

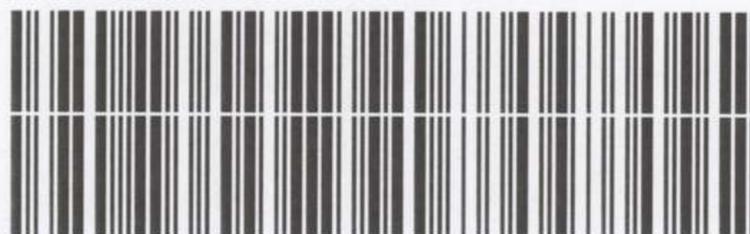
AWM4
Australian Imperial Force unit war diaries,
1914-18 War

Tunnelling & Survey

Item number: 16/2/20

Title: 1st Australian Tunnelling Company

August 1918



AWM4-16/2/20

CONFIDENTIAL.

ORIGINAL.



Australian Imperial Force.

WAR DIARY

OF

First Australian Tunnelling Company.

FOR

August 1918.

Signature of Officer compiling

White H.

Signature of Officer Commanding

S. Anderson M.C. DE

August 1918

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

(Erase heading not required.)

1st Australian Tunnelling Coy.

Remarks and references to Appendices

Summary of Events and Information

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
	1		Hot and sultry	
Hospice	2		Rained all morning. Took over work at 12 dugouts in C. Division area from 2nd Australian Tunnelling Coy.	
St Victor				
RIVERY	3		Fine + warm. Dugout for Brigade H.Q. some West of Le Hamel commenced by No 4 Section. Rush job, work to be completed by 8th inst.	
AMIENS				
	4		A little rain during the day. Owing to work being rushed the new infantry training Squad was sent back to Sections.	
	5		Heavy rain. Comforts & food stores distributed in accordance with Coy Order of 4-8-18. Coy Operation Order No 6 issued in connection with forthcoming offensive. 1 Sapper slightly wounded.	2 pt. 7 2 pt. 3.4
	6		a little rain	
	7		Fine. Special instruction No 6 issued in connection with coming offensive.	2 pt 5+6
			<u>Weekly Summary</u> Strength 20 off. 599 O.R. In dugout work during the week 48,332 cubic ft. were mined and 850 c ft. of open cut excavated. Difficulty was experienced in obtaining fatigues and working parties owing to preparations for the offensive.	

AMS

August 1918

WAR DIARY

Army Form C. 2118.

3874

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.

(Erase heading not required.)

1st Australian Tunnelling Coy.

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
RIVERY	8		<p>Fine day. Offensive successfully launched. 4 parties of 1st Australian Tunnellers each in charge of 1 Officer, advanced at zero plus 20 minutes. Appendix 4 contains copies of the reports from each officer engaged. Also preliminary instructions and information from C. E. Corps and C. B. E. 4th Australian Division, and a short comprehensive report from C.O. of this unit, Major Anderson Major E. S. Anderson M.C. covering the composition of the parties engaged from this unit, the work done, and the results obtained.</p> <p>2 Sappers slightly wounded.</p>	4
	9		Fine and warm, all work on depots discontinued.	
	10		Fine. Operation Order N° 7 issued in connection with work on Broad Gauge line at Villers Bretonneux.	2 fol. 1+2.
	11		Fine. Sections commenced work at Villers Bretonneux with 4th Canadian Ry. Coy.	
	12-14		Fine & warm. Sections working as above.	
			<p><u>Weekly summary</u> Strength 21 off. 607 O.R.</p> <p>3600 c. ft. were mined in depot work, and in addition 1144 c. ft. by 11th F. Coy. A.E. under supervision by this unit. During the week a large number of localities were thoroughly examined for mines, and from 30 to 40 land and tank mines were located and destroyed.</p>	<p style="text-align: right;">MBS</p>

August 1918.

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.

(Erase heading not required.)

1st Australian Tunnelling Coy.

334

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
	15			
RIVERY	18		4 Fine and warm	
	19		Cloudy and mild	
Amiens	20		Fine + warm	
	21		Hot.	
			<u>Weekly summary</u>	
			Strength 22 Off. 607 O.R.	
			During the week the Unit was engaged with 4th Canadian Ry. Coy. reconstructing the Broad Gauge line from Villers Bretonneux Eastward. The work consisted of clearing away debris, forming + grading, and removing and replacing damaged rails + sleepers. On 17th inst H. Manton proceeded to the rest camp at Lieport. H. Bonar having been there for the previous fortnight. A summary has been prepared showing work done by this unit while on G. H. Q. line. A copy is included in this month's diary.	
				7

1/18/18

August 1918

WAR DIARY

Army Form C. 2118.

354

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.

(Erase heading not required.)

1st Australian Tunnelling Coy.

Summary of Events and Information

Remarks and references to Appendices

Place	Date	Hour	Summary of Events and Information	Remarks and references to Appendices
RIVERY (AMICHS)	22 23 24		Hot, remaining days of month fine & warm. Special Order issued re proposed meeting point. (This proposition fell through) Sgt. Gartrell was informed of his promotion to Commissioned rank, 2nd Lt. as from 16/3/18. He was introduced to the Off Men by the C.O. and congratulated on his promotion.	2 fol. 859
	28		Summary for Week Strength Off. 20 O.R. 599. In addition to work on Villers Brestonneux line the following work was carried out during the week - Building winter proof shelter for Corps H.Q. at Passen sur Somme, Salvaging R.E. stores from captured R.E. dumps, Repairs to Well at Bayon Villiers, and small jobs such as the loading of bridging material at Corbie Ry. Station.	1
	29		Orders received to shift Headquarters Camp.	
	30		H.Q. Camp transferred from Rivery to 62° R.A.d. 7.7 about 1000 yds. N.E. of Chassignolles. Orderly room working at new camp under hastily rigged tarpaulin. during afternoon & evening a building was procured at Rivery for the storage of surplus stores and baggage in view of the prospect of rapid movement forward. Lt. Gartrell was detached to 257 Tunnelling Coy R.E.	
	31		Erecting Offices at new Camp.	

Handwritten signature or initials.

WAR DIARY

OF

1st. AUSTRALIAN TUNNELLING COMPANY.

FOR

AUGUST

1918

LIST OF APPENDICES.

No.	Subject.
1.	Weekly Returns of Work done.
2.	Special Orders and Instructions.
3.	Instructions etc. from Higher Authority.
4.	Report on operations of the Company during the advance of 8/8/18.
5.	Casualties and Sick.
6.	Officers and O.R. sent to Instructional Schools.
7.	Summary of Work done on G.H.Q. Line.

SECRET

APPENDIX I
WEEKLY PROGRESS REPORT.

(SERVICES OTHER THAN MINING.)

Strength of Company
(From A.F. B.213.)

	Officers	O.R.
R.E.	20	599
Permanently Attached Infantry...	-	-
Temporarily Attached Infantry...	-	-
Totals	20	599

Date 7-8-18

1st Aust. Corps.

"B" Division.

1st Australian Tunnelling Company.

Coy No.	Designation of Working No.	Nature of Work or Service	Locality	Map Reference Sheet 68D	Section Employed No.	Days Worked	Shifts per Day	PERSONNEL		O.R.	Probable Date of Completion	REMARKS Circumstances affecting Progress (Working Parties, Material, Equipment, Transport, Enemy Activity, etc.)
								Per-Shift	Average Working Party			
								R.E.	P.A.I.	P/Shift		
113	O.15 -5	H.A.Bty H. . .	SE Aubigny	015487	1	7	3	1	-	8	-	Great difficulty in obtaining fatigues from Artillery. Men being constantly taken away for Gun work
126	O.16 -3	"	S Fouilloy	016424	1	4 ² / ₃	3	1	-	9	-	
125	O.16 -3	"	"	016424	1	4 ¹ / ₃	3	1	-	7	-	
116	O.18 -3	"	SE "	018418	1	7	3	1	-	8	-	
117	O.21 -3	"	S Aubigny	021413	1	3 ¹ / ₃	3	1 ¹ / ₆	-	5	-	
109	O.11 -1	Signal Test Pt. DO	R Fouilloy	011Cent	1	3 ¹ / ₃	3	2	-	-	-	Unable to get fatigues from Signals or Brigade It has been necessary to use 1st Aust. Tunn. Coy. sappers as fatigues.
123	P.15 -1	Bn H. . .	H Hamel rd.	015433	1	5	3	4	-	14	-	
102	P.14 -2	Bn H. . . (Double)	NV Vaire rd	014Cent	1	6 ² / ₃	3	4	-	11	-	
103	P.14 -1	H.A.P.	"	014487	1	5 ² / ₃	3	4 ³ / ₄	-	9	-	
128	P.13 -2	Relay Post	Hamelet	013414	1	6	3	4	-	4	-	
204	I.14 -4	Obsv. Group	S Lahoussaye	014424	2	2 ² / ₃	1	4	-	-	-	working parties very erratic.
206	O.12 -3	H.A. Battery	S Hamolet	012450	2	2	3	2	-	5	-	
207	O.12 -4	"	"	012453	2	2	3	2	-	5	-	
208	P. 7 -5	A.D.S.	S Hamolet	P7c18	2	4 ¹ / ₃	2	2	-	3	-	
209	P. 7 -4	Arty. Bde H. . .	SE Hamolet	P7a02	2	7	3	4	-	6	-	
210	P. 8 -1	Relay Post	S Hamel	P8b14	2	7	3	4	-	5	-	
119/2	P. 4 -1	H.A.P.	N Hamel	P4a56	2	7	3	4	-	4	-	
121/2	P. 9 -1	"	N Hamel	P9a44	2	7	3	5	-	10	-	
307	H. 9 -1	Tell & Dagout	Cailloux rd.	H9a72	3	4	4	4	-	-	-	48 hours lost through engine and pump troubles.
310	H. 2 -1	Bde H. . .	S Bomart rd.	H2a00	3	4	1	2	-	-	-	
306	H.10 -8	O.P.	Cailloux rd.	H10c206	3	1	1	3	-	-	-	Excavation only. On morning of 4th the men of this section were distributed betwe 1-2-4 sections whose reports will include their work.
312	O.13 -9	H.A.Bty	S Douars	013422	3	3	2	8	-	8	-	

(Dug-out progress to be shown by sketch.)

Anderson

Major

354

APPENDIX

SECRET.

Date _____

Army Form Wc 3404.
Strength of Company
(From A.F. B.213).

WEEKLY MINE REPORT.

Corps. _____

Tunnelling Company, R.E.

Division. _____

	Officers	O.R.
R.E.		
Permanently Attd. Infy....		
Temporarily Attd. Infy...		
Totals ...		

Designation of working 1	Trench No. or name 2	Map reference 3	Shaft or Gallery			Footage for week 7	No. of days worked 8	Nature of ground 9	REPORT	
			Depth 4	Size inside timbers 5	Total footage 6				Circumstances affecting progress.	Results of listening. Mines and camouflets. General information. 10

(6 21 35) W6134-772 20,000 9/16 HWV(P346) Forms/W3404/3
5509-M2533 25,000 7/17

SECRET.

WEEKLY PROGRESS REPORT.

(SERVICES OTHER THAN MINING.)

Date 7-8-18

Strength of Company
(From A.F. B.213.)

	Officers	O.R.
R.E. A.P. ...	20	599
Permanently Attached Infantry...		
Temporarily Attached Infantry...		
Totals ...	20	59

354

1st Aust. Corps.

1st Australian Tunnelling Company.

"B" Division.

Coy No.	Designation of Working Party No.	Nature of Work or Service	Locality	Map Reference Sheet No.	Section Employed No.	Days Worked	Shifts per Day	PERSONNEL		Average Working Party	Probable Date of Completion	REMARKS Circumstances affecting Progress (Working Parties, Material, Equipment, Transport, Enemy Activity, etc.)
								O.R.				
								Per Shift				
								R.E.	P.A.I.			
313	O.19 -1	H.A. Bty Position	S. Daours	019b6037	3	4	2	4	-	4	-	F. 3/8 Excavation only.
111/30.15	-2	"	S. Aubigny	015b88	3	4 ^{2/3}	2	8	-	5	-	Labor has been consistently short on all jobs.
112/30.15	-4	"	"	015b08	3	4 ^{2/3}	2	4	-	4	-	
408	H.35 -2	Company H. .	H. Bassy	135b87	4	2	3	7	-	32	-	F. 4/8
423		Bde H. .	W. Hamel	124b55	4	3	4	8	-	5	-	S. 3/8
431	H.20 -1	"	S. Guerriou	124b51	4	1	2	2	-	8	-	Taken over from No. 2 Aust. Tunn. Coy. 2/8
412	I. 2 -2	H.A. Bty.	S. Heilly	112b74	4	-	-	-	-	-	-	do.
413	I.12 -3	H.A. Bty	"	112b44	4	1	2	2	-	6	-	do.
414	I.23 -2	"	S. Bonnay	123b94	4	1	2	2	-	8	-	do.
415	I.24 -2	"	S. Bonnay	124b27	4	-	-	-	-	-	-	do.
416	I.29 -2	"	S. Corbie	122b22	4	-	-	-	-	-	-	do.
417	I.29 -4	"	H. Corbie	122b29	4	-	-	-	-	-	-	do.
418	I.29 -5	"	H. Corbie	122b5	4	2	2	2	-	8	-	do.
419	I.35 -2	"	H. Corbie	135b89	4	-	-	-	-	-	-	do.
420	I.35 -3	"	H. Corbie	135b88	4	2	2	2	-	8	-	do.
421	I.36 -2	"	H. Corbie	136b45	4	2	2	2	-	8	-	do.
422	I.36 -3	"	Corbie	136b81	4	1	2	2	-	8	-	do.
302/4	A.4 -2	H.G.R. & O.P.	S. Bassy	124b83	4	1	3	2	-	2	-	F. 3/7
409	H.24-2	Inftry Dugout	S. Pont Noye-11es	124c67	4	3	2	8	-	41	-	S. 2/8 Dugouts Nos 412-422. Works delayed through Batteries moving forward and being constantly in action, and therefore unable to supply fatigues.

J. Anderson
Major,
C.O. 1st Australian Tunnelling Company.

(Dug-out progress to be shown by sketch.)

APPENDIX

SECRET.

Date _____

Army Form W. 3404.
Strength of Company
(From A.F. B.213).

WEEKLY MINE REPORT.

Corps. _____

Tunnelling Company, R.E.

Division. _____

	Officers	O.R.
R.E. ...		
Permanently Attd. Infy...		
Temporarily Attd. Infy...		
Totals ...		

Designation of working 1	Trench No. or name 2	Map reference 3	Shaft or Gallery			Footage for week 7	No. of days worked 8	Nature of ground 9	REPORT	
			Depth 4	Size inside timbers 5	Total footage 6				Circumstances affecting progress.	Results of listening. General information. 10	Mines and camouflets.

(6 21 35) W6134-772 20,000 9/16 HWV(P346) Forms/W3404/3
5509-M2533 25,000 7/17

SECRET.

WEEKLY PROGRESS REPORT.

(SERVICES OTHER THAN MINING.)

Date 14th Aug. 1918

Strength of Company (From A.F. B.213.)		
	Officers'	O.R.
R.E.	21	697
Permanently Attached Infantry...	-	4
Temporarily Attached Infantry...	-	-
Totals ...	21	697

3
257

Corps.
Australian

Tunnelling Company.

1ST AUSTRALIAN

Division.
"B"

Designation of Working	Nature of Work or Service	Map Reference	Section Employed No.	Days Worked	Shifts per Day	PERSONNEL		Probable Date of Completion	REMARKS			
						O.R.						
						Per Shift	Average Working Party					
Coy. No.	Army No.	Sheet				R.E.	P.A.I.					
113	015-5	H.A. Bty. H.Q.	S. E. AUBIGNY	015a97	1	1/3	3	2	-	10	-	
116	018-3	do	S. E. FOUILLOY	018a18	1	1/3	3	3	-	12	-	
126	016-3	do	S. FOUILLOY	016b24	1	1/3	3	3	-	15	-	
128	F13-2	Relay Post.	HAMLET	F13a14	1	1/3	3	4	-	12	-	
209	P7-4	Arty. Bde. H.Q.	S. E. HAMLET	P7a02	2	2/3	3	4	-	6	-	Railway Track VILLIERS BRANTONNEUX 440 yds Old line cleared and reformed - plate-laying etc.
210	P8-1	Relay Post	W. HANDEL	P8b14	2	1/3	3	4	-	5	-	
119/2	P4-1	R.A.P.	W. HANDEL	P4a36	2	2/3	3	4	-	5	-	
121/2	P9-1	R.A.P.	W. HANDEL	P9a44	2	1/3	3	5	-	8	-	
211		Artillery	VAUX	J25b16								11th Company A.E. no information re shifts available.
212		Artillery	VAUX	J26b12								
213		Artillery	VAUX	J27c28								
423		Bde. H.Q.	W. HANDEL	P8a55	4	1	3	10	-	11	-	Since 11/8/18, section has been attached to Canadian Railway Company.

P. S. Anderson Major A.E.
C.O. 1st Australian Tunnelling Company A.E.

APPENDIX

(Dug-out progress to be shown by sketch.)

SECRET.

Date _____

Army Form W. 3404.

Strength of Company
(From A.F. B.213).

	Officers	O.R.
R.E. ...		
Permanently Attd. Infy....		
Temporarily Attd. Infy...		
Totals ...		

WEEKLY MINE REPORT.

Corps. _____

Tunnelling Company, R.E.

Division. _____

Designation of working 1	Trench No. or name 2	Map reference 3	Shaft or Gallery			Footage for week 7	No. of days worked 8	Nature of ground 9	REPORT	
			Depth 4	Size inside timbers 5	Total footage 6				Circumstances affecting progress.	Results of listening. General information. 10	Mines and camouflets.

SECRET.

APPENDIX I.
WEEKLY PROGRESS REPORT.

(SERVICES OTHER THAN MINING.)

Date 21/8/18.

Australian Corps.

Division.

1st AUSTRALIAN Tunnelling Company.

Strength of Company
(From A.F. B.213.)

	Officers	O.R.
R.E.	22	607
Permanently Attached Infantry...	-	-
Temporarily Attached Infantry...	-	-
Totals	22	607

354

Designation of Working	Nature of Work or Service	Locality	Map Reference	Section Employed No.	Days Worked	Shifts per Day	PERSONNEL		Probable Date of Completion	REMARKS Circumstances affecting Progress (Working Parties, Material, Equipment, Transport, Enemy Activity, etc.)		
							Per Shift				Average Working Party	
							R.E.	P.A.I.				
1	2		3	4	5	6 hrs.	7	8	9	10	11	
	Railway reconstruction work, including re-grading, excavation, embankment, removal of spoil and relaying of track, over a length of 1½ Miles	VILLERS-BRETONNEUX										Company is working with the fourth Canadian Railway Coy. for this work. Owing to the diversity and discontinuous nature of the work, a reliable estimate of the amount of work done, cannot be given.
				1	5	1	84	-	-	-		
				2	5	1	78	-	-	-		
				3	5	1	90	-	-	-		
				4	5	1	85	-	-	-		

P. S. Audena
Major A.E.
Commanding 1st Aust. Tunnelling Coy. A.E.

(Dug-out progress to be shewn by sketch.)

APPENDIX

15

SECRET.

Date _____

Army Form W. 3404.

Strength of Company
(From A.F. B.213).

	Officers	O.R.
R.E.		
Permanently Attd. Infy....		
Temporarily Attd. Infy...		
Totals ...		

WEEKLY MINE REPORT.

_____ Corps.

_____ Tunnelling Company, R.E.

_____ Division.

Designation of working	Trench No. or name	Map reference	Shaft or Gallery			Footage for week	No. of days worked	Nature of ground	REPORT		
			Depth	Size inside timbers	Total footage				Circumstances affecting progress.	Results of listening. General information.	Mines and camouflata.
1	2	3	4	5	6	7	8	9	10		

(6 21 35) W6134-772 20,000 9/16 HWV(P346) Forms/W2404/3
5509-M2538 25,000 7/17

(Australian Corps)

Headquarters
 29/8/18.

Report for week ending 28th August 1918.

During the week the Company has been engaged on various work as under.

Railway construction work forward of Villiers - Bretonneux.

Building, with partial excavation, splinter proof shelters for ^{Corps. HQ.} Brigade accommodation at Vaux sur Somme.

Salving R.E. Stores from captured R.E. Dumps.

Small jobs such as loading bridging material at Corbie Railway Station.

Repairs to well at Bayon-villiers.

About 250 of Section Strength have been employed on these works. The remainder have been resting.

The strength of Company is as under:-

A.E. Officers, 23. Other Ranks, 629.

No temporarily or permanently attached infantry or working parties.

J. S. McManus

(Major A.E.)

Commanding Officer.

1st AUSTRALIAN TUNNELLING COMPANY.	
No. <u>0.644</u>	
Date <u>29.8.18</u>	

Extracts from Company Orders for 4/8/18.

1. COMFORTS.

The following stores have been received from the Australian Comforts Fund:-

13 cases	Cocoa and Milk	624 tins.
6 cases	Milk	285 tins.
3 cases	Cigarettes	2400 pkts. (10)
2 cases	Havelock Tobacco	768 plugs.
5 cases	Tomato Soup	150 tins.
1 case	Curry Powder	30 tins.
2 cases	Lime Juice	24 bottles.
1 case	Playing Cards	180 packs.
1 case	Soup	
1 Bag	Sugar	70 lb.
2 bales	knitted socks	360 pairs.
1 Case	Insect Powder	

These stores are being divided equally among Sections and Headquarters according to Parade State, and each Section quota sent to O.C. Section in bulk for distribution.

3. PIANO.

At the request of the C.O. the General Comforts Fund has purchased on behalf of this Unit a Baby Cramer Piano. This has now come to hand and will be available for the amusement of the troops when at Headquarters. The C.O. requests that great care be taken of the instrument and that people who can only strum or can't play will refrain from learning on it. Key for same will be in charge of Sapper C.G. Shore at A.M.C. Office. The piano will be placed in the recreation room on first floor of the building.

8/253

Account

OPERATION

ORDER

No. 6.

By

Major W.S. Anderson, M.C.
Commanding 1st Australian Tunnelling Company

Headquarters
In the Field
5-8 18

1. INTENTION

The Australian Corps will attack the enemy positions immediately in front of their area on "Z" day at a time and date to be ordered later.

2. INFORMATION.

To economise skilled labour and to enable this Unit to locate enemy dugouts and if necessary carry out the construction of new systems with the least possible delay the following instructions will be adhered to :-

3. RECONNAISSANCE
PARTY

Each Section will detail a party of three M.C.O's and 12 men in accordance with the memos Nos. S/236/9 issued to Section Commanders on 3-8-18.
The following officers have been detailed to take charge of the party and will be in command of section details set opposite their names :-

O i/c	Section detail	to
		Brigade attachd.
Lieut. Armstrong, JR	No. 2 section	11th Aust. Inf. Bde
" Mayoh K.	4 "	9th Aust. Inf. Bde
" Nye P.B.	3 "	4 th " " "
2/Lt. Irving RCO	1 "	12 th " " "

The above named officers will get into touch with their respective Brigades and work with the Engineer Liaison Officer at Brigade Headquarters.

4. DUTY

Exploration and location of Dugouts and wells.

5. ASSEMBLY POST

All four parties will be located at the Deep Dugout at P.L.C.S.R. and will be at that locality by midnight 6/7th inst

6. DETAILS.

Further details and arrangements to suit Brigades will be made direct with Engineer Liaison Officer.

7. RATIONS.

Two days rations to-be will be carried. One days rations to be stored at Deep Dugout P.L.C.S.R.

8. TOOLS.

Saws, hammers, axes, and nails to be carried by each reconnaissance party.

9. DRESS.

Battles Order.

10. CESSATION OF PRESENT CONSTRUCTION WORK

All work will cease at the end of the afternoon shift on the 6th inst, that is midnight 6/7th and all troops will be withdrawn to Section Headquarters ready to start immediate operations ~~when~~ on the new forward area if required.

OPERATION ORDER No. 4 (CONTD.)

Required

10 (Contd.)

The following parties will be detailed to carry out any repairs or maintenance work that may be necessary :-

4 Sappers (2 capable fitters) to each Brigade H.Q. at P.L.A. Central, P.D.A.A.A., P.L.A. Central.

These men will report at the Deep Dugouts at P.L.C.S.E. immediately the Brigades go forward. Parties to be detailed by O's C sections now constructing D.O.

11. SPECIAL WORK.

Should the Brigades be agreeable and it is necessary to work on their H.Q. or A.A.P's after midnight 5/7th this may be arranged by O.C. section concerned.

12. AUXILIARY PARTIES.

One H.C.O. and 20 men will be detailed to report at the FOUILLOY R.E. Dump to assist in loading R.E. Material and to make, and paint signboards.

The following will be the detail :-

1 H.C.O. from No. 1 Section
5 men from each section.

Detail will report to O i/c Dump at 8 a.m. 7th inst Parties will be rationed by Company Headquarters and billeted by No. 1 Section in FOUILLOY.

13. TRANSPORT.

On requisition from Corps O's C sections will hand over their H.D. Horses and in return will receive 3 L.D. for every 4- 2 H.D./

J. Bowry
Lieut. A.M.

Copies to :-

O.C. No. 1 Section
2 "
3 "
4 "

Lieut. Armstrong
Mayoh
Eve
Irving

O.C.
War Diary
File

354

*Secured*SPECIAL INSTRUCTIONS No. 6

BY

Major R.S. Anderson, M.C.
Commanding 1st Australian Tunnelling Company.Headquarters
in the Field
7-5-181. INTENTION.

It is anticipated that the advance of our troops into the enemy territory will be considerable and that the ground will be held.

All ranks will therefore hold themselves in readiness to move up and start tunnelling operations with the least possible delay.

2. RECONNAISSANCE PARTIES

These will be relieved as soon as definite locations have been sent back stating what dugouts and what conditions for transport exist in the vicinity. Section Commanders will arrange to relieve these parties on receipt of orders from the C.O.

3. SPECIAL PARTIES

In order to be ready to meet any cases of emergency that may arise G's C sections will arrange to have two parties each consisting of one M.C.O. and 6 C.R. standing by with the necessary tools and equipment for proceeding into the new forward area.

4. GENERAL.

G's C sections will make the necessary arrangements for rationing, water etc. They will satisfy themselves that all the troops under their command are properly equipped, particular attention being paid to Gas Masks and Identification discs.

5. BATTLE H.Q.

Company Battle Headquarters will open at No. 1 section Headquarters at zero plus 4 hours.

6. LIAISON

Lieut. Sawyer will be in liaison with the C.R.E. Division and will be allotted a motor cycle in order to keep in communication with Company Battle Headquarters. When the command changes from the 3rd Australian Division to the 4th Australian Division he will report to 4th Div. Headquarters for liaison to 4th Divisional C.R.E.

7. PERSONNEL

The personnel detached from No. 3 section will report back to their section at 8 a.m. 8th inst carrying the unaccounted portion of their rations

R.S. Anderson

Major, M.C.

OPERATION ORDER NO. 7.

By

354

Major E.S. Anderson M.C.
 Commanding Officer
 1st Australian Tunnelling Company A.E.

In the Field
 10/8/18.

INFORMATION (1)

The Unit will commence work at VILLIERS-BRETONNEUX repairing the Broad Gauge Line, at noon 11/8/18.

(2) DETAIL

Approximately 100 men from each Section with Officers and N.C.O's will be employed on this work. 50 men per Section with necessary Officers and N.C.O's will report to the O.C. 4th Canadian Railway Coy. at noon on 11th inst. at the Railway yard. On the morning of the 12th inst. approximately 100 men per Section with necessary Officers and N.C.O's will be available for work.

(3) MOVEMENT.

O's C. Sections will see that approximately 100 men per Section with Officers and N.C.O's proceed to VILLIERS-BRETONNEUX on the morning of the 11th inst. ~~XXXXXXXXXX~~ leaving present Section Headquarters at about 9 a.m. They will carry necessary working gear, bivouacs and tents and will continue to live at new location until the job is completed.

(4) MOTOR TRANSPORT.

All available Motor Lorries, probably 4 per Section, will report to O's C. Sections about 9 a.m. on the 11th inst. and will continue to work for Sections until the move is completed when they will be given orders to report back direct to their Lorry Parks.

(5) HO RSE TRANSPORT.

G.S. Wagons at present attached to Sections will move to the new location and continue to work for Sections. G.S. Wagon/ in charge of T/Corpl. Slingsby will proceed to new location and live with No.1 Section and will be for use of all Sections

(6) TOOLS.

Necessary picks and shovels will be supplied to Sections on the job. Heavy hammers will be supplied by O's C. Sections. All 1098 stores together with Hardy picks and G.S. shovels will be stacked at present Section H.Q. for use if necessary on future Dugout work. Any tools at present on outside jobs must be brought to Section H.Q. Camps.

(7) RATIONS.

The unconsumed portion of the 24 hours rations will be carried by all ranks and Parade State for the 11th inst. will be handed to the D.R. delivering this Order.

(8) GENERAL.

O's C. Sections, together with any men/^{not employed} will continue to live at present Section H.Q. Camps. The O.C. will meet O's C. Sections at C 27 d 5.2. at 9-30 a.m. on the 11th inst. to arrange for location of Advance Billets.

Distribution.

O.C. No.1. Section
 O.C. No.2. Section
 O.C. No.3. Section
 O.C. No.4. Section
 Commanding Officer
 Sergt. Hammond
 War Diary
 File.

E.S. Anderson
 Commanding Officer.

Major A.E.

Major E.S. Anderson M.C.
Commanding Officer
1st Australian Tunnelling Company A.E.

In the Field
24/8/18.

INFORMATION. The Chief Engineer, Australian Corps, has decided to take advantage of the present situation to rest as many Tunnellers as possible from each Tunnelling Unit. Roughly three quarters of this Unit will proceed to Rest Camp at a date to be fixed later. The first party, No. 1 and No. 2 Sections, including Officers, N.C.O's and men, and half of No. 3 Section. This half to include Captain R.B. Hinder, M.C. who will be in charge of the party. Lieut. P.C.P. Plummer and Sergt. Hindmarsh will remain behind, having been detailed to attend the Fourth Army Musketry School, and will report to Headquarters at first opportunity. Arrangements will be made for all ranks due for Leave to proceed from Rest Camp as passes become available. On receipt of this Order, the following instructions will be carried out:-

1. Stores & Tools.

O's C. Nos. 2 & 3 Sections will send all Stores and Tools, to DAOURS Camp, the present Section Headquarters of No. 1 Section.

1 N.C.O. and 3 men from Nos. 1, 2, and 3 Sections will be detailed to remain behind in charge of these Stores.

The N.C.O's and men remaining behind will be chosen from those who have already been to the Fourth Army Rest Camp.

2. Detachments.

O.C. No. 3 Section will arrange to hand over two complete squads, including N.C.O's, to O.C. No. 4 Section. These men will be attached to No. 4 Section for duty until further Orders. They will take with them, rifle, full kit and cooking gear and tents, also such tools and stores required; arrangements re *same* will be arranged by O's C. Nos. 3 & 4 Sections.

3. Extra Kit of N.C.O's. and Men proceeding to Rest Camp.

N.C.O's and men proceeding to Rest Camp, will march out with Rifle and complete kit and equipment. Surplus kit will be properly marked and sent with Section Stores and tools, and will be in charge of N.C.O. and three men detailed as per para. 1 of this order.

4. Horse Transport.

All horse transport will be handed over to T/Cpl. Slingsby to work under O.C. No. 4 Section. Horse Lines will be established at No. 4 Section Camp at VAUX.

J. Bowyer
Lieut. A.E.

consisting of

(COPY)

CONTROLLER OF MINES. FOURTH ARMY.

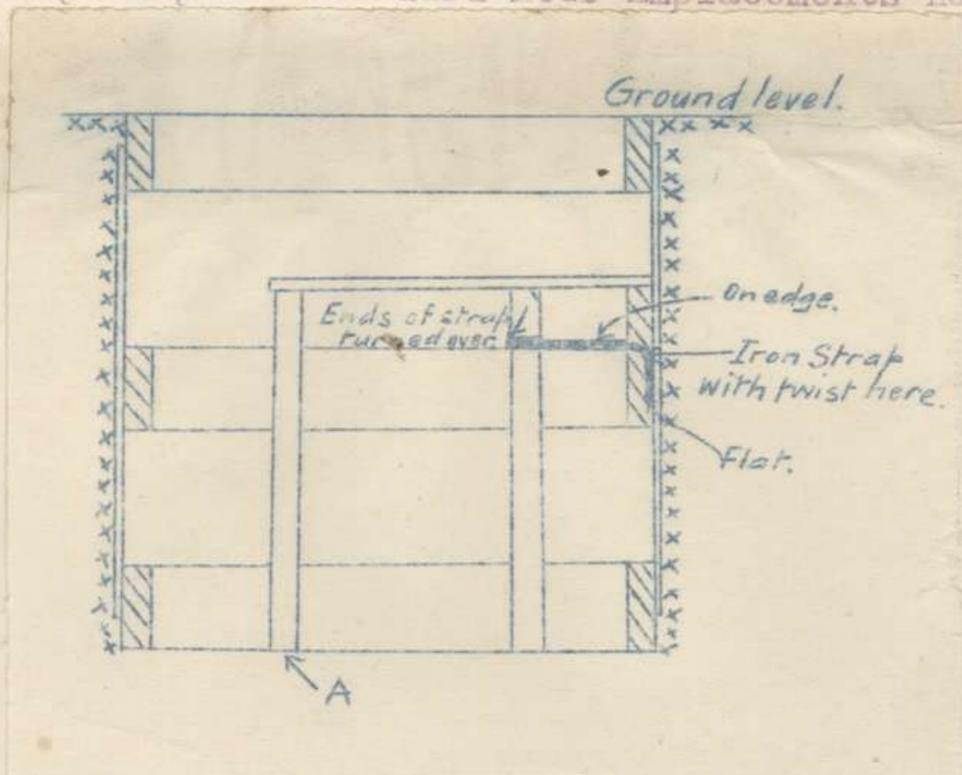
C/19/515

27/7/18.

O.C. 1,

No. 4 R.E. Workshop Company.

Two weak points in the standard M.G. Emplacements have been pointed out.



1. Vibration when the gun is being fired is liable to cause the table to draw away from the front of the Emplacement.

This can be prevented by an iron strap to hook round the front leg and over the centre timber in front.

If the ends are turned over, two nails would be sufficient to keep the table rigid.

2. Vibration of the tripod over the back legs is liable to cause either an unstable table, or even break the floor - the floor should be strengthened at the point A shown above.

Can you please arrange to strengthen the floor, and supply two iron straps with each table.

Sgd. T.E. Hill Lt.-Col. R.E.

A.R.Q.

Controller of Mines, 4th. ARMY.

O.C. 172.180.182.253.254.256 Company R.E.

O.C. Ast. Australian Tunnelling Company A.E.

O.C. 2nd. Australian Tunnelling Company A.E.

above
Above for your information. Please arrange to make alterations locally, to all tables and floors of the old pattern.

Sgd. T.E. Hill Lt.-Col. R.E.

A.R.Q.

Controller of Mines, 4th ARMY.

354

(COPY)

INSPECTOR OF MINES CIRCULAR.

"E" GENERAL.

Instructions for Weekly Progress Reports.

All Weekly Reports will be made out in accordance with the instructions below:-

A Specimen Report is attached.

- A. The front side of A.F.W.3404, "Weekly Mine Report" will be used for Mines or Subways only. For all other work, The reverse side, "Weekly Progress Report" will be used.
- B. The spaces for "Corps" and "Division" will always be filled in all the Divisions for which work, mentioned on the sheet, is being done will be included. Separate forms will be used for different Corps.
- C. Strength of Company (from A.F.B.213).

The figures for R.E. will include:-

(1) Officers- All Officers posted to the Company whether R.E. or Seconded Infantry Officers.

(2) Other Ranks- R.E. personnel only.

A.S.G. details will not be given.

P.A.I. -- (1) Officers- attached to the Company on probation.

(2) Other Ranks- belonging permanently to the Company. Usually this will only include Batmen.

T.A.I. Officers and Other Ranks of working parties temporarily attached for discipline and rations to the Company.

D. (a) Columns. (Weekly Mine Report.)

When mining is in progress all columns will be filled in. Plans will be forwarded by Controller of Mines to G.H.Q. and weekly progress slips will be rendered to Controller of Mines in duplicate with the Weekly Report.

(b) Columns. (Weekly Progress Report.)

Column 1 will be filled in in accordance with instructions of Controller of Mines in each Army for local reference.

Column 2 will show the nature of the work (concrete shelter, etc. It will be assumed to be a dugout unless otherwise stated): its purpose (Bde. H.Q. etc.) and the nearest place name on the 1/40,000 map. Details for the various faces in one dugout are not required.

(Column

Column 3. Map Reference: The number of the 1/40, 000 sheet will always be given.

Column 4. Number of the Section employed.

Columns 5 and 6. This will be filled up so as to indicate the number of shifts worked, i.e. if a place is worked with two eight hour shifts for six days ~~and~~ and one eight hour shift for one day, the entry in column 5 would be 6 1/2 days, and in Column 6 two shifts.

Column 7. Average number of R.E. per shift.

Column 8. Average number of T.A.I. per shift.

Column 9. the average working party will be the average number per shift - other than T.A.I. shown in Column 8. Special carrying parties will be shown separately and will be the average number per day.

Column 10 will be given approximately.

Column 11. This will include remarks on any circumstances affecting the work. The principal subjects are enumerated in the heading. The nature of any work which produces no footage should be noted. On the left hand side of the column all work started or finished during the week will be marked "S" or "F" in red ink.

Drawings.

Duplicated drawings of new dugout work will accompany each report. They must be fully dimensioned and will show the footage done each week.

Controllers of Mines will make their own arrangements with Companies for having the drawings brought up-to-date.

Drawings will be on a sheet of paper, not less than half foolscap - one dugout only on each sheet.

Drawings will be headed as shown on the Specimen Sheet attached.

Drawings of concrete work will be shown twice only i.e. on commencement and on completion of the work. The percentage completed will be shown in Column 11 each week.

Detail of reinforcement will be shown.

Chief Engineer,
Fourth Army.

The "Champagne" type of Machine Gun Dugout, as usually constructed consists of a small living chamber, with 20-30ft. of cover, and a gallery terminating in a vertical, or combined incline and vertical shaft to the Machine Gun position on the surface.

It is considered that the Gun Crew, if sheltering in the dugout, might not be able to get the gun in action sufficiently rapidly. It is therefore necessary to provide a small splinter-proof chamber, just sufficiently large to shelter the crew, as close as possible to the gun position. This is especially necessary in the case of vertical shafts.

In exposed sites the chamber could probably be most simply made by driving a short length of 5ft. x 4ft. gallery off the shaft with about 3ft. of headcover only. Additional ~~cover~~ protection could be given later if circumstances permitted.

Sgd. D.S. MacInnes, Brig-Gen.

for Major-General,

Engineer-in-Chief.

G.H.O.

26/1/18.

(COPY)

C.L.No. 3278

20/6/18.

FILTERS for use with HAND DRIVEN FANS for VENTILATING DUGOUTS.1. C.L.DRAWING No. 34.

Filter for use with fan capable of giving up to 2,000 cubic feet per hour.

This size of fan being intended for use in very small dugouts or in a pillbox where economy of floor space is important, the fan filter has been designed with a vertical layer of granules and the fan has been placed on top.

The air intake is to be through a 15ft. length of flexible 2" hose which screws into a flange fitted to the side of the filter box.

The box is made of tongued and grooved wood about 3/4" thick, or if this is not procurable, two thicknesses of 3/8" board may be used, a layer of carton-bitumé or tarred paper being included between.

The wire gauze is supported by expanded metal.

Sufficient granules should be put in to completely fill the space between the top of the wire gauze and the door through the granules are introduced. In this way a "header" will be secured so that even if the granules pack closer during use there will always be sufficient to completely fill the space between the two sheets of wire gauze.

2. C.L.DRAWING No. 35.

Filter for use with fan capable of delivering 7,000 cubic ft. of air per hour.

This filter is intended for use in dugouts containing up to about 140 men.

The air intake is to be through a length of 6" pipe which may be either taken through a vertical borehole or alongside the staircase.

The filter should be supported at such a height above the ground as to allow the fan to be worked with comfort.

The material can be either 3/4" tongued and grooved boarding, or two thicknesses of 3/8" board with a layer of carton-bitumé or tarred paper between.

The baffle plate fitted below the inlet is made of a bent sheet of tinfoil nailed to a wooden cross-bar and is intended to prevent the jet of incoming air impinging direct on the granules.

The joint between the removable lids A & B, Drawing No. C.L.35. and the sides of the box can be made airtight by filling the corners with clay or putty.

The discharge of the fan can be taken to different parts of the dugout system through 6" iron pipes. These pipes must be connected with the fan by means of a conical adapter, this adapter should not be

less than 23" long.

This gives 7 square feet of filter bed, and with a "Handy" fan working at about 40 r.p.m. the discharge is a little over 7,000 cubic feet per hour. With 45ft. of 6" pipe on the suction side of the filter and 100 feet of this pipe on the delivery side, the output is still 7,000 cubic feet per hour.

Sgd: W. Watson Lt.-Col.

CENTRAL LABORATORY DIRECTOR.

B.E.F. 29 June '18.

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(COPY)

INSPECTOR OF MINES. CIRCULAR.

"C" MINING NOTES.

C/139

Torch Batteries used for firing Charges Electrically.

The possibility of the use of electrical torch batteries for firing demolition charges has recently been raised.

The voltage of a new battery is approximately 4.5 volts.
 Resistance of 100 yards (double) leads, E.I. Mark II,
 is $2 \times 100 \times 3 \times .443$ ohms 2.66 ohms.
 Fusing Resistance of No. 13 Mark III Detonator is 2.6 ohms.
 Fusing current for No. 13 Mark III Detonator is 0.8 amps.

$$C = \left(\frac{E}{R} \right)$$

1 Battery.

$$0.8 \times R = 4.5$$

Maximum resistance allowable is 5.6 ohms.

Therefore 1 Battery will fire 1 Detonator only with certainty through 100 yards of leads.

2 Batteries in series.

$$0.8 \times R = 2 \times 4.5$$

$$R \dots \dots \dots = 11.2 \text{ ohms.}$$

$$\text{Resistance of leads} \dots = 2.66''$$

Permissible resistance of Detonators = 8.54 ohms.

Therefore 2 Batteries in series will fire 3 Detonators in series through 100 yards of leads.

3 Batteries in series will fire 5 Detonators in series.

4 Batteries in series will fire 7 Detonators in series.

It is assumed that the batteries are new ones of 4.5 voltage and that the jointing is efficient throughout.

G.H.Q.

21/7/18.

(COPY)

INSPECTOR OF MINES CIRCULAR.

"C" MINING NOTES.

C/137.

17/17.

BLOWN SHAFTS.GENERAL.

Vertical shafts formed by exploding boreholes, and lined with cylinders of corrugated iron, have been used in rear zones in the construction of Machine Gun Dugouts. The method is unsuited to forward areas as it does not lend itself to night work.

Blown shafts form a quick method of providing central shafts for large dugouts, and emergency exits in dugouts ~~1/4~~ systems. In the latter case the shaft is fitted with a circular staircase of simple design, consisting of a 2" pipe fixed in the centre from which wooden treads radiate. The treads have a supporting block under each end, and are bolted to the pipe and wedged at the side of the shaft. Thirteen steps form a complete circle and allow ample headroom.

Blown shafts are economical of tunnelling labour and timber: there is no spoil to remove; and the work can be rapidly concealed.

On the other hand thick beds of flints seriously hinder progress, and may even make the method impracticable.

The strength of a 3ft. 6in. shaft, not fitted with stairway, was tested by exploding a tamped charge of 12lb. of Blastite 10ft. distant at a depth of 5ft. 6in. The lining was bent to a greatest diameter of 3ft. 11in. and a smallest diameter of 3ft. 2in., otherwise it was undamaged. The crater ~~1/4~~ formed was 14ft. 6in. in diameter and 5ft. deep.

Experiments in blowing inclined shafts have proved a failure.

BORING.

In clay or chalk the hole is started with an earth auger and completed with the WOMBAT Boring Machine, a 3" water pipe being inserted afterwards. In alluvial gravel or clay with flints a 3" pushpipe is sunk by means of a portable Pipe Driver with 8 1/2 cwt. monkey. This is capable of being driven 10 feet into soft chalk without undue expenditure of time and material, but beyond that depth the damage to plant and piping and the slow progress render its use impracticable.

The pipe should be at least 10 feet, and preferably 14 feet deeper than the depth of shaft required. This is especially important in chalk.

(CHARGING)

CHARGING.

More uniform results have been obtained from Blasting than from ammonal. WOMBAT Boring rods or drain rods are first placed in the pipe to its full ~~1/4/4~~ depth and the ~~1/4~~ explosive poured in gradually, the rods being kept moving to prevent the explosive clogging and to tamp it to the required density. This may be varied from 3lb. per foot run for soft ground to 3 1/2 lb. for the harder ground. The top 10 feet of the pipe may be more lightly charged.

The charge is detonated by a No. 8 Commercial detonator with three guncotton primers tamped in a foot or two below top of pipe and fired by a 4ft. length (two minutes) of safety fuse.

Charging to surface is necessary to facilitate the escape of gas, which otherwise tends to rupture the ground and increase the cratering effect.

FIRING.

As pieces of the top soil may be thrown 150 yards, all traffic should be stopped for at least that distance before firing.

The compressed chambers formed by the charge are usually 4 to 5 feet in diameter, but this may be more or less at places where soft or hard bands have been passed through. The bottom length of 10 feet is always filled in with loose ground (in chalk usually more).

Craters average 13 feet in diameter and 4 feet deep.

Occasionally the shaft is completely arched over a few feet down. As a rule the arch is only a few inches thick and can be broken down without difficulty.

LINING.

Circular sections of 22 gauge corrugated iron, four feet in diameter, prepared in 4 foot lengths, should be ready on the site; The total length required is made up by joining these lengths with corrugated iron collars, one foot wide; which are sprung into position and secured by bolting together the lugs rivetted to the inside of the collars. Unless much trimming is required at shallow depths, the whole length of lining may be lowered immediately after firing, such trimming as may be necessary being done by a man slung from the sheer legs. If much trimming is required at shallow depths, it is better to use the lining in shorter lengths adding to it as it descends. If the shaft is to be entered from a trench, the top of the lining should be about one foot above trench level, so that a cover may be made over the shaft at surface level and the lining still be well above trench drainage.

(15 TIME

TIME.

The average time for boring in ground without an excessive quantity of flints is 8 hours for 40 feet. This does not include 2 hours for making the emplacement, as this is usually done in advance by surface labour, while another hole is being bored. The time for sinking the pipe by pile driver is 4 hours for 40 feet. The time occupied in dismantling, charging and firing is 1 1/2 hours, and for lining clearing and packing from 1 hour in normal cases to 4 hours in the case of an unsatisfactory blow.

LABOUR.

A team of 1 N.C.O. and 7 unskilled men is required for each WOMBAT or Pile Driver. In the case of the WOMBAT the N.C.O. must be trained in its use. In making use of shafts, an extra team of 1 N.C.O., 1 Sapper and 5 labourers to follow the boring parties for charging, firing, and lining, economises time.

With the work systematised, not more than 100 man-hours in the case of boring or 60 man-hours in the case of pile driving should be expended to complete each shaft.

TRANSPORT.

A G.S. Wagon for moving the WOMBAT plant, or a Pontoon Wagon for moving the pile driver is required.

G.H.Q.

19/7/18.

1ST AUSTRALIAN TUNNELLING COMPANYHeadquarters
15-8-18.Controller of Mines,
4th Army.

The following is a short report on the operations carried out by the Company in connection with the recent advance of our forces.

On our front there were two Aust. Divisions involved with a third in reserve.

With each of the attacking Brigades the Company detached 1 Officer, 3 N.C.O.'s, and 12 O.R. making a total of 4 Off. and 60 O.R. These parties were working in liaison with the Brigade and Field Company Officers.

The primary duty was to locate suitable Dugouts for Brigade and Battalion H.Q., to make them safe, and then explore the locality for further underground accommodation, booby traps, land mines, and water.

These parties proceeded at Zero plus 20 minutes and found that the initial attack had been so successful that they had no difficulty in gaining their objectives without casualties.

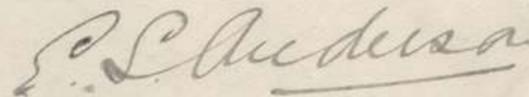
Suitable Dugouts were found at once for Bde.H.Q. but the Battalions were moving so fast that it was thought useless to settle them in Dugouts, and so they went from cover to cover as the line advanced.

DUGOUTS. A large number of Dugouts were located but in only one or two cases were they of any consequence, the majority being new construction, and only staircases down to a depth of from 15 to 20 feet. In a few cases Stairways were joined up with the usual metre gallery, while only one or two had chambers for increased accommodation. There is a large quantity of mine timber scattered throughout the area, and if that already in the stairways was required it could very easily be salvaged. One or two Drager Sets were found, but were more or less badly damaged by shell fire.

WATER : One or two wells were found and at once handed over to the Field Engineers.

TRAPS : No Booby traps were located, nor have I heard of any going off within the area.

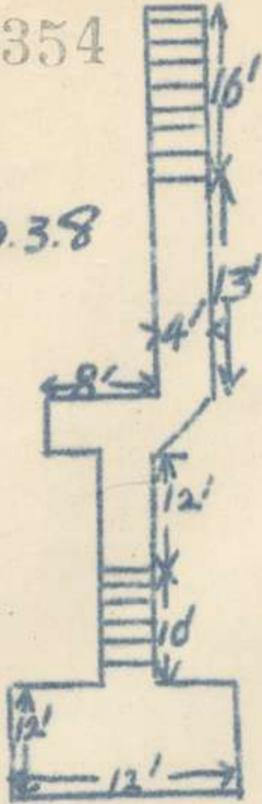
LAND MINES : No mines were located on the day of the Battle but since then we have destroyed about 30 or 40.


Major, A.E.
C.O. 1st Aust. Tunn. Company Aust. Engrs.

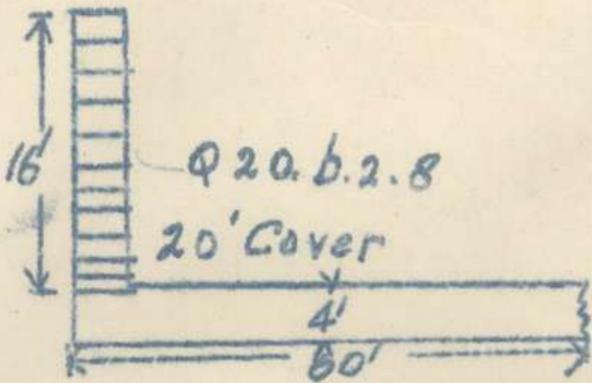
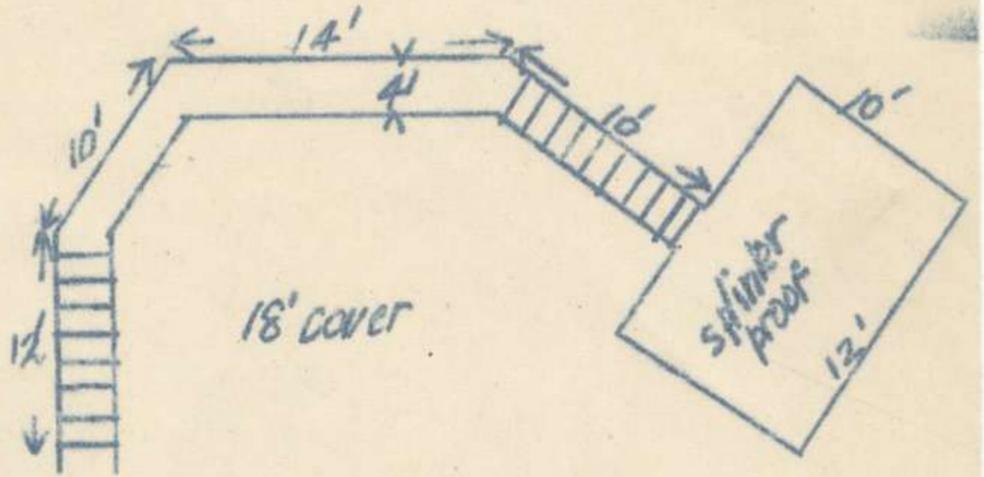
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No.	S/477
Date.	15.8.18.

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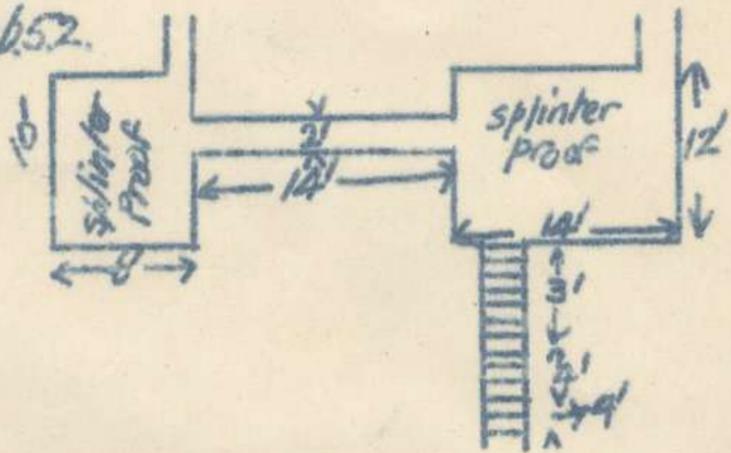
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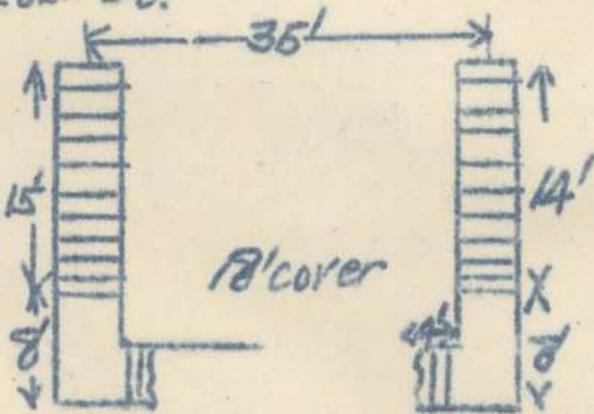
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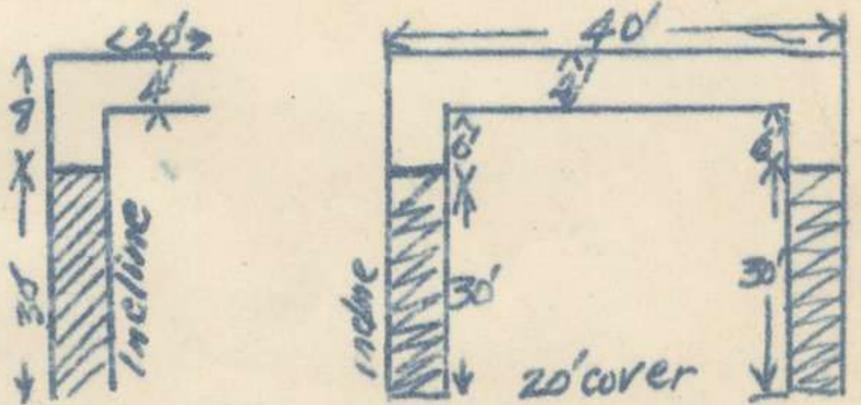
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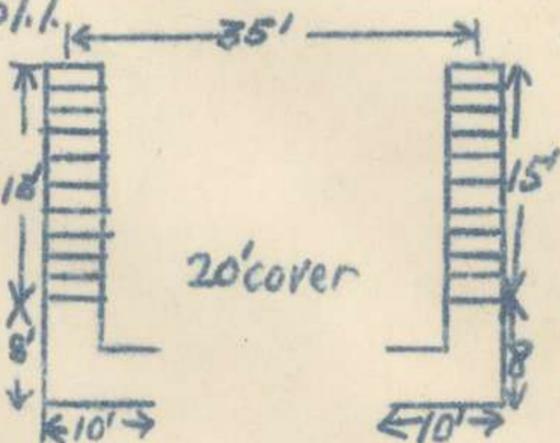
Q28a.28



P.24b.45



Q21b.1.1



Measurements Approximate

Not to Scale

Sketches to accompany

REPORT

by

L. R. C. Irving.

(COPY)

To C.O. 1st. Aust. Tunn. Coy.,

The following are the results of my reconnaissance of the 4th. Brigade Area.

- Q.21.b.5.5. 3 dugouts containing approximately 200ft. of 6"x4" (gallery. Cover about 20ft.)
 Q.16.a.8.2. 1 dugout 50ft. 6"x4" (gallery. Cover up to 35ft.)
 Q.16.a.7.3. 1 dugout 150 ft. 6"x4" (gallery. Cover 20 ft.)
 Q.10.c.3.0. 150 ft. 6"x4" (gallery. Cover 20ft.)
 Q.9.d.8.2. 120 ft. 6"x4" (gallery. Cover 60ft.)

The bank running from Mörcourt to Cerissy is full of bivouacs with plenty of cover but which cannot be called dugouts. There may also be a few more dugouts in the bank which I may have overlooked.

The Brigade and rear Battalions are fixed up as regards Headquarters. The front Battalions have no dugouts as none of these existed East of Mörcourt. Work in that area will be necessary by the Company if these are required. There is plenty of German mining timber available in the area but it is scattered over numerous jobs.

9/8/17.

Sgd. P.B.Nye Lt.

(COPY)

To C.O. 1st. Aust. Tunn. Coy.

I have reported back to Hamlet 4.0. with men.

The Brigade was fixed up at 4 P.M. and the Liaison Officer informed me that I need not keep them there any longer, so they returned to the D.O. at Hamelwood. I remained with 9th. Brigade until 6 P.M. and then the Liaison Officer said he was unable to get in touch with C.R.E. and that if I was required any further he would inform me.

I sent a message through the 10th. Brigade last night to you asking for instructions and having no reply brought the men to HAMELET.

I reached the wood near P.17 Cent. and can find nothing suitable in dugouts there and the only ones I have to report are the ones around P.17.d.3.2. which I reported to you.

I did not examine these in detail, as the C.O. 9th. Bde. said they were going forward this morning and the positions were not suitable for his Battalions.

Will you please inform me what has to be done with the men I now have here.

I can't get in touch with Lt. Mason but I have heard he has reported back to the C.R.E.

In the Field. 9/8/17.

Sgd. K.Mayoh Lt.

(COPY) (270/)

8/8/18.

5p.m.

To: O.C. 1st. Aust. Tunnelling Coy.,

Sir,

Have established temporary quarters in conjunction with 11th. Engr. near Hun Turn P.17.a.2.8. Have explored two large dugout systems in Gun Valley adjoining Dog Wood P.24. and reported these to Liaison Officer.

Lorry with rations for 1 Officer and 15 men for at least 24 hours to report at Hun's Turn by 6a.m. tomorrow would I think give me a chance of ^{again} moving forward if called upon to do so.

Sgd. J.E. Armstrong Lt.

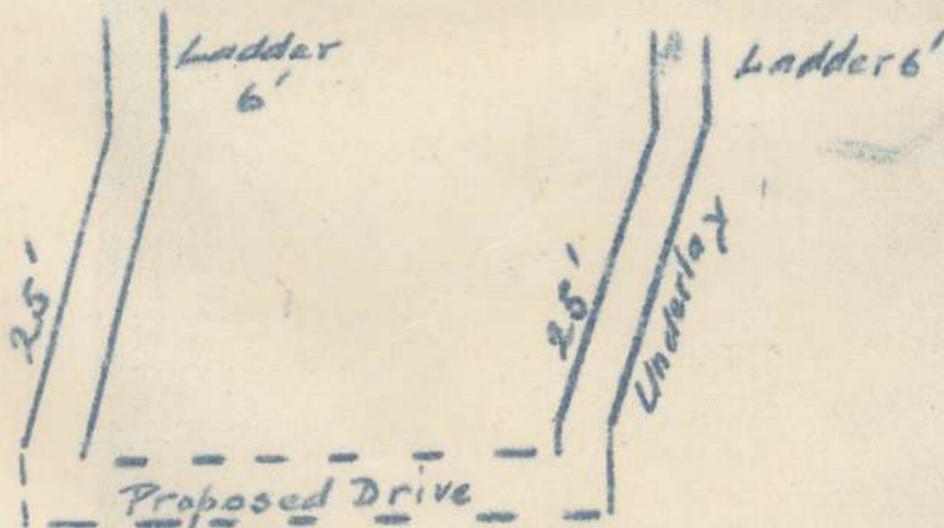
9/8/18.

To: O.C. 1st. Aust. Tunnelling Coy.,

11th. Brigade require work done at Dugout P.17.a.2.8. Hun's Turn.

Two faces each 5ft. x 4ft. in hard chalk under 15ft. cover to be driven to meet a distance of approximately 30ft.

Sketch of present workings.



Sgd. J.E. Armstrong Lt.

SECRET.

AUSTRALIAN CORPS.

Chief Engineer.
Aust. Corps.
SO/1025.

Engineer Instructions No. 1 issued
under Australian Corps Battle Instructions
Nos. 1 to 7.

3rd. August 1918.

1. PERSONNEL.

The Technical personnel allotted to the C.E. (Vide Battle Instruction No. 1, para. 6) as under will come under command of C.E. at midnight 6/7th. August.

- | | |
|---------------------------|----------------------|
| 4th. Aust. Division. | 13th. Field Company. |
| 5th. Aust. Division. | 15th. Field Company. |
| 2nd. Aust. Division. | 5th. Field Company. |
| | 6th. Field Company. |
| 3rd. Aust. Division. | 9th. Field Company. |
| | 10th. Field Company. |

- 3rd. Pioneer Bn.
- 5th. Pioneer Bn.
- 1st. A.T. Company ~~A.T.~~ A.E.
- 146th. A.T. Company R.E.
- 238 A.T. Company R.E.
- 567th. A.T. Company R.E.
- 1st. Aust. Tunneling Coy. A.E.
- 2nd. Aust. Tunneling Coy. A.E.

2. (a) Allotment of duties to units.

The following duties are allotted to the Units named:

Duty.	Northern Sector.	Southern Sector.
Roads.	3rd. Aust. Pioneer Bn. 9th. Field Company A.E. 10th. Field Company A.E. O.C. Lt. Col. Sanday, D.S.O. 3rd. Aust. Pioneer Bn.	5th. Aust. Pioneer Bn. 5th. Field Company A.E. 6th. Field Company A.E. O.C. Lt. Col. Carter, D.S.O. 5th. Pioneer Bn.
(1) Exploration of Digouts & wells.	1st. Australian Tunneling Coy.	2nd. Australian Tunneling Coy.
(2) New Digout work under Divisional arrangements.		
Water Supply.	Under C.E.S.O.	238 A.T. Coy. R.E.
Reserve.	13th. Field Coy. A.E. 146th. A.T. Coy. R.E.	15th. Field Coy. A.E. 567. A.T. Coy. R.E. 1st. Aust. A.T. Coy. A.E.

(b) The attached map shows the detailed allocation of roads to units for repair and maintenance in accordance with the above. Mile and Pack tracks will be a Divisional responsibility.

(c) Corps Roads Line.

The Corps Road Line, marking the forward boundary of Corps responsibility for road maintenance will be moved forward to the line shown on the ~~map~~ attached map as "Proposed Corps Line" at a date and time to be named later.

(7)

3. R.E. Stores.

(a) The main Corps R.E. Dumps are as follows:-

Northern Sector. VECQUEMENT.

Southern Sector. CHATEAU (M.36.d.)

(b) Advanced Corps Dumps will be established as opportunity offers.

(c) Transport of Stores from Corps Dumps.

Until further orders, four 3-ton lorries will be placed by "A" Branch of the Corps at the disposal of C.R.E. each Division daily for the transport of R.E. stores.

(d) Stone dumps will be located as follows:-

LONGUEAU.

POULAINVILLE.

(e) CHATEAU Dump will be closed from 9 p.m. on the night before Zero day till 8.30 a.m. Zero day.

4. Water.

(a) The existing sources of supply, and proposed extensions are shown on the attached map.

(b) The following transport for water is also ~~also~~ allotted to each Division.

1 Water lorry - 125 gallons.

4 G.S. wagons with tanks, each 300 gals.

3 hand pumps for deep wells.

4 windlasses with bucket & 100ft. ^{rope.} ~~7/8~~

3 Sterilising Lorries, capacity 1500 gallons per hours.

C.7.3.6.

5. Bridging Equipment.

(a) Pontoons. Material now in bridge will remain, and will be replaced by the issue to Divisions of pontoons and trestles:- the whole of the ~~the~~ equipment of all four Divisions (less vehicles) will then be dumped as follows: in a Corps pool:-

2nd. Aust. Division

3rd. Aust. Division.

4th. Aust. Division.

5th. Aust. Division.

will be notified

later.

N.21.3.3.7.

Each of these Divisional Pontoon Dumps will be under the charge of an N.C.O. detailed by the Division. The whole of the pontoon equipment (less vehicles) of the 2nd. and 5th. Aust. Divisions will be at the disposal of the 3rd. and 4th. Divisions if required as follows:-

3rd. Aust. Division will draw from the 2nd. Aust. Division.

4th. Aust. Division will draw from the 5th. Aust. Division.

C.R.Es. of Divisions concerned will make mutual arrangements with their opposite numbers accordingly.

(b) Artillery Bridges.

Artillery Trench Bridges will be deposited at CHATEAU, VECQUEMONT and POULAINVILLE.

The heavy bridges are at the disposal of, and may be drawn by Corps heavy Artillery only. The light bridges will be drawn as required by divisions in equal amounts.

(c) Special Bridging material, R.S.J., timber girders, planing as available will be deposited at VECQUEMONT and CHATEAU dumps.

6. Prepared Demolitions.

All road mines and Bridge Demolition charges in Divisional control (Vide Instructions for Defensive No. 55) will be withdrawn and stored under arrangements to be made by C.R.Es. by the night 5/6th. August. Parties in charge will return to their units not later than 6/6/1918/.

7. Tunnelling.

Tunnelling work on deep dugouts will cease on completion of the last shift on 6/8/1918. Engineers, Pioneers, and attached personnel will return to their units on ceasing work.

8. U.S. Engineers.

All Officers and other ranks of U.S. Engineers at present attached to Australian Engineers or Tunnelers will rejoin their own companies etc. not later than midnight 6/7th. August.

9. Special Duties.

(a) 1st. A.F. Company A.E. is at the disposal of G.O.C. R.A. Australian Corps for special duty. If not required for this duty or on completion thereof, it remains in reserve under C.E.

(b) O's.G. 1st. Aust. Tunnelling Coy. and 2nd. Aust. Tunnelling Coy. will detail parties to C.R.Es. of Divisions as follows:-

From.	To.	Strength.	
		Off.	O.R.
1st. Aust. Tunnlg. Coy.	3rd. Aust. Divn.	2	30
1st. Aus. Tunnlg. Coy.	4th. Aust. Divn.	2	30
2nd. Aus. Tunnlg. Coy.	2nd. Aust. Divn.	2	30
2nd. Aus. Tunnlg. Coy.	5th. Aust. Divn.	2	30

These will be employed in locating and exploiting deep dugouts, wells etc. as directed by C.R.E.

(c) When opportunity offers, the 1st. and 2nd. Aust. Tunnelling Coys. will undertake deep dugout work in the Northern and Southern Sectors respectively, under arrangements similar to those now in force.

bd) Special arrangements will be made by the Corps for the rehabilitation of the VILLERS BRETONNEUX Railway Line.

10. ACKNOWLEDGE.

Sgd. C.H. Foott
 Brigadier-General
 Chief Engineer AUSTRALIAN CORPS.

SECRET.

AUSTRALIAN CORPS.

Engineer Instruction No. 2 issued under
Australian Corps Battle Instructions Nos. 1 to 12.

.....

4th. August 1918.1. Allotment of Duties to Units.

The 567 ADT. Company R.E. will arrange with C.R.E. Aust. Division to take over the maintenance of the plank roads leading from bridges GLISY 2 and BLANGY 8 from Midnight 5/6th. August. The maintenance of the bridges, approaches and plank roads will then devolve upon 567 A.T. Company R.E.

Roads.

Para. 2(b) of Engineer Instruction No. 1 refers to certain roads which are shown on the map issued with that order. This map shows the roads only so far as approximately the line Marcelcave, Warfusee, Cerisy-Gailly. It is intended that M.T. and H.T. Roads shall be pushed forward as opportunity offers as far as the line Wiencourt- Q.27.c.3.3.- Mercourt. The O.Cs. allotted to roads will therefore arrange for the necessary reconnaissance and repair of the principal roads up to this line as early as practicable.

Provided that opportunity offers it is desirable that the track passing from the crossroads in Q.7.a. through Q.13.a.&b.P.24.b.d. to Warfusee should be rehabilitated for horse transport as early as possible // practicable.

It is not the present intention to do anything to the road from Q.7.c.2.8. through P.18. Central to P.23.b.8.4. as this is an exposed road.

3. Tunnelling Companies.- Special Instructions.

Attached to these copies of these orders which are issued to 1st. and 2nd. Aust. Tunnelling Coys. is Australian Corps Circular No. I.G. 106/1000. This circular contains certain special information for the Tunnelling Coys.

4. Resting of Troops.

Commanding Officers are to make every effort to rest any troops not employed on work during the day before Zero-day.

Horses.

Commanding Officers to take special precautions to avoid the overworking of horses prior to the operations. Weak and unfit horses are to be given every possible chance

of resting and feeding up. Sgd. C. H. Foott Brig. Gen.
Chief Engineer AUSTRALIAN CORPS.

5. ACKNOWLEDGES.

354

(COPY)

SECRET.

INSTRUCTION No. 11

ISSUED UNDER 4th. AUST. DIVISION. ORDER No. 138.

ENGINEERS and PIONEERS.

The 4th. Australian Division is to attack the enemy from the River SOMME (inclusive) to the South at a date and hour to be notified later.

DISTRIB- 4th. Field Coy. will work with 4th. Aust. Inf. Bde. in t
UTION. left Sector.

12th. Field Coy. will be responsible for communication across the SOMME.

13th. Field Coy. will work under C.E. Aust. Corps and will come under his command at midnight 6/7th. August. O.C. 13th. Field Coy. will arrange for a runner to be available at C.A.E.'s office from 6p.m. on the 6th. inst.

4th. PIONEER BATTALION 2 Companies will be attached to 5th. Aust. Division and work under C.R.E. 5th. Aust. Division.

1 Company will be attached to ⁴12th. Aust. Inf. Bde. in the left Sector.

1 Company will be attached to the 12th. Aust. Inf. Bde. in the Right Sector.

The Company attached to the 12th. Inf. Bde. will function as outlined for 4th. Field Coy.

O.C. 4th. Field Coy. will keep in touch with G.O.C. 4th. Bde. and carry out any necessary work.

Particular attention will be paid to erection of ~~1/4~~ notice boards on tracks, roads, H.Q.'s, etc., road repair in the Bde. Sector, reconnaissance for captured dumps.

SOMME 12th. Field Coy. will be responsible for the CROSSINGS. crossings over the River SOMME. An early reconnaissance will be made of captured bridges, which should be immediately repaired if not too badly damaged.

Bridges to carry 1st. Line Transport will be constructed, if existing bridges are damaged beyond immediate repair, at,

(a) Q.2.b.80.95., provided a suitable approach exists on the North Side of the River. Failing this, a bridge to carry infantry will be constructed.

(b) Q.3.d.95.55. Bridges to carry infantry will be constructed at a suitable place, should existing bridges be damaged beyond immediate

repair:

(a) in Q.3.b. or d.

(b) as near to Q.3. Central as possible.

The maximum loads to be placed on bridges will be clearly shown at each approach.

It is most essential that the bridge reconnaissance, and subsequent action thereon, should closely follow the advancing infantry, as, at any stage during the advance it may be necessary to send reinforcing troops from one side of the river to the other. At all events, it will be necessary to have efficient crossings to facilitate communication between both banks of the river.

Any available boats or surplus pontoons will be converted into ferries. O.C. 4th. Field Coy. will arrange liaison direct with O.C. 12th. Field Coy. as to the requirements of the brigade in this respect.

The following bridging equipment is placed at the disposal of the 12th. Field Coy.:-

(a) Complete bridging equipment 5th. Aust. Div. Engrs., location to be notified later.

(b) Complete bridging equipment of 4th. Aust. Div. Engrs.

(c) 4 Pontoon Wagons loaded from Pontoon Park.

At a date to be notified later, O.C. 13th. Field Coy. will place at the disposal of O.C. 12th. Field Coy.:-

(a) Two loaded Pontoon Wagons,

(b) 3 - 6 horse teams.

O.C. 4th. Field Coy. will place Company bridging equipment at the disposal of O.C. 12th. Field Coy. and arrange details direct.

O.C. 12th. Field Coy. will be advised of the arrival of 4 Pontoon Wagons from the Pontoon Park. These will be met and parked in the Railway Station Yard, CORBIE.

Special bridging material, R.S.J., timber, girders, planking, as ~~is~~ available, will be deposited at VECQUEMONT and CHATEAU DUMPS.

On the assumption that the road bridge at Q.3.d. has been prepared for demolition, one tank has been detailed to deal with the guard and prevent demolition of the bridge. O.C. 13th. Field Coy. will arrange necessary details with the G.O.C. 4th. Aust. Inf. Bde. and detail two sappers to accompany the tank to remove, or render ineffective the charges.

DUGOUT AND WATER RECONNAISSANCE. Two parties, each of 1 Officer and 15 O.R's. detailed by O.C. 1st. Aust. Tunnelling Coy. will be employed - one in each Brigade Sector in locating

and exploiting deep dugouts and wells. Officers &c of these parties will notify their respective Brigades of the existence of suitable dugouts for H.Q. etc. and notify O.C. 1st. Aust. Tunnelling Coy. through C.R.E., of any work required by the Brigades, and which cannot be undertaken by the Brigade or Tunnellers available. Reconnaissance reports will be sent to C.R.E. as early as possible.

OVERLAND

TRACKS.

Overland tracks in continuation of those to be constructed by 3rd. Div. will be constructed as follows:-

"A" by Company of Pioneers attached to 12th. Bde.

"B", "C", and "D" by 4th. Field Coy.

All tracks will be clearly marked. Wire and other obstacles to be removed and trenches filled in.

The attached map (to 4th. Aust. Div., 4th. and 12th. Field Coys., and 4th. Pioneer Bn.) shows overland tracks to be constructed by 3rd. Aust. Div. and 4th. Aust. Div. and the Roads Work being carried out by C.E. Aust. Corps.

REPORTS. O's.C. 4th. and 12th. Field Coys. and C.O. Pioneer Bn. will send reports to C.R.E. every two hours from Zero hour until further notification.

C.R.E.'s office will be situated in FOUILLOY.

ACKNOWLEDGE.

5th. AUGUST 1918.

Sgd. R. John Dyer Lieut. Colonel,
C.R.E. 4th. AUSTRALIAN DIVISION.

Casualties and Sick during August 1918.Casualties

August 5. / 1 Spr. / Wounded slightly
 August 8. / 2 Sprs. / " " "

Sick (including injured excluding dental).

	To Hospital	From Hospital
1st. Week	6.	15.
2nd. Week	6.	18.
3rd. Week	7.	18.
4th. Week	10.	11.

Officers and O.R. sent to Instructional Schools during August 1918.

August 3.	1. N.C.O. to Corps Cooking School.
10.	1. Off. & 1. N.C.O. to 4th. Army Musketry School.
11.	1. N.C.O. to Corps Gas School.
16.	1. N.C.O. to Corps Lewis Gun School.
16.	4. N.C.O.s. to Corps Infantry School.

APPENDIX 7

37

M.G.E. P.	Number	Length				
M.G.E. P. 9.a.50.15.	Stairways	10.	30.	51a.		
M.G.E. P. 9.c. 1. 3.						
B.H.Q. P. 15.a. 8. 5.		2.	44.	34.	34.	20.
M.G.E. P. 15.d. 1. 3.		1.	85.	69.	20.	21.
M.G.E. P. 16.c. 3. 9.		2.	52.	29.	11.	
M.G.E. P. 19.d. 7. 5.		2.	72.		26.	
M.G.E. P. 20.a. 35. 25.		1.	23.	14.	13.	
M.G.E. P. 20.a. 85. 50.		2.	66.	36.	13.	
B.H.Q. P. 20.b. 3. 2.		2.	100.	7.	79.	
M.G.E. P. 21.a. 3. 5.		2.	18.	14.		
M.G.E. P. 21.b. 50. 40.		2.	73.	4.	17.	
M.G.E. P. 21.b. 9. 9.		2.	53.	42.	15.	
M.G.E. P. 21.c. 5. 5.		1.	23.	18.		
M.G.E. P. 25.a. 6. 2.		1.	13.	4.		
B.H.Q. P. 26.a. 2. 7.		2.	91.	28.	23.	
M.G.E. P. 26.b. 80. 40.		2.	61.	41.		
M.G.E. P. 26.c. 10. 85.		2.	58.	8.	22.	
M.G.E. V. 2.a. 8. 8.		2.	52.	42.		
M.G.E. V. 7.a. 4. 2.		2.	40.	34.		
B.H.Q. V. 8.a. 5. 1.		3.	112.	20.	93.	
<i>M.G.E. / V. 8. 8. 2.</i>						
M.G.E. V. 8.c. 8. 8.		2.	62.	62.		
M.G.E. V. 13.c. 5. 2.		2.	6.			
M.G.E. V. 14.a. 7. 5.		2.	38.	50.		
M.G.E. V. 14.b. 7. 8.		2.	62.	32.		
M.G.E. V. 14.b. 8. 9.		2.	61.	33.		
B.H.Q. V. 14.c. 4. 6.		2.	15.			
M.G.E. V. 19.b. 7. 0.		1.	20.	45.		
B.H.Q. V. 19.d. 2. 0.		3.	94.	19.		
B.H.Q. V. 20.d. 4. 9.		2.	20.			
B.H.Q. V. 25.a. 6. 1.				177.		
M.G.E. V. 25.c. 5. 2.		1.	25.			
M.G.E. V. 25.d. 1. 6.						14
M.G.E. V. 26.b. 4. 5.		2.	77.	26.		
M.G.E. V. 26.c. 5. 0.		2.	52.	70.		
<hr/>						
M.G.E. C. 6.d. 8. 0.		2.	44.			57a.
M.G.E. D. 1.c. 0. 5.		2.	31.	63.		
M.G.E. D. 7.a. 7. 3.		2.	71.	26.		
<hr/>						
M.G.E. Q. 24.c. 90. 45.		1.	9.	161.		15. 44b.
M.G.E. Q. 30.b. 50. 75.		3.	114.	181.		21.
E. 3.BK. Q. 30.b. 85. 80.				71.		
M.G.E. Q. 36.b. 1. 6.		2.	47.	14.		
Caves. R. 19.a. 2. 7.		3.	84.	48.		

354

Job.	Map Reference.	Stairways		Galleries		Rises & Shafts.	Sheet.
		Number.	Length.	6x3.	9x7.		

M.G.E.	R.19.c.	7.	7.	2.	30.	.....	44b.
M.G.E.	R.19.d.	7.	4.	2.	65.	.....
M.G.E.	R.25.a.	30.	65.	3.	52.	58.	..... 18.
E.3RX.	R.25.a.	55.	25.	2.	28.	9.	.....
M.G.E.	R.25.central.			1.	32.	6.	.....
M.G.E.	R.25.b.	4.	0.	1.	58.	50.	.....
O.P.	R.25.b.	4.	2.	1.	26.	123.	..... 25.
M.G.E.	R.25.b.	50.	35.	2.	19.	8.	.....
E.3RX.	R.25.d.	4.	4.	2.	47.	2.	.....
M.G.E.	W.11.a.	4.	8.	1.	5.	.....
M.G.E.	W.11.d.	10.	85.	...	28.	8.	..... 13.
M.G.E.	W.11.d.	8.	0.	2.	55.	16.	.....
M.G.E.	W.17.a.	95.	80.	2.	55.	4.	.....
M.G.5E.	W.17.a.	9.	9.	2.	60.	11.	.....
M.G.E.	W.17.c.	75.	70.	1.	14.	.....
M.G.E.	W.21.d.	7.	9.	1.	7.	.....
M.G.E.	W.22.d.	5.	1.	1.	19.	4.	.....
M.G.E.	W.23.c.	35.	40.	2.	29.	.....
M.G.E.	W.28.a.	1.	4.	2.	34.	.....
M.G.E.	W.28.a.	6.	6.	1.	13.	.....
M.G.E.	W.28.b.	1.	0.	2.	42.	8.	.....

Total. 98 Jobs. 163. 4564. 2809. 611. 205.
