (WESTERN) DIVISION

- | | |
|---|---|
| <p><i>56th Brigade :</i>
 7/King's Own.
 7/E. Lancashire.
 7/S. Lancashire.
 7/L.N. Lancs.</p> <p><i>57th Brigade :</i>
 10/R. Warwickshire.
 8/Gloucestershire.
 10/Worcestershire.
 8/N. Staffordshire.</p> | <p><i>58th Brigade :</i>
 9/Cheshire.
 9/R. Welch Fus.
 9/Welch.
 6/Wiltshire.</p> <p><i>Pioneers :</i>
 5/S.W.B.</p> |
|---|---|

21ST DIVISION

- | | |
|---|---|
| <p><i>62nd Brigade :</i>
 12/Northumberland Fus.
 13/Northumberland Fus.
 1/Lincolnshire.
 10/Green Howards.</p> <p><i>63rd Brigade :</i>
 8/Lincolnshire.
 8/Somerset L.I.
 4/Middlesex.
 10/York & Lancaster.</p> | <p><i>64th Brigade :</i>
 1/E. Yorkshire.
 9/K.O.Y.L.I.
 10/K.O.Y.L.I.
 15/Durham L.I.</p> <p><i>Pioneers :</i>
 14/Northumberland Fus.</p> |
|---|---|

29TH DIVISION

- | | |
|--|---|
| <p><i>86th Brigade :</i>
 2/Royal Fus.
 1/Lancashire Fus.
 16/Middlesex.
 1/R. Dublin Fus.</p> | <p><i>88th Brigade :</i>
 4/Worcestershire.
 2/Hampshire.
 1/Essex.
 Newfoundland Regt.</p> |
|--|---|

87th Brigade :

2/S.W.B.
1/K.O.S.B.
1/R. Inniskilling Fus.
1/Border.

Pioneers :

1/2nd Monmouthshire.

30TH DIVISION

21st Brigade :

18/King's.
2/Green Howards.
2/Wiltshire.
19/Manchester.

90th Brigade :

2/R. Scots Fus.
16/Manchester.
17/Manchester.
18/Manchester.

89th Brigade :

17/King's.
19/King's.
20/King's.
2/Bedfordshire.

Pioneers :

11/S. Lancashire.

31ST DIVISION

92nd Brigade :

10/E. Yorkshire.
11/E. Yorkshire.
12/E. Yorkshire.
13/E. Yorkshire.

94th Brigade :

11/E. Lancashire.
12/York & Lancaster.
13/York & Lancaster.
14/York & Lancaster.

93rd Brigade :

15/W. Yorkshire.
16/W. Yorkshire.
18/W. Yorkshire.
18/Durham L.I.

Pioneers :

12/K.O.Y.L.I.

32ND DIVISION

14th Brigade :

19/Lancashire Fus.
1/Dorsetshire.
2/Manchester.
15/Highland L.I.

97th Brigade :

11/Border.
2/K.O.Y.L.I.
16/Highland L.I.
17/Highland L.I.

96th Brigade :

16/Northumberland Fus.
15/Lancashire Fus.
16/Lancashire Fus.
2/R. Inniskilling Fus.

Pioneers :

17/Northumberland Fus.

34TH DIVISION

101st Brigade :

15/Royal Scots.
16/Royal Scots.
10/Lincolnshire.
11/Suffolk.

103rd (Tyneside Irish) Brigade :

24/Northumberland Fus.
25/Northumberland Fus.
26/Northumberland Fus.
27/Northumberland Fus.

102nd (Tyneside Scottish) Brigade :

20/Northumberland Fus.
21/Northumberland Fus.
22/Northumberland Fus.
23/Northumberland Fus.

18/Northumberland Fus.

36TH (ULSTER) DIVISION

107th Brigade :

- 8/R. Irish Rifles.
- 9/R. Irish Rifles.
- 10/R. Irish Rifles.
- 15/R. Irish Rifles.

108th Brigade :

- 11/R. Irish Rifles.
- 12/R. Irish Rifles.
- 13/R. Irish Rifles.
- 9/R. Irish Fus.

109th Brigade :

- 9/R. Inniskilling Fus.
- 10/R. Inniskilling Fus.
- 11/R. Inniskilling Fus.
- 14/R. Irish Rifles.

Pioneers :

- 16/R. Irish Rifles.

37TH DIVISION

110th Brigade :

- 6/Leicestershire.
- 7/Leicestershire.
- 8/Leicestershire.
- 9/Leicestershire.

111th Brigade :

- 10/Royal Fus.
- 13/Royal Fus.
- 13/K.R.R.C.
- 13/Rifle Brigade.

112th Brigade :

- 11/R. Warwickshire.
- 6/Bedfordshire.
- 8/E. Lancashire.
- 10/L.N. Lancs.

Pioneers :

- 9/N. Staffordshire.

46TH (NORTH MIDLAND) DIVISION (T.F.)

137th Brigade :

- 1/5th S. Staffordshire.
- 1/6th S. Staffordshire.
- 1/5th N. Staffordshire.
- 1/6th N. Staffordshire.

138th Brigade :

- 1/4th Lincolnshire.
- 1/5th Lincolnshire.
- 1/4th Leicestershire.
- 1/5th Leicestershire.

139th Brigade :

- 1/5th Sherwood Foresters.
- 1/6th Sherwood Foresters.
- 1/7th Sherwood Foresters.
- 1/8th Sherwood Foresters.

Pioneers :

- 1/1st Monmouthshire.

48TH (SOUTH MIDLAND) DIVISION (T.F.)

143rd Brigade :

- 1/5th R. Warwickshire.
- 1/6th R. Warwickshire.
- 1/7th R. Warwickshire.
- 1/8th R. Warwickshire.

144th Brigade :

- 1/4th Gloucestershire.
- 1/6th Gloucestershire.
- 1/7th Worcestershire.
- 1/8th Worcestershire.

145th Brigade :

- 1/5th Gloucestershire.
- 1/4th Oxf. & Bucks. L.I.
- 1/Bucks. (O. & B.L.I.).
- 1/4th R. Berkshire.

Pioneers :

- 1/5th R. Sussex.

49TH (WEST RIDING) DIVISION (T.F.)

146th Brigade :

- 1/5th W. Yorkshire.
- 1/6th W. Yorkshire.
- 1/7th W. Yorkshire.
- 1/8th W. Yorkshire.

148th Brigade :

- 1/4th K.O.Y.L.I.
- 1/5th K.O.Y.L.I.
- 1/4th York & Lancaster.
- 1/5th York & Lancaster.

ORDER OF BATTLE

147th Brigade :

- 1/4th Duke of Wellington's.
- 1/5th Duke of Wellington's.
- 1/6th Duke of Wellington's.
- 1/7th Duke of Wellington's.

Pioneers :

- 1/3rd Monmouthshire.

56TH (1ST LONDON) DIVISION (T.F.)

167th Brigade :

- 1/1st London.
- 1/3rd London.
- 1/7th Middlesex.
- 1/8th Middlesex.

169th Brigade :

- 1/2nd London.
- 1/5th London (London Rifle Brigade).
- 1/9th London (Queen Victoria's Rifles).
- 1/16th London (Queen's Westminster Rifles).

168th Brigade :

- 1/4th London.
- 1/12th London (Rangers).
- 1/13th London (Kensington).
- 1/14th London (London Scottish).

Pioneers :

- 1/5th Cheshire.

THE SOMME

1ST JULY 1916

ORDER OF BATTLE OF GERMAN INFANTRY

3rd Guard Division :	Guard Fusiliers. Lehr Regt. Grenadier Regt. No. 9.
12th Division :	Regts. Nos. 23, 62, 63.
52nd Division :	Regts. Nos. 66, 169, 170.
185th Division :	Regts. Nos. 185, 186, 190.
10th Bavarian Division :	Bavarian Regt. No. 16. Bavarian Reserve Regts. Nos. 6, 8.
2nd Guard Reserve Div. :	Reserve Regts. Nos. 15, 55, 77, 91.
11th Reserve Division :	Regts. Nos. 22, 156. Reserve Regt. No. 10.
12th Reserve Division :	Reserve Regts. Nos. 23, 38, 51.
26th Reserve Division :	Regt. No. 180. Reserve Regts. Nos. 99, 119, 121.
28th Reserve Division :	Reserve Regts. Nos. 109, 110, 111. Regt. No. 163 (attached from 17th Reserve Division).

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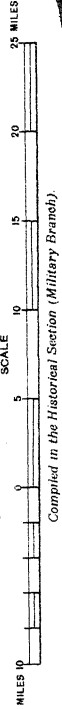
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