

AWM4
Australian Imperial Force unit war diaries,
1914-18 War

Engineers

Item number: 14/11/16

Title: Headquarters 5th Australian
Divisional Engineers

September 1917



AWM4-14/11/16

WAR DIARY

Army Form C. 2118.

Instructions regarding War Diaries and Intelligence Summaries are contained in F. S. Regs., Part II. and the Staff Manual respectively. Title pages will be prepared in manuscript.

~~INTELLIGENCE SUMMARY.~~

Page 1.

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Headquarters, 5th. Aus. Div. Engineers.

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
BLARINGHEM B.23.b. Sheet 36a France 1/40,000	Sept. 1 st.		<p>Strength of Divisional Engineers 24 Officers & 677 O.R. Units located as follows;- H.Q.D.E. Blaringhem B.23.b. Sheet 36a. 8th. Field Coy. AE. OUTERSTEENE, F.9.a. Sheet 36a. 14th. Field Coy. AE EBBLINGHEM T.23.a. Sheet 27. 15th. Field Coy. AE H.Qrs. & dismounted personnel at Heavy Bridging School AIRE. Transport at C.5.c.7.8. Sheet 36a.</p>	
	2nd.		<p>8th. Field Coy. under orders of 2nd. ANZAC Corps. 8th. Field Coy. erecting huts etc. under orders 2nd. ANZAC. 14th. Field Coy. Training. 15th. Field Coy. Instruction in Heavy Bridging at AIRE.</p>	
	3rd.		<p>Captain Caddy to Headquarters as Adjutant. Lieut. Evans to 15th. Field Coy. AE. as Second in Command.</p>	
	4th.		<p>8th. Field Coy. moved from OUTERSTEENE to billets at RACQUINGHEM B.19.a.4.4. Sheet 36a.</p>	
	5th.		<p>8th. Field Coy. relieved 15th. Field Coy. at BRIDGING SCHOOL, AIRE. 15th. Fd. Co. to billets at C.5.c.7.8. Sheet 36a.</p>	
	to 9th.		<p>8th. Field Coy. instruction Heavy Bridging. 14th. and 15th. Field Cos. training.</p>	
	10th.		<p>Progress of work report rendered to D.H.Q. ** 14th. Field Coy. relieved 8th. Field Coy. at Bridging School AIRE. 8th. Field Coy. to Billets at B.19.a.4.4. Sheet 36a. 15th. Field Coy. transport moved to WIPPENHOEK L.21.c.4.4. Sheet 27. Received A.I.F. Orders 7th. Sept. List 227. 2/Lieuts DOBLO, EWART, BURROWS to be Lieuts dated 5/8/17.</p>	App.1.
	11th. to		<p>Captain Caddy to be Adjutant, vice Lieut. EVANS to Regimental duties dated 23/9/17. Lecture by C.R.E. on Forward Traffic Communications During Offensive Operations **</p>	App. 2.
	13th.		<p>8th. Field Coy. training. 14th. Field Coy. instruction in Heavy Bridging.</p>	
	14th.		<p>15th. Field Coy. under orders 1st. Anzac Corps. 14th. Field Coy. moved from AIRE to EBBLINGHEM. T.23.a.5.3. Sheet 27.</p>	

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or
INTELLIGENCE SUMMARY.

Sheet 2.

(Erase heading not required.)

Headquarters, 5th. Aus. Divl. Engineers.

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
BLARINGHEM B.23.b. Sheet 36a France 1/40,000	Septr. 15th. 16th. 17th. 18th. 19th.		<p>14th. Field Coy. moved from EBBLINGHEM to K.34.c.5.8. C.R.E. attended demonstration by 8th. Brigade L.T.M. of firing without a stand at A.24.a.7.9.. Sheet 36a.</p> <p>Lieut. Green 14th. Field Co. Leave to England.</p> <p>Lieut. Clark, 15th. Field Co. reported accidentally injured - broken leg.</p> <p>Major. Farquhar returned from leave. 8th. Field Co. moved to STEENVOORDE Area. Headquarters transport, S.M., and 10 O.R. moved to STEENVOORDE Area 1 p.m..</p> <p>Headquarters moved to RENINGHELST G.34.b.6.3. arriving 12 noon. **</p> <p>Location of Companies:- 8th. Field Co. Sheet. 28. I.19.b.2.8. 14th. Field Co. " 28. H.24.a.1.3. 15th. Field Co. " 28. H.23.c.8.2.</p> <p>C.R.E. visited Companies and forward area. M. BREUSKIN of Belgian Mission reported for duty.</p>	App. 3.
	20		Operations by 1st. and 2nd. Aus. Divisions carried out successfully.	
	21		<p>8th. Field Coy. under orders C.R.E., 5th. Aus. Div. 8th. Field Coy. started work on Divisional Tramway from BIRR CROSS ROADS through I.18.central.</p> <p>Engineer Instructions No. 28/75/4 by C.R.E. 5th. Aus. Div. issued *</p> <p>Preparatory to the Division going into the line Engineer Instructions No. 28/75/5 by C.R.E. issued * allotting the responsibility of work as between Field Companies.</p>	*APP.4 *App.5.
	22	9.30 pm	<p>Officers Commanding 14th. & 15th. Field Companies advised to meet officer of 1st. Divisional Engineers to go over area to be handed over.</p> <p>Engineer Instructions No. 28/75/7 issued * dividing the responsibility of work between Field Cos. and Pioneers.</p> <p>Divisional Headquarters advised re R.E. Dumps, workshops and water supply * C.R.E. No. 12/67/22</p> <p>Major Operations, Preliminary Instructions No. 7, Extracts issued to Field Cos. & Pioneers together with sketch of Red and Blue Lines * also extracts from Divl. Order No. 161.</p>	* App.6 *App.7 *App.7a

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INTELLIGENCE SUMMARY.

Sheet 3.

(Erase heading not required.)

Headquarters,
5th. Australian Divl. Engineers.

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
Reninghelst G.34.b.6.3. Sheet 28 1/40,000	22	Sept.	The arrangements with regard to move of 14th. Brigade are set ^{out} in extracts from Administrative Memorandum No. 22 (C.R.E. 3/170/19) * The selection of Divisional R.E. Dumps allotted to 8th. Field Coy. pending arrival of Pioneer Battalion.	*App.7B.
WALKERS CAMP H.27.b.7.7 Sheet 28 1/40,000	23	9am	C.R.E. Headquarters moved from RENINGHELST (G.34.b.6.3.) to WALKER'S CAMP (H.27.b.7.7.) 8th., 14th., 15th. Field Cos. and 5th. Pioneers under orders of C.R.E. 5th. Aus. Div. In accordance with 5th. Aus. Div. Administrative Memo. No.24 (C.R.E's.3/170/21) issued to Field Cos. and Pioneers *	*App.7c.
	24	p. 10.45	In accordance with 5th. Aus. Div. Preliminary Instructions No. 8, C.R.E's. Engineer Instructions No.49/29/20 issued with regard to Strong Points and R.E. Dumps and material * 5th. Aus. Div. Administrative Memo. No. 25 issued with regard to Veterinary Arrangements, R.E. Stores and Traffic Restrictions, extracts taken and forwarded to Fd.Cos. ** Congratulatory message received from 1st. Anzac with reference to the work done by Engineers and Pioneers prior to and during the MENIN ROAD attack of 20th. inst. copied to Companies * (CRE's 202/4).	*App.8 *App.9 *App.10.
	25		In consequence of 5th. Aus. Div. Order No. 162 issued yesterday C.R.E's. order No. 1/8/51 issued to Field Cos. and Pioneers relative to the coming attack on the enemy ** Company Headquarters;- 8th. @ I.19.b.2.8. Transport at I.19.b.2.8. 14th. @ I.21.b.0.5. " " H.24.a.1.3. 15th. @ I.21.b.0.6. " " H.23.c.8.2.	**App.11

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Page 4.

INTELLIGENCE SUMMARY.

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Headquarters,
5th. Aus. Div. Engineers.

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
Walker's Camp. Sheet 28. H.27.b.77	Sept. 26		C.R.E's report on the work of the Engineers and Pioneers in this morning's operations submitted to C.E. 1st. Anzac and 5th. D.H.Q. *	*App.12.
	27		Progress of Works Report rendered to 5th. Aus. Div. * (for week ending 26.9.1917).	* App.13.
	28th.		Census of dugouts in 14th. Brigade Area, by O.C. 14th. Field Coy. submitted to 5th. D.H.Q., C.E., 1st. Anzac and relieving Divisions. * Progress of work contained in Engineer Notes 28/27th. Septr. rendered. *	*App. 14. *App. 15.
	29		Lieut. Fry, 14th. Field Coy. and party proceed on 1st. Octr. to Engineer Training School for a period of 6 months as per C.R.E. 51/167/172a *	* App. 16
	30		Lieut. A.T. Ewart, 15th. Field Coy. nominated to attend 10 days course of instruction at No. 23. Veterinary Hospital, St. OMER commencing 1st. Octr. The following personnel having been nominated for a period at the Summer Rest Camp proceed there on the 1st. Octr.:- 8th. Field Coy. No.4507. Sapper L. Lucas and No.4452 Sapper C. Gormack. 14th. do No. 121 Cpl. RT. Griggs and No. 2436 Sapper R.C. Sweny. 15th. do No.4145 L/Cpl. F. Urquhart and No. 5950 Sapper W.T. Brown. A.I.F. Order 25th. Septr. List. 233 the following officers to be Captains d/17/9/17 Lieut. A. McP. Greenlees and to remain seconded with C.E. 1st. Anzac. Lieut. L.G. Merkel, and to remain seconded for staff training. Lieut. S.E. Evans, 15th. Field Coy. Strength of Divisional Engineers :- 19 Officers 515 O.R. Total casualties for period 15th. to 29th. Septr. 1917. (being the period Engineers engaged in active operations) 3 Officers, and 72 O.R.	

J. B. O'Sullivan
Capt & Adj. Lt.

H.Q.
5th AUSTRALIAN

War Diary

PROGRESS OF WORK FOR WEEK ENDING 5/9/17.

Appendix I

250

Subject.	Particulars	Total Work.	Progress of Work.		Remarks.
			State of Completion	Time required to Complete.	
BLARINGHEM Permanent Baths.	Erection of building. Laying of concrete floor, drains and filter bed. Erection of tank stand. Painting of building.		Building complete. Painting in progress.	3 days.	-
MISCELLANEOUS Work.	Trays, Boxes, Tripod frames. & Tables.				

J. Howard
Capt. R.E.
Lt-Col. R.E.
C.R.E.
5th. Australian Division...

Appendix No. 1

5

Whitby

Appendix

250

PROGRESS OF WORK FOR WEEK ENDING 12/9/17.

Subject.	Particulars.	Progress.	Remarks.
BLARINGHEM Permanent Baths.	Erection of Building, laying of concrete floor, drains and filter bed. Erection of tank stand. Painting of building. Erection of Fence round baths.	Whole work now completed.	-

Whitby
Appendix
 Lieut-Col. RE.
 C. R. E.
 5th. Australian Divl. Engineers.

Appendix No. 1
No. xixpueddy

War Diary

250

5th. AUSTRALIAN DIVISIONAL ENGINEERS.

PROGRAMME OF WORK FOR WEEK ENDING SATURDAY, SEPTEMBER 15th. 1917.

15th. FIELD CO.

Date.	Time.	Locality.	Work.	Remarks.
Sept. 9th.	9 a.m.	Company Headquarters	Company Drill.	
" 10th.	"	C.5.c.7.8..Sheet 36a.	Route March.	Pass through LYNDE at 10a.m.. Xroads B.12.c.7. at 10a30 a.m. thence through La Belle Hotess to main MORBECQUE Rd. through MORBECQUE to Billet.
" 11th.	"	" "	Company Drill., Musketry.	
" 12th.	"	" "	Demolitions & Placing of Charges.	
" 13th.	"	" "	Reconnaissance, writing reports messages.	
" 14th.	"	" "	Route March.	Route to be notified later.
" 15th.	"	" "	Tracing of Works & laying out Strong Points.	

Orders since received 15 Fd. Coy. to move to Whiffenbach

Appendix No. 1

8th. Field Co.

Date.	Time.	Location.	Work.	Remarks.
Sept. 10th.	8 a.m. to 11 a.m. Afternoon	<u>A I R E.</u> Coy. moving to RACQUINGHEM	Heavy Bridging.	
" 11th.	8 a.m. - 12 noon 1.30 p.m. - 4 p.m.	B.19.a.4.3.	Musketry. Demolitions.	
" 12th.	8 a.m. - 12 noon 1.30 p.m. - 4 p.m.	"	Musketry. Bombing.	To be arranged with Brigade. B.19.a.4.3.-WITTES- B.22.b.7.0.-B.8.b.1.7.- A.18.c.8.1.-B.19.a.4.3.
" 13th.	8 a.m.	"	Route March.	
" 14th.	8 a.m.-12 noon 1.30 p.m.-4 p.m.	"	Musketry. Lewis Gun.	To be arranged with Brigade.
" 15th.	8 a.m.-12 noon	"	Section training and lecture on probable part Engrs. will take on going into the line.	
<u>14th. Field Co.</u>				
Sept. 11th. 12th, 13th, 14th. & 15th.	Heavy Bridging School	<u>A I R E.</u>		

J. P. ...
 Lt-Col. R.E.
 C.R.E.
 5th. Australian Division..

Appendix No. 1

250
War Diary

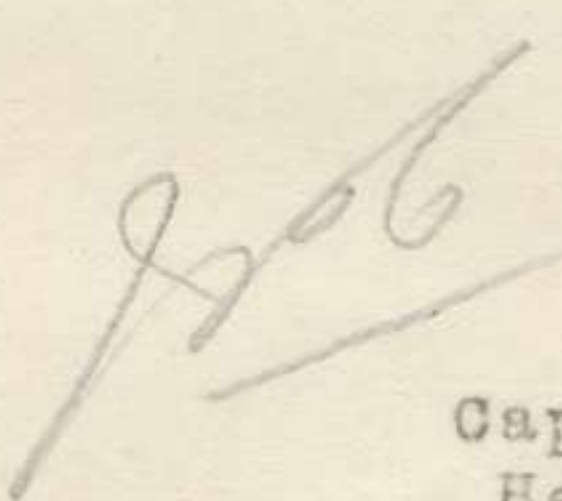
5th. Australian Division.
5th. Australian Divisional Engineers.

ADMINISTRATIVE MEMORANDUM NO.,. 18.

10th. Sept. 1917.

Ref. Map. 1/40,000 Sheet 36 A.

- 1 . The 15th. Field Coy. A.E. (less transport) are moving to 1st. Anzac Corps Area tomorrow 11th. inst. The transport is moving today and is staging at WIPPENHOEK.
- 2 . 13 lorries will report to 15th. Field Coy. at 10 a/m tomorrow. Of these lorries - 11 are for the conveyance of personnel, one for the transport of cooking utensils etc. not sent on transport, and one for transport of supplies and forage drawn for consumption on the 12th. inst. The lorries will be drawn up on the road running from ~~2000~~ C.10.a.8.9. to C.5.d.2.8. with the head of the column about 100 yds. West of the latter point. Each lorry will take one officer and 24 O.R.
- 3 . After supplies for consumption on the 11th. inst. are drawn this morning, the supply wagon will join the 15th. Field Coy. and move to the new area with 1st. Line Transport, carrying supplies for transport personnel and animals. This wagon will be detached from the Divisional Train and will remain with the 15th. Field Coy. until it rejoins the Division.
- 4 . Acknowledge.


Captain. & Adjt.,
Headquarters,
5th. Aus. Div. Engineers.

FORWARD TRAFFIC COMMUNICATIONS DURING AN ADVANCE.

LECTURE AT BLARINGHEM ON THE 10th. Sept. 1917.
-----*-----

When the Division wishes to advance the first thing it has to do is to beat the enemy in the trenches opposite them. Having defeated him the next thing to do is to follow him up and defeat him again. Now, the getting up of all the necessary ammunition, supplies, water and Engineer material for the first attack is a comparatively easy matter. The real problem arises when it becomes necessary to advance your communications across the shelled area, in order to get all these commodities up to your fighting troops again, and also to enable the fighting troops themselves to cross this area without undue fatigue. In proportion, as we get more Artillery and more ammunition and employ this in heavy concentration, so will the poached area get more and more difficult to cross, and the problem of pushing forward communications becomes more & more important.

The crises will arise when the Bosche Forces are so attenuated that we are able to make a comparatively continuous advance. Under these conditions the speed with which we are able to push forward our railways, roads, Decauville, and other means of transport will be a vital factor in determining whether we are able to inflict a staggering blow on the enemy or only to fight advanced guard action against his rearguard until such time as he arrives at a prepared position. Now, eventually, the speed of any such advance is controlled by the speed with which we can lay a broadgauge railway, but it does not follow from this that a local and temporary advance may not be made 30 or 40 miles ahead of the broad-gauge, using lorry and horse drawn transport over hastily repaired roads. It must be recognised that such an advance would probably be unable to sustain itself for any prolonged period of time against Bosche counter attacks.

Roads wear out very rapidly especially in wet weather, and require an enormous amount of material to keep them in repair.

The rapid laying of Decauville will extend the life of the roads, but it can hardly be looked on as a complete cure for such a long distance as 30 miles, and, without pushing forward ~~all~~ the broadgauge, a determined enemy would almost certainly gain advantage.

As long as we are able to utilise existing formation for the broadgauge, the rate of 1 or 2 miles per day should be obtainable. In S.W. Africa, where conditions were exceptionally easy, I believe a rate of 5 miles per day was obtained for a short time. For Decauville the rate of 1 mile* per day should be obtainable under fairly bad conditions as existing on this front. With more favourable conditions 2 miles per day should be obtained, but this will probably be at the expense of cutting down the transport of supplies for the line which would probably be congested with construction material, so that

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while this rate might be touched for one or two days it would probably be impracticable to keep it up for any length of time.

The making of a road across a really badly shelled area will probably not exceed the rate of one third of a mile per day for a really well made Macadam road, though this rate will no doubt be exceeded for roads of corduroy or hard wood slabs. This comparatively slow rate of progress will be more easily understood when it is realised that a Macadam road with a soling foundation takes some 3000 tons of material to the mile, which has to be carefully made in two layers and consolidated before traffic can be allowed to pass over it, if it is to last for any time. The repairing of a road, though it does not call for 3000 tons to the mile, yet calls for a very large quantity of material and the supply of this in itself forms a large proportion of the traffic on the road under conditions such as the BAPAUME advance.

A broadgauge railway probably requires not more than half the amount of material contained in a road, even when it has to be ballasted, and if the Bosche is unable to remove the ballast and possibly has to leave the sleepers behind as well the amount of material required to make good may be a tenth or 1/20 of that required for a road. Moreover the railway in itself provides the means of bringing up the necessary material for its own extension without unduly straining the capacity of the line.

The Decauville light railway can come forward at a quarter to a half the allowance for a broadgauge, this being sufficient to allow of the line taking ~~some~~ steam engines and heavy bogeys. Against this must be considered the fact that roads are absolutely essential for the movement and relief of troops, and that when in good condition and fit for lorry traffic they have capacity of say 400 tons per hour with grades of 10% and possibly steeper, whereas the broadgauge railway found the going heavy if the grade was steeper than 2%, and, the light railways did not like grades over 2½%, though I have seen steam engines on light railways working on grades slightly over 4% during the present war.

A further advantage of the railway over the road is that once built it needs very much less material and labour to keep it in repair. The maintenance of a road is a horribly expensive item and when the road is strained a little beyond the limits of its endurance it swallows an enormous amount of material and labour usually without any visible improvement. This is particularly the case when the only material available is broken brick from a ruined village. It is therefore obvious that while roads must continue to be made yet every effort must be made to reduce the traffic on them both by provision of broadgauge and light railway and by so organising the location of troops, dumps, water supply, transport lines, lorry parks, etc. as to reduce traffic to an absolute minimum. During the SOMME operations of last summer

an enormous amount of congestion was due to horses going to water. This was accentuated by the comparatively few large watering points which meant that horses had a considerable distance to walk to water each time. If the horse lines are two miles from the watering point and the horse comes to water three times daily it means that the horses have to do twelve miles in coming and returning from water in addition to their daily work. With congested roads they are probably held up for half-an-hour or more each trip which again accentuates the fatigue of the animals and the congestion on the road. In one case 20 or 30 lorries which had to cart stone from a siding along a mile and a half of road were parked some 7 or 8 miles away from their work. They left their night quarters at 7 or 8 o'clock in the morning and arrived at the sight of their work any time between 11 and 2; wearing out the road; wearing out their tyres; consuming petrol; helping to delay all the other traffic and doing less than half a day's work at the other end. Arrangements were made to park them at the siding, and have one lorry only travel backwards and forwards with rations and petrol, but at the earliest opportunity the lorries reverted to the procedure of coming up daily from their old place. Similar cases have occurred with horse transport. In the siting of dumps the greatest care wants to be observed in all these cases to reduce traffic to an absolute minimum, and particularly not to site horses or wagon lines during winter at a distance from a hard road. The making of roads from a main road to horse lines and dumps has at times utilised large quantities of material which would have been more usefully employed in advancing the roads leading towards the enemy.

Two maxims may be laid down with reference to horse standings and water; first, that no body of horses should have to come more than one mile to water and 2nd., that no body of horses should have to cross a main road to get to water.

Broadgauge railheads vary from some six to nine thousand yards behind the front line.

The heads of roads may reasonably be expected to be kept in good repair within 4000 yards of the front line, while the transportation light railways ~~the~~ is delivering ~~of~~ material 2500 yards behind the front line in what might be described as a fighting sector. This is a great improvement on the conditions experienced on the SOMME last Autumn, and is done in spite of considerably heavier shell fire. The advance made by the light railways transportation dept. during the first few months of this spring has been enormous, their ton mileage having increased by some 13 times its figure at the beginning of the year.

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 So much for the more permanent communications.

Ahead of these we get Trench Tramways; weight about 50 tons per mile; same gauge as the transportation light railways, but usually lighter railway; anything from 9 to 20 lbs. per yard. These probably have to be laid without ballast and drawn by mules or pushed by men.

The capacity of a mule drawn line with 20 truck siding~~s~~ at every half mile may be put at 200 tons per day for which it would~~s~~ require approximately 70 mules and 80 to 100 trucks for every 5 mile length. Mule trains are usually made up of one mule to three trucks, carrying one ton each and called a "Tow". '3 tows working together to form a "Train", One Division works ordinarily two mules to 5 trucks. This worked well~~l~~ enough on grades not exceeding 1/30. For steep~~s~~ grades and particularly if the going ~~was~~^{is} bad owing to rain and mud, ~~more~~ mule power is required. Two mules to three trucks will get over practically all going. On the Beaulencourt Line the mule track was almost entirely dirt which was kept in condition by drainage, but now that material is coming along more freely mule tracks are being made both by hurdles and a specially made duckwalk. This will reduce the waste of mule power very largely and will also have a lot of labour in maintenance, principally in bad weather

Mono Railway has been a good deal talked about from time to time and two or three articles have appeared about it in the R.E. Journal. Its disadvantages are that it forms a fence across the country and it requires special rolling stock and cannot take such heavy loads. To be of practical value therefore it must either be very much lighter than the ordinary twin railway track~~s~~ or else it must be very much more quickly laid. I am not aware of any stiff mono railway giving either of these requirements. Most Mono Railways have really 3 tracks. A centre^{one} to take the load and two side ones which may be only rubbing streaks to prevent sway. Brennans Mono Railway was a true mono railway but he depended for stability on gyroscopic action which meant a special engine in each car, and increased the weight of his rolling stock and the advantage of the mono railways was completely lost. Reduced to its logical conclusion the Mono Railway becomes a wire ropeway and as such a proposition is very largely used as a commercial proposition and is also largely used by the Italians where with their mountainous and rocky country large spans can be ^{covered} carried with comparatively few supports and this can be erected and brought into use infinitely quicker than any twin railway system.

I have not referred here to the fixed mono railway system with hanging loads as it is obvious that this requires frequent supports of considerable weight and stability and though such a mono railway is in existence on a very large scale the type is only suitable in large buildings such as for instance Cold Storage or Large Stables. Whether the wire ropeway will become a paying proposition for ordinary level or undulating country during this war still remains to be seen, but to be a success its weight will have to be reduced to say 10 tons per mile, and the speed of erection will

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have to be very much greater than 2 miles per day. This, in good country which has not been badly shelled, does not seem an impossible proposition at all, but over a poached area very considerable difficulties present themselves, the chief one being to obtain uprights which will remain in the position in which they are placed. These uprights will have to be probably 10' above ground level and when the ropeway is loaded may have to carry from $\frac{1}{2}$ to $\frac{2}{3}$ of a ton with possibly an uneven stress on the rope which will be largely exaggerated when the rope happens to be cut by a shell. All the same the problem does not seem one incapable of solution.

A comparison of the capacity of mule decauville, push decauville, mule pack and man pack is as follows:-

One man carries 50 lbs. with considerable difficulty over bad mud.

One Mule carries from 160 to 200 lbs. and that for a greater distance.

Four or five men push one decauville truck containing one ton.

One mule draws two to three decauville trucks containing one ton each.

Therefore one pack mule = 4 or 5 pack men & possibly 8 to 10.

4 or 5 men pushing trucks = 44 pack men.

1 mule drawing trucks = 88 to 132 men carrying or 10 to 15 men pushing.

During the Beaulencourt advance the mule railway put across about 100 tons per day. This would have made 4 or 5 thousand man loads and probably two relays of men. A long carry detracts enormously from the fighting power of the Division. A man carry of 8/9000 yards between a railhead and a front line practically means that the Div. is out of action. Many failures during this war have been due to an insufficient supply of ammunition or bombs to the front line, and while decauville or mule tracks are not likely to reach the front line yet the sooner they are forward the more man power is freed and the better the chance of the Brigadier or the Battalion commander being supplied with bombs and having sufficient man power at his disposal to be able to send them up. Hence the vital necessity of utilising any and every means available for reducing large carrying parties. A further point to be noted is that trench tramways and tracks ahead of the transportation light railway system must be regarded as temporary expedients to be discarded or picked up and moved forward according to the exigencies of the moment. The point is to lay them as quickly as possible and bring them into use at the earliest possible moment. Twenty tons of ammunition delivered at 2 o'clock one afternoon might be worth several thousand tons the next morning and to start ballasting a trench tramway will usually be to confess that the offensive has finished for the year. An unballasted tramway takes considerably more maintenance than a ballasted tramway, but as it will carry 5/10,000 man loads daily with an expenditure of say 70/80 mules it is well worth even 1000 men for maintenance. To ballast the line without motor traction being available

would probably

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mean one or two days delay at least for every mile of track and would mean that the line was fully employed in carrying ballast instead of carrying bombs.

COMMUNICATION TRENCHES.

In the past these have been rather over done. They are generally useful within the enemy's M.G. zone. They do not afford much protection against shrapnel nor against the ordinary type of shell landing in mud such as on the SOMME. Instantaneous fuze now used by the Bosche may make a considerable difference in this respect and may compel us to use communication trenches much further back. The effect of the instantaneous fuze is that the splinters of the shell radiate horizontally, a very small hole being made in the ground instead of having a big hole in the ground and little more than a column of mud thrown up. Also the instantaneous fuze means less damage to the trench. On the other hand the thicker the concentration of Artillery the less chance ~~is~~ any clearly defined trench has of remaining in existence and the more likely the enemy is to be able to ear-mark certain guns to deal with it every night and render it useless. The Bosche lays down that they should give 8' of cover and he prefers mined subways with 13' of cover over them Both these conditions are very nice but they are more easily obtained by an Army which is following a policy of slow retreat and has at its disposal a large amount of forced labour, than by an army which is on the offensive and which is more humanitarian in its methods of dealing with prisoners and has not got a large amount of enemy civilians population to draw upon.

When C.Ts. are made they should not deviate more than about 1 in 4 from the general direction and the offset should never be more than three times the width of the trench at the top. Straights of 25 yds. joined up by curves are suitable and if the trench is a narrow one for single traffic about 10% of its length should be widened out for passing places so as to have one stretcher passing place in every two straights.

The amount of labour expended in digging C.Ts. is usually nothing compared with the amount of labour required to maintain and revet it, and in some sectors the drainage of a C.T. is a *peckish* job. With the digging and revetting and maintenance all put together this is a factor which varies enormously with the weather, the ground, the water level and the enemy shelling, therefore ^{with} so many possible permutation and combinations of these factors ~~that~~ it is impossible to lay down any hard and fast rule.

On the whole it is probable that light duckwalks for men and hurdle tracks for mules are likely to be considerably more used for at least 90% of the ground to be covered and it is hoped that in future both these will be available in sufficient quantity.

SECRET.
=====5th. Australian Division Order No. 158.Ref;- Sheets 27 &
36a. 1/40,000.15th. Sept. 1917.

1. The 5th. Aus. Division (less Arty. & detached units) will move by march route, in accordance with the attached march table from the BLARINGHEM area to the STEENVOORDE area, and thence to forward areas of 1st. ANZAC Corps.
2. The following distances will be maintained in the march;-

From BLARINGHEM Area to STEENVOORDE Area ;-			
400	yds.	between	Brigades.
200	"	"	Battalions.
100	"	"	Companies.
From Steenvoorde Area to the Forward Area;-			
500	yards	between	Battalions & other Units.
200	"	"	Transport of units & other
100	"	"	Companies. troops.
3. One officer per Battalion will be detailed to keep a look-out for Hostile Aeroplanes. If a hostile Aeroplane is sighted the column will be halted, and the men will be ordered to remain steady at the side of the road and not look upwards.
4. A halt of 10 minutes will be made at 10 minutes before each clock hour. A halt of one hour will be made for dinners at 12 noon on the 17th. inst. Troops will be concentrated for the meal on any stubble or ploughed ground in the vicinity.
5. Administrative instructions will be issued separately.
6. Orders for the movement of Field Ambulances on the 18th. inst. will be issued by the A.D.M.S.
7. Divisional Headquarters, will close on the 18th. Sept. at 12 noon at BLARINGHEM and open at RENINGHELST at the same hour.
8. Acknowledge by wire.

Signed. J.H. PECK, Lt-Col.
G.S., 5th. Australian Divn.

MARCH TABLE ISSUED WITH 5th. AUS. DIV. ORDER NO. 158.

Serial No.	Unit.	Date.	From	To.	Starting Point.	Time.	Route	Remarks.
3.	"C" Brigade Group 8th. Inf. Bde. 8th. Field Coy. 8th. Field Amb. 18th. Co. AASC	17th.	BLARINGHEM Area.	STEENVOORDE Area	As selected by Bde. Group Commander.	As ordered by Bde. Group Commander.	RENENSCURE T.14. a.6.4. - Bavin- CHOVE - OXELAERE - P.4.b.7.3. thence to billeting area as allotted.	Not to enter STEENVOORDE before 12 noon.
7.	"C" Bde. group (as for serial No.3 less 8th. Field Amb.)	18th.	STEENVOORDE Area	WIPPENHOEK Area.	Sheet 27. Q.2.b.0.9.	11 a/m	ABEELE L.34.d.1.4. thence to areas as allotted.	March to be completed by 2 pm. One Battn. via K.36.d.1. 1.2. to area in K.30.c.

8th. Field Coy. AE.

Forwarded for your information.

[Signature]
Captain & Adjt.

SECRET.

Appendix 4.

Headquarters, 5th. Australian Divisional Engineers.

8th. Field Coy. AE
 14th. Field Co. AE
 15th. Field Co. AE.
 5th. Pioneer Battalion.
 File.
 War Diary 2.

ENGINEER INSTRUCTIONS.***28/75/4***

The Tramline from GORDON ROAD to join up with the 1st. Divisional Tramline is cancelled entirely.

When the Division goes into the line stores will be sent up by lorry along the main road to a point near HOOGE where a branch of the 1st. Divisional Decauville runs NORTH to the main road. From approximately this point every effort should be made to get the tramline forward and workable for mules; also to lay a double duck-walk up the centre of the Divisional Area.

8th. Field Coy. are at present in charge of Decauville which will probably be handed over to the 5th. Pioneers when they become available.

14th. Field Coy. will be responsible for duckwalks.

15th. Field Coy. will be responsible for mule tracks.

Officers of 8/14/15 Field Cos. & 5th. Pioneers should get in touch with officers of the 1/2/3 Field Cos. & 1st. Pioneers respectively to ascertain what stores have been found most useful under present conditions and what other stores it might be advisable to get up.

20/3/17.

Lieut-Col.
 C.R.E.,
 5th. Australian Division.

250
War Diary

SECRET.

Appendix 5. 19

Headquarters, 5th. Australian Divisional Engineers.

ENGINEER INSTRUCTIONS.

28/75/5.

When the Division goes into the line 15th. Brigade will be on the RIGHT; 14th. Brigade on the LEFT and 8th. Brigade in reserve.

Probably two strong points per Brigade will be dug after the objective is taken.

14th. & 15th. Field Cos. will be responsible for Engineer Supervision, also for laying out a track in each Brigade area forward from the 1st. Divisional Tracks.

Divisional Headquarters will be at Half Way House. Adjutant Engineers will remain behind with back portion of D.H.Q., probably on Canal in neighbourhood of 8th. Field Coy. present Camp.

Companies must be prepared for this move on short notice.

21/9/17.

[Handwritten Signature]
Capt. P.

Lieut-Col.,
G.S.E.
5th. Australian Division.

8th. Field Coy.
14th. Field Co.
15th. Field Co.
8th. Pioneer Bn.
File 28.
War Diary 2.

App. 620

250

HEADQUARTERS. 5th. AUSTRALIAN DIVISIONAL ENGINEERS,

ENGINEER INSTRUCTIONS.
28/75/7.

10 p.m.
5 p.m.
Birr + roads
24

- 8th. Field Coy. AE.
- 14th. Field Coy. AE.
- 15th. Field Coy. AE.
- 5th. Pioneer Battalion.

The Mule Decauville has been taken over by Corps.

The formation of a Divisional Dump in I.18.b. is abandoned.

14th 8 a.m.
15th 3 p.m.
8th aff.

The Division is responsible for constructing a Plank Road from CHATEAU CORNER forward J.13.a.5.9. J.8.c.2.2. J.14.a.5.6. approximately. This road is wanted very early. Approximately 100 Infantry are expected to report to each Field Coy. tomorrow in time for work at 4 p/m. Beech slabs are available for the road and can be picked up from the main road between BIRR Cross Roads and HOOGE.

The 5th. Pioneers will work on the CHATEAU Corner, GLENCORSE from 4 a/m to 4 p/m.

The 8th. Field Coy. will work from 4 p/m to 4 a/m.

The 14th. Field Coy. will employ such Engineers and Infantry as can be spared from other works in making good the formation of the road from J.7.d.2.1. to J.8.c.2.2.

The 15th. Field Coy. will employ such Engineers and Infantry as can be made available on the portion of the road from J.8.c.2.2. to BUTT approximately J.14.a.5.7.

Turning places for lorries are to be made every 400 yards from CHATEAU WOOD CORNER.

Passing Siding to contain 2 G.S. Wagons; one between each pair of lorry~~s~~ turnings.

14th. & 15th. Field Cos. will place their Pontoon Wagons at the disposal of 8th. Field Coy. unless required for urgent work in connection with their Brigade Sectors, reporting to this office the action they have taken in this matter.

Ans Lang

Lieut-Col. RE.
C.R.E.
5th. Australian Division.

9.30 p/m
22/9/17.

121 b 0.5.

Appendix

7

250
Water Supply

Headquarters, 5th. Australian Divisional Engineers.

Water Supply.
12/67/22

Q.
Q.
5th. Aus. Div.

There are Engineer Dumps and Workshops
at BUSSEBOOM G.21.b.4.6.)

At DICKEBUSCH H.27.c.2.4. At KRUISTRAAT
H.18.d.2.2. [Engineer Material is sent up to BIRR CROSS
ROADS by lorry and by railway and is dumped from BIRR
Cross Roads to HOOGE.

A Branch road from HOOGE through Chateau
Wood to J.8.c.2.2. and J.14.a.5.6. will be pushed on
as rapidly as possible and two or three Engineer Dumps
will be located at intervals along it.

Water points are established by Corps at
I.17.d.9.9., I.11.d.5.3. and I.18.d.0.3. A water
tank at I.18.d.0.3.

It is hoped to establish two wells in the
forward area in three days time.

W. L. ...

Lieut-Col.
C.R.E.
5th. Australian Division.....

22/9/17.

No. 117/46
Date

- MAJOR OPERATIONS. -

Extracts from Preliminary Instructions No. 7.

Ref: Sheet 1/10000.

BECHLAREN.

Headquarters,
21st. September/17

1. (b) The approximate line now held is shown in black on the attached map "F".
2. The next step in the operation will be an advance to the line JOIST FNE inclusive - JERRY TRENCH - JUBILEE TRENCH - line of the road leading to the brick kiln as far as J.27.b.95.10.. The operation will probably be effected in two stages.
3. The boundaries and dividing lines are shown in the attached map "F".
4. (a) The operation will be carried out by the 4th. and 5th. Australian Division. - 5th. Australian Division on the right, 4th. Australian Division on the left.
(b) The attack by the 5th. Australian Division will be made with the 15th. Infantry Brigade on the right and the 14th. Brigade on the left. Each Brigade will be organised on a Battalion frontage and in depth.

COPY OF MOVE TABLE.

1. 14th. Inf. Bde. moves into the line from J.9.d.2.0 to J.9.b.25.75. on 23rd. Sept.
2. 15th. Inf. Bde. moves into the Line from Southern boundary at J.9.d.2.0. to J.9.d.25.75. on the night of 23rd./24th. Sept.
3. 5th. Inf. Bde. moves to CHATEAU REGARD on the night of 23rd/24th. Sept.

EXTRACTS FROM 5th. AUSTRALIAN DIVISIONAL ORDER No. 161.

Ref. Map. Sheet 28.
Belgium 1/40000.

5. The relief of the Divisional Sector will be completed by 8 a.m. on 24th. Sept. At 10 a.m. the Command of the Sector will pass to the G.O.C. 5th. Aus. Div. until this hour Units of the 5th. Aus. Div. in the line will be under the Command of G.O.C. 1st. Aus. Div.
6. Reinforcements and surplus personnel will remain in their present billets until moved to reinforcement Camps under separate orders
8. Divisional Headquarters will be at WALKER CAMP H.27.b.7.7.
9. ACKNOWLEDGE BY WIRE.

[Handwritten Signature]
Lt-Col. R.E.
G.R.E.
5th. Australian Division.

22/9/17.
9.30 a.m.

250

23

"A" Form.
MESSAGES AND SIGNALS.

Army Form C.2121
(in pads of 100).
No. of Message.....

Place of Origin and Service Instructions.	Words	Charge	This message is an a/c of: Appendix No. 7A	Recd. at.....m.	
	Sent			Service.	Date.....
	At.....m.				From.....
	To.....				By.....
By.....		(Signature of "Franking Officer.")			
TO { 8th. Field Co. 14th. Field Co. 15th. Field Co.					

Sender's Number. *****	Day of Month. 22.	In reply to Number.	AAA
--------------------------------------	----------------------	---------------------	-----

Ref. para. 5. Extracts Div. Order 161. Relief will be completed by 8 a.m. 23rd. inst. and Command will pass at 10 a.m. on that Date instead of 24th. inst.

From C.R.E., 5th. Aus. Division.
Place
Time

The above may be forwarded as now corrected. (Z)

Censor.	Signature of Addressor or person authorised to telegraph in his name.
---------	---

* This line should be erased if not required.

10,000

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D

J

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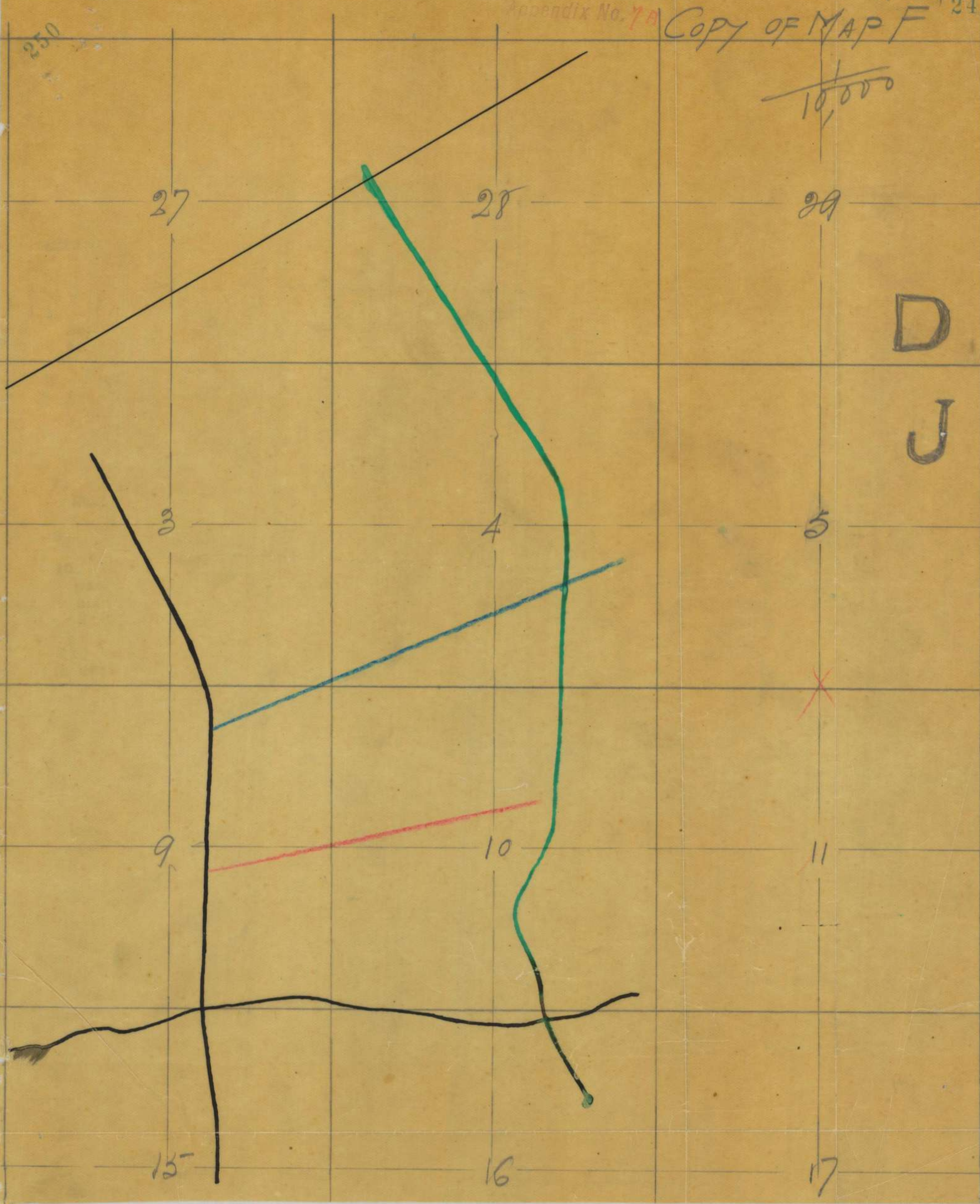
11



15

16

17



*Star Diary**Appendix 7B*

EXTRACTS FROM ADMINISTRATIVE MEMORANDUM No. 22.

1. The 14th. Australian Infantry Brigade (less 14th.M.G. and 14th. Field A.E. Cos) will move to-day, 21st. inst., to CHATEAU SEGARD Area.
6. Supplies of all classes of ammunition will be drawn from the following Divisional Dumps.
 H.23.d.1.9. rear Main Divisional Dump.
 I.24.a.1.7. advanced Main Divisional Dump. (HORNBY DUMP)
 HOOGE forward Main Divisional Dump.
7. Pack saddlery and Yukon Packs may be drawn from HORNBY Dump, I.25.a.4.7.
8. Water tins may be drawn from HORNBY Dump I.25.a.4.7.
10. All surplus stores, blankets, Officers kits and men's packs will be stored in the Transport Lines of the Units concerned. L.T.M. Battery Baggage will be stored with Brigade Headquarters.
11. The nucleus personnel, will with necessary cooking utensils ~~essentials~~, be congregated in one camp in the RENINGRELST staging Area; location of camp and numbers by Units to be wired to Divisional by 8 p.m. on 21st. inst.

ACKNOWLEDGE.

H. Q.,	
5TH AUSTRALIAN	
DIVL. ENGINEERS.	
No.	3/170/19
Date	22/9/17

J. P. ... Capt.
 Capt. & Adjt.,
 for Lt- Col,
 5th. Aus. Divl. Engineers...

ADMINISTRATIVE MEMORANDUM NO. 24.

(2) AMMUNITION SUPPLIES. Supplies of S.A.A., Grenades, Stokes & miscellaneous ammunition will be maintained by Division at the following dumps:-

- H.23.d.1.0. - Main Divisional Dump.
- Hooge - Forward Divisional Dump.

Brigades will take over from 1st. Aus. Div. the dumps in forward areas and establish them in advanced positions.

(3) WATER SUPPLY. Water for troops will be drawn from water points at:-

- I.17.b.9.0. (On mule Track.)
- I.11.d.7.5.
- I.11.d.10.8.
- I.23.b.5.8.
- I.22.b.2.3.
- I.22.b.8.3.
- I.18.d.1.3.
- I.18.b.2.6. (ready in a few days).

Water bottles and petrol tins will be taken from these points by Pack or Yukon Pack to the forward areas. A filled water tin dump will be established in the MENIN TUNNEL (Eastern end) holding 2000 gallons for the use of both forward Brigades. Watering Places for Horses exist in close proximity in all Transport Areas. Extra Water Carts will be allotted to Forward Brigades.

(5) SALVAGE. (a) Corps Main Salvage Dumps are established at
 REMINGHELSST G.34.b.6.8.)
 CAFE BELGE H.29.b.9.5.) For General Salvage.
 De GROENEN JAGER H.22.a.7.9.)
 BRISBANE SIDING H.24.b.2.4. For gun ammunition and empty shell cases.

SALVAGE COLLECTING STATIONS.

- BIRR CROSS ROADS I.17.b.3.9.
- ZILLESBARE I.22.b.6.8.

(b) Forward dumps will be located under Brigade arrangements at points on roads, mule tracks or duckwalks where rations & other stores are delivered. All parties and individual men will be instructed to pick up and lodge salvage at these dumps. Any empty transport returning, whether wheel or pack, will take it to the nearest collecting or main dump. The Salvage Company will be quite unable to deal with the large amount of salvage to be collected, and special parties should be told off by Brigades to carry out this work at such time as the operations will permit. A man from the Corps Salvage personnel is on duty at each advanced dressing station to collect Binoculars, compasses, revolvers, etc. Every opportunity is to be taken in collecting rifles, wire cutters, (all kinds), wiring gloves, Yukon Packs and petrol tins. These should be sent to the nearest Divisional Ammunition dump, if not required for purposes within those Brigades.

(6) VETERINARY ARRANGEMENTS. Animals will be evacuated through the nearest Aus. Mobile Vet. Section at the following locations:-

- 1st. Aus. Mobile Vet. Section - G.34.b.
- 2nd. -dc- G.24.c.0.5.
- 4th. -dc- F.5.a.6.8.

5th. Aus. Mobile Vet Section - G.25.b.9.5.
 Corps Mobile Vet Section - WIPPENHOEK SIDNG.
 If animals are killed in action or die every endeavour should be made to have the animal skinned and carcasses buried. The skins should be forwarded to nearest Mobile Vet. Section at earliest opportunity.

(7). SUPPLY ARRANGEMENTS. The Railhead for Division in RIGHT Forward Area will be DICKEBUSCH. train.

SUPPLIES. Supplies will be drawn from Railhead by ~~same~~ transport and taken to Brigade Supply Dumps, (H.33.a.6.3.) From Brigade Supply Dumps to Q.M's Stores, Train transport will also be used.

1st. Line Transport will be used for taking rations, (done up in ration bags), from Q.M.s' stores to WARRINGTON ROAD, (I.20.c.), where they will be loaded on to pack transport and taken to the vicinity of Battalion Headquarters. For transport from this point forward carrying parties will be organised. It is possible to take supplies even as far as HOOGE by wheeled transport but so far there is no possibility of taking pack transport any further forward than I.20.c, nor is it considered good policy under present circumstances to unload wheeled transport and load Pack Transport at HOOGE or in that vicinity.

If from actual experience it is found that any alternative scheme would be more advantageous to either one or other of the forward Brigades, details of any alternative scheme adopted should be submitted to Divisional Headquarters.

In addition to Supplies normally carried by Units the following special supply arrangements are made for the Division whilst it is in the forward area.

- (a) Rations in Supporting Points held by 1st. Aus. Division. will be taken over by relieving Brigades of this Division.
- (b) One day's iron rations for troops in front line system on scale of one per man. These rations will be carried on the man.
- (c) 3,000 barrage rations, (1,500 for each Brigade), for troops inside a possible enemy barrage.

The supply situation at noon on any given day will be as under:-

On the man.

Unconsumed portion current day.
 1 iron ration.
 1 emergency ration.

Held Regimentally.

1 day.

With Divisional Train.

1 day.

When rations referred to in para.7(b) and (c) are consumed a corresponding number will be written off by S.S.O..

SUPPORTING POINT RATIONS.

On taking over rations in Supporting Points Brigades or Units will give a receipt, a copy of which will be forwarded to Divisional Headquarters. A guard must be placed over all such rations, and none will be issued except on a requisition signed by an Officer.

BARRAGE RATIONS.

Great care must be exercised by Brigades in selecting a sight for these. All Officers should be warned of the existence

(3)

250

of those rations and should know the exact locations. Reserves of water in petrol tins will also be deposited with these barrages rations.

PACK TRANSPORT.

The 5th. Australian Divisional Pack Transport Troop is concentrated at H.23.d central. Staff Captains, Q.M.s. and Transport Officers of Units requiring Pack Transport will arrange direct with the O.C. Pack Transport, or, if necessary, through "Q" Division.

SUPPLY DUMPS.

The Supply Dumps whilst in forward area will be at H.33.a.6.3..

8. TRENCH STORES.

A careful check will be made of all trench stores taken over from 1st. Aus. Division.

Particular attention must be paid to GAS APPLIANCES, WIRE CUTTERS LONG, WIRE BREAKERS, WIRE CUTTERS S.A., HEDGING GLOVES, GUM BOOTS. A receipt will be given and taken for all such stores taken over, and copies forwarded to D.H.Q. by 6 p.m. 26th inst.

9. PACK SADDLERY.

Pack Saddlery will be obtained from Main Divisional Dump at H.23.d.1.0.. Every care must be taken that, when unloaded, all equipment such as Pack Ropes, lashings etc. are returned to the driver.

10. YUKON PACKS.

YUKON Packs will be supplied from Main Divisional Dump at H.23.d.1.0. and any in possession and not required will be returned to this dump.

8
14
15
Spencer

Forwarder please acknowledge

[Handwritten signature]
Capt R. R. [unclear]

H. Q.	
5TH AUSTRALIAN DIVL. ENGINEERS.	
No.	3/170/21.
Date.	23.9.17

War Diary

Appendix 7D

SECRET.

ENGINEER INSTRUCTIONS.

28/75/8.

- 8th. Field Co.
- 14th. Field Co.
- 18th. Field Co.
- 8th. Pioneer Bn.

8th. Field Company will select site for Divisional Dump from Divisional Tramline about 1.18.b. and will be responsible for this until such time as the 8th. Pioneers return to the Division. The 8th. Pioneers will then take over both Tramline and Dump. As soon as the Line is through to this point sand-bags should be got up in considerable quantities.

10.45 a.m.
28/9/17

J. J. [Signature] Capt

Lt-Col. R.E.
C.R.E.
8th. Australian Division.....

250

SECRET.

5th. Australian Division.

Extracts. 5016/52.

MAJOR OPERATION.
Extracts from
PRELIMINARY INSTRUCTIONS No.9.

CONSTRUCTION OF STRONG POINTS & EMPLOYMENT OF R.E. & PIONEERS.

Strong Points.

(1) The 15th. Infty. Bde. will construct strong points approximately at (K) J.10.c.6.4. (L) J.10.a.2.1.

The 14th. Infty. Bde. will construct strong points approximately at (M) J.10.a.5.5. (N) J.10.a.6.9.

"K" Strong Point should be so situated as to sweep the Northern Side of the Spur running S.E. to provide a field of fire up the stream running North from J.10.d.3.5. and also the road running North approximately Central across J.10.

"L" Strong Point should be situated so as to sweep the stream running between J.10.d.8.1. and the slopes on both sides. It should also cover the road junctions at J.10.a.10.10.

"M" Strong Point should be situated to sweep the stream to J.10.d.8.1. and also both the spurs and also to bring fire to bear on troops advancing from the high ground in the N.W. corner of J.10.b.

"N" Strong Point should be sited so as to cover the open ground in J.4.c. and also to bring fire to bear on troops coming over the slope. The Butt in the N.E. corner of J.10.a. should have positions prepared for three or four Lewis Guns.

C.R.E. will provide Engineer Supervision.

WIRE.

(2) A continuous line of French Concertina Wire is to be fixed along the whole front of the line of posts.

A continuous band of barbed wire apron fence is required in front of the line of strongpoints.

Each line of wire is to be provided with suitable covered gaps to enable troops to counter attack.

C.R.E. will supply engineer supervision.

Engineer Liaison Officers.

(3) (a) Officers Commanding Field Cos. affiliated to Brigades Areas will be present at Brigade Headquarters during operations in order to keep the C.R.E. fully informed of Brigade requirements and to assist the Brigadier with any Engineer information or advice he may require.

(b) The 14th. and 15th. Field Cos. are affiliated to the Left and Right Brigade Areas respectively.

The 8th. Field Coy. and 5th. Pioneer Battalion. will be held in reserve.

TRACKS.

(4) The C.R.E. will arrange for the marking out of one track for each Brigade. Route to be marked with wood pickets painted white round the top. Signboards with Right Brigade

Route, or Left Brigade Route respectively will be placed at about every 150 yds. These tracks will be improved by ditching and draining as opportunity offers.

- (5) The C.R.E. will arrange to supply Bridging Material for the crossing of POLYGOEBEEK.

5th. Australian Divn.
24th. Sept. 1917.

=====

ENGINEER INSTRUCTIONS.
No. 49/29/20 .

- (1) Reference the above :-

The 14th. and 15th. Field Cos. will supply the necessary supervision for Strong Points and will mark out the track each in their own areas.

- (2) The Adjutant will arrange for supplying 15th Infantry bridges to 15th. Company Dump and 5 to 14th. Company Dump in GLENCORSE WOOD for delivery to Brigades as required.

- (3) Bulk stores will be sent up by the Adjutant and divided equally between the 14th. and 15th. Dump in GLENCORSE WOOD. Small stores will be sent to GLENCORSE WOOD or drawn by the Companies from KRUISTRAAT by arrangement between O's.C. Cos. and the Adjutant.

- (4) Hurdles and barrel stave matting will be sent up to GLENCORSE WOOD Dump in case marshy ground is encountered.

Acknowledged

R.E.

Lt-Col. R.E.
C.R.E.

5th. Australian Division..

10.45 p.m.
24/9/17

8 F Co
14
15
5 Ps.
Office copy ✓
from Diary (2)

5th. Australian Division Administrative
Memorandum No. 25.
24/9/1917.

(1) Ordnance. An advanced D.A.D.O.S. has been established at DICKBUSCH, H.27.d.9.0.

(2) Veterinary Arrangements. (Para 6) of Adminis. Memo. 24 dated 22/9/17 is cancelled, and the following substituted:-

"Sick animals from units east of DICKBUSCH will be evacuated to advanced post 5th. Aus. Mobile Vet. Section, at H.33.c.2.8, sheet 28., and from Units West of Dickbusch direct to 5th. Aus. Mobile Vet Section at I.24.a.0.5. sheet 27. Sick horses will not be sent to other mobile vet. sections except by direct order of a Vet. Officer. Every endeavour should be made to have animals that are killed or die skinned and the carcasses buried. The skins will be sent to the 5th. Aus. Mobile Vet. Section at its advanced post.

(3) R.E. Stores. Engineer Workshops - BUESBOON, G.21.b.4.6.
" Dump Dickbusch H.27.c.2.4.
" " KRUISSTRAAT H.18.d.2.2.
" " BIRK CROSS RDS.
" " HODGE.

A branch road from HODGE through CHATEAU BOOB to J.S.c.3.2. and J.14.a.3.6. is being pushed forward rapidly. Two or 3 Engineer Dumps will be located at intervals along it.

(7) Traffic Restrictions. No change in arrangements detailed in C.M. no. 48 of 22nd. Inst. except Para 1, sub para ii which amend to read as follows:-

"(ii) Transport on all roads East of line MENINGATE - SHRAPNEL CORNER.

(a) By Day. - Groups of not more than 2 wagons or lorries at 100 yards interval between groups.

(b) By Night. - Groups not more than 6 wagons or lorries at 100 yards interval between groups.

and

Para 3 of same circular memo. which amend to read as follows:-

"(iii) Troops. - Movement of troops within the Corps Area is subject to the following restrictions:-

(a) East of a N. and S. line through OUDERLOON (G.50.c.3.7.) as far forward as road CAPE BELGE to DEN GROENEN JAGER CABY, troops will not move in columns consisting of more than one company, and a distance of 200 yards will be maintained between Cos. moving in the same direction along one road.

(b) East of Cape Belge - Den Groenen Jager Road and up to Line MENINGATE to SHRAPNEL CORNER, troops will not move in column consisting of more than 1 platoon, and a distance of 100 yards will be maintained between platoons moving in the same direction along one road.

(c) East of the Line MENINGATE to SHRAPNEL CORNER parties of troops will consist of no more than 12 all ranks. This is subject to tactical considerations.

Field Coy.

For information & guidance.

Capt. & Adjt.

5th. Aus. Divl. Engineers.

24/9/17.

250
WHD

Appendix 10.33

SPECIAL ENGINEER ORDER No. 202/4.

8th. Field Co.
14th. Field Co.
18th. Field Co.
5th. Pioneer Bn.
File.
War Diary.

The following is a copy of a letter received from Chief Engineer 1st. ANZAC, which the C.R.E. has much pleasure in circulating for the information of all ranks.

" 190/185
22/9/1917.

" Army Commander's appreciation of the Engineers and the Pioneers work previous to and during the recent IPRES and Battle of 20th. Sept. 1917.

" C.R.E.
5th. Aus. Div.

Major-Gen. CLUBB, C.R. 2nd. Army has personally conveyed to me a message from the Army Commander, expressing the A.G.'s. appreciation of the excellent work done and services rendered previous to and during the battle of the 20th. Sept. 1917 by the Engineers and Pioneers of this Corps.

In asking you to inform all ranks under your command of this encouraging message, I wish to add my congratulations and to thank every officer and man for his individual efforts.

Sgd. A.J. De Lotbiniere, Brig-Gen.
Chief Engr. 1st. Anzac Corps. "

24/9/17.
202/4.

Lieut-Col.,
C.R.E.
5th. Aus. Division.

EXTRACTS.

from

8th. AUSTRALIAN DIVISIONAL ORDER NO. 102.

Ref; Sheets WESTROCK
& SHREWSBURY FOREST,
1/10900.

24th. Sept. 1917.

(1) 1st. Anzac Corps in conjunction with the Corps North & South will attack the enemy on "K" day.

(2) OBJECTIVES. (a) There will be two stages in the operation - each stage forming one objective. These stages are shown on the attached map "J". The first stage or objective in RED, the second stage or objective in BLUE.

(b) Troops will consolidate on the Blue Line under cover of the barrage. Subsequently the barrage will be moved forward when outposts will be established.

(c) When the final protective barrage ceases at 0 plus 132 minutes, patrols properly supported will be pushed forward some 300 yards all along the Divisional Front. The location of these posts will be communicated immediately to Divisional Headquarters in order that S.O.S. Lines may be adjusted accordingly.

(4) FLANK. 8th. Pioneers will have special parties ~~attached~~ *CRE's* detailed for securing the right flank in case of emergency. 8th. Field Coy. for the left flank. Instructions for these units are issued separately. *Order*

(5) ASSEMBLY POSITION (c) All assaulting troops will be in their assembly position 45 minutes before ZERO.

(6) ARTILLERY (b) The 18 - pr. Artillery Barrage will be put down 150 yards in front of the Infantry Lines at departure at ZERO hour and will commence to move forward at ZERO plus 3 minutes.

(g) As each gun in the 18 pr barrage reaches the protective barrage line for each successive objective, it will fire three smoke shells in quick succession to indicate to the Infantry that they have reached their objectives.

(8) DIVISIONAL RESERVE. (a) The 8th. Aus. Inftry. Brigade (less M.G. Coy.) in Divisional Reserve will, by zero hour be distributed as follows:-

- Headquarters, Half Way House
- 1 Battalion " " "
- 3 Battalions Chateau Segard Area.

(b) They will be held ready to move at any time up to ZERO hour.

(9) STRONG POINTS. Strong Points will be constructed by the 15th. and 14th. Aus. Inftry. Brigades as under:-

- 15th. Inftry. Bde: K - J.10.c.6.4.
- L - J.10.a.2.1.
- 14th. Inftry. Bde. M - J.10.a.8.8.
- N. J.10.a.6.9.

(In accordance with G.R.E. Instructions 49/22/20)

CRE's

(11) CONTACT AEROPLANE (a) Contact aeroplanes will be in the Air approximately at the following times:

250

(2)

ZERO plus 55 minutes (Red Line)
Zero plus 152 minutes (BLUE Line).

(b) Leading Infantry will be ready to light Red Flares and wave Watson FANS at the above hours as soon as aeroplanes call for the flares by means of a BLAXON horn or WHITE VERY LIGHTS.

(c) Contact planes will be distinguished by a black streamer on the rear edge of the left wing.

E X T R A C T
from

PRELIMINARY INSTRUCTIONS NO. 11.

ARTILLERY BARRAGE.

1. (a) The barrage will be put down at ZERO 150 yards in front of our forming up line. The forming up line will be as shown on the barrage map, which has already been issued separately.

(b) The barrage will move from its protective position in front of the Red Line at 0 plus 100 minutes. Prior to movement, it will be increased in intensity, and the troops will move close up under the barrage at this signal.

(c) The rate of movement from the RED to the BLUE Line will be 100 yards in 8 minutes.

14. SYNCHRONISING WATCHES. Watches will be synchronised.

15 ACKNOWLEDGE.

- To 8th. Field Coy.
- 14th. do
- b 18th. do
- 8th. Pioneers.

astoy

H. C.	
5TH AUSTRALIAN DIVL. ENGINEERS.	
No.	1/8/51.
Date	25.9.17.

Lieut-Col.
G.R.E.
8th. Aus. Division.
25/9/17.

250

W 10

Appendix No. 11

"A" Form
MESSAGES AND SIGNALS.

Army Form C. 2121
(in pads of 100).
No. of Message.....

Prefix	Code	m.	Words	Charge	This message is on a/c of:	Recd. at.....
Office of Origin and Service Instructions.						Date
Secret			Sent	Service	From
			At.....			
			To.....			
			By.....			
(Signature of "Franking Officer.")						By

TO	8 th Field Co	5 th Transport	
	14	"	241
	15	"	Don't know

Sender's Number. * HFI 166	Day of Month. 25	In reply to Number.	AAA
-------------------------------	---------------------	---------------------	-----

1st Amendment to Extracts from
3rd Div Order No 162
(CRE's 1/8/51)

Para 2 Subpara (c) line i
for 0 plus 132 minutes
and 0 plus 327 minutes

acknowledged

From	ORL	
Place		
Time		

The above may be forwarded as now corrected. (Z)

Ypbo... Capt

Censor. Signature of Addressee or person authorised to telegraph in his name

* This line should be erased if not required.
(227) Wt W492/M1647. 50,000 Pads. 5/17. A.C.Ltd. (E 1187)

War Diary

REPORT ON WORK OF ENGINEERS AND PIONEERS FOR
OPERATIONS OF 25/26th. September 1917.

Prior to the operations energies were directed on the 24th. to planking and draining CHATEAU WOOD - GLENGORSE road.

On the 25th. Engineer and Pioneer labour was divided between this road and the continuation track to POLYGON VELDT, and the getting out of Engineer Stores, chiefly wiring material.

The 14th. and 15th. Field Cos. were affiliated to the Left and Right Brigade Areas respectively for forward work. The 8th. Field Coy. and 5th. Pioneer Battalion were used on back work and were held in reserve on operation day.

About 500 yards of planking was laid on the CHATEAU - GLENGORSE road in the first 24 hours. The next 24 hours progress was somewhat less owing to the shelling of the Main Road between HOOGE and BIRR, and consequent blockage of traffic, but, when work ceased on the road at 3 a/m on the 25th., to permit of Engineer Stores being carried up, the road was through to a couple of hundred yards of GLENGORSE WOOD and the unplanked portions were on sufficient hard ground to carry wheeled traffic during fine weather.

A well was commenced in NONNEBOSSCHEN WOOD and was driven down to water bearing sand. ^{4' of good water obtained.} Unfortunately this well was completely blown out during the Bosche attack of the 25th. which also caused 14 shell holes in the plank road. These holes were all repaired by 2 a/m on the 26th. The accuracy of the enemy shelling on the HOOGE-BIRR road caused considerable damage with congestion of traffic and great difficulty was experienced in consequence in getting up Engineer Stores.

On the day of the attack the 14th. Field Coy. in the Left Brigade Area marked and formed a track from J.9.b.3.3. to J.10.a.5.6. to about 100 yards from the front line, and dug two strong points - "M" and "N"; made a Lewis Gun position on the Butt; brought up considerable quantities of wiring stores and provided engineer supervision for a continuous row of French concertina wire to the front line and a single apron fence of barbed wire and screw pickets for the RED line. This work was put in hand during the day and Major Bachtold, the O.C., 14th. Field Coy. made a personal inspection of the wiring arrangements during the late afternoon and evening. *Work was stopped by counter attack about 7 p.m.*

In the Right Brigade Area the 15th. Field Coy. had made similar arrangements, but there was considerable delay with StrongPoints, partly owing to the Bosche attack of the 25th. and partly owing to the failure of the Division on our Right to get forward and heavy fighting on our right front which involved the attached infantry carrying party in the battle. Two tracks were marked out early in the day, and, a second track being necessary on account of the branch of the POLYGONBEEK cutting the Brigade front. One strong point was put in hand early and completed. The site of the other * was not captured ~~and~~ ~~was~~ ~~in~~ ~~the~~ ~~pos.~~ The heavy fighting of the 25th. & 26th. rendered it necessary for one company of the Pioneers to be detailed to assist in wiring the front at night.

Appendix No. 12

(2)

During the day the Pioneer Battalion and the 8th. Field Coy. were held in reserve. Each of these units having had a specific flank allotted to it previously to study the ground and consider the location of defensive lines in case of emergency threatening on either flank of the Division. Luckily these precautions proved unnecessary.

Tracks were marked out with wooden pickets painted white at the tops and also with Notice boards marked right and left brigade route respectively.

During the night 600 yards of duckwalk track was laid from the Cross Roads of the CHATEAU - GLENCORSE & WESTHOEK towards NONNE-BUSSCHEN WOOD. Repairs were effected to GLENCORSE WOOD ROAD. Considerable quantities of Engineers stores were carted up to the head of the road. Barbed wire fence was put in to cover our post on the CAMERON SPUR running through J.10.c.1.1. to J.10.c.3.4.

Lieut-Col.,
E.R.E.

5th. Australian Division.

26/9/17.
3/170/21

app. B250

Subject.	Location.	Particulars and Progress.	Remarks.
<u>Roads.</u>	Chateau Wood - Glencorse	On 24th. 520 yards planking laid. Continuation track to POLYONEVELDT made. On 25th. road completed to within 200 yards of GLENCORSE Wood. 14 shell holes on new plank road repaired. General repairs to Glencorse Wood Road.	Also drainage.
<u>WELLS.</u>	NONNEBOSSCHEN WOOD	Well driven down to water bearing sand. Four feet of good water obtained.	This well completely blown out on 25th. by enemy shelling.
<u>WIRE.</u>	Front & Second Line.	Materials sent up for wiring front and 2nd. Lines and the work commenced.	
<u>Tracks.</u>	Left Brigade Area Right Brigade Area From Cross Roads of CHATEAU =Glencorse & Westhoek towards NONNE BOSSCHEN HOOGE	Track marked and formed from J.9.b.3.3. to J.10.a.5.6. to within 100 yards of front line. Tracks marked out; two necessary owing to POLYONEBEEK cutting Brigade Front. 600 yards duckwalk track laid.	Tracks marked out with wooden pickets painted white at top and notice boards shewing Right Brigade Route and Left Brigade route respectively.
<u>STORES.</u>		Considerable quantities of Engineer stores carted up to HOOGE R.E. Dump and to Head of Glencorse Road.	
STRONG Points.	J.10.a.5.5. J.10.a.6.9. J.10.a.2.1.	Strong point "M" constructed) One Lewis Gun " " "N" ") position made on the Butt in the same locality. Strong Point "L" completed.	"M" abandoned as too wet.

Lieut-Col.,
C. R. E.
5th. Australian Division.....

Appendix No. 13

250

Survey by 14th. Field Coy. Engineers, 5th. Australian Divn.
DUGOUTS IN 14th. BRIGADE AREA.

28/9/17.

MAP LOCATION.

J.10.b.1.7.	Fill Box	4 bunks.
J.10.a.7.8.	Dugout in BUTT	96 bunks, plan attached. (forwarded later)
J.10.a.9.9.	Fill Box	12 bunks.
J.4.c.1.1.	Fill Box	4 bunks.
J.10.a.5.6.	"	End blown in - 6' x 4' x 4'
do	"	Good - 8 x 8 x 6'
do	"	Sides good, roof not on 10 x 8 x 6'
J.10.a.0.2.	2 Fill Boxes	Good 10 x 10 x 6' -
J.10.c.0.9.	Fill Box	Good 12 x 12 x 6'
do	do	Good do
J.9.a.9.4.	do	" 10 x 10 x 6'
do	do	Splinter proof only, requires cleaning out 10 x 8 x 6'
J.9.a.5.1.	do	4' of water inside, easily drained, otherwise good. 12 x 12 x 6'
J.9.c.0.5.	do)	S.W. end blown in. Require ed pumping out. Servicea- ble now as dugouts, both 12 x 12 x 6
do	do)	Roof badly damaged but intact, 1' water. Not likely to withstand direct hit. 12 x 10 x 6.
do	do	(slightly damaged, service- able, 10 x 8 x 6
do	do	6 compartments, slightly damaged. Serviceable. 6 x 4 x 4
do	do	Splinter Proof. 6 x 6 x 4
do	do	Good. 12 x 12 x 6
do	do	" 10 x 8 x 6
do	do	" 10 x 8 x 6.
J.9.c.2.5.	do	Good 10 x 8 x 6.
J.8.d.8.9.	do	do 6 x 6 x 4'6"
do	do	do 6 x 6 x 4'6"
do	do	Dressing Station, full of Bosch dead, good. 10x6x16.
J.8.d.5.6.	do	Damaged. Splinter proof only. In use, 12 x 10 x 6.
J.8.d.5.4.	do	Full of water. Otherwise serviceable. 15 x 10 x 6.
J.8.d.3.7.	do	Back end front walls out Ends & roof standing. 15 x 10 x 6.
do	do	3' water. Otherwise serviceable 15 x 10 x 6.
do	do	Good. requires cleaning out. 15 x 10 x 6.
J.8.c.9.5.	do	Splinter Proof only. 10 x 10 x 6.
do	do	Good. 10 x 10 x 6.
do	do	Splinter Proof only etc 6 x 10 x 6

Dimensions gave floor space in feet.

Sgt. H. Baxby
 was
 in 14th Ha Coy

ENGINEERING NOTES 27th. & 28th. SEPTEMBER 1917.

ROADS. GLENCORSE WOOD - repaired and maintained.
 HERR CROSS ROADS TO HOOGE - widened repaired & cleared.

DUCKWALKS. From J.7.a.9.1. to J.8.d.7.5. 1,300 yards laid.

WELLS. "A" - J.8.c.40.05. yields 200 gallons per hour.
 "B" - J.14.a.45.90. " 300 gallons per hour.
 "C" - J.8.d.85.15. destroyed by shell fire. Another well being sunk close by.
 Covered well found at J.9.d.1.0. Sample sent & tested by M.O.
 One NORTON TUBE WELL destroyed by shell fire.

WIRING. In LEFT Brigade Sector materials for completely wiring the BLUE Line with French Wire and the RED Line with double apron fence were stacked at BUTT by 9.20 p/m on the 27th.

By morning 28th. BLUE LINE was wired with 2 lines of French Wire 400 yards and 500 yards respectively.
 RED Line wired with double apron fence about 700 yards.

**

DUGOUTS. During the 28th. inst. a survey of dugouts in LEFT bde. Area including Plan of Large Dugout and Butt is being made. (survey complete - herewith)

**WIRING. In Right Brigade Sector 400 yards French wire from road at J.16.b.2.9. to POLYGONNEBEEK J.10.d.15.55 has been finished.

H. C.	
5TH AUSTRALIAN DIVL. ENGINEERS.	
No.	68/156/24.
Date.	28.9.17.

Lieut-Col.,
 C.R.E.,
 5th. Australian Division.

250

Headquarters, 5th. Australian Divisional Engineers.

H. Q.
5TH AUSTRALIAN DIVL. ENGINEERS.
No. 51/167/a.
Date 17/

Headquarters,
5th. Aus. Division.

Reference your A57/4809.

The following officer and O.Rs. are nominated to relieve Officer and O.Rs. at Engineer Training Depot, A.I.F. Depots in U.K. They will proceed to BRIGHTLINGSSEA on the 1st. October. May travelling warrants and Instructions for the move be issued please.

8th. Field Coy. No.140 Cpl. W.B. Conn.

14th. Field Coy. Lieut. H.W. Fry.
No.2606 Sgt. J.T. Wallis.
No.5390 Cpl. W.F. McIntosh.

18th. Field Coy. No.3188 Sgt. Forbes.
No. 29 Cpl. R.H. Pottenger.

Lieut-Col.,
C.R.E.

5th. Australian Division.

29/9/17.

Copy on 1st. Oct. to:-
Hdqs. A.I.F. attached 1st. Anzac Corps.
Commandant A.I.F. Depots, U.K.
A.I.F. Headquarters, London.