

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

Formation Headquarters

Item number: 1/42/10 Part 10

Title: General Staff, Headquarters 1st
Australian Division

November 1915



AWM4-1/42/10PART10

1st Australian Division
(Melbourne Copy)



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1ST AUSTRALIAN DIVISION

TRENCH WARFARE

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This collection of Notes on Trench Warfare was drawn up by direction of Major General Walker, Comd 1st Aust. Div. Copies were handed to 2nd Aust Div relieving brigades and to Divisional Headquarters, in order to acquaint them with local conditions on arrival. Steps were taken to have this printed and issued on a more general scale, but this ^{arrangement} was afterwards cancelled.

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20 Nov 1915.

D. Glasford Lt Col G.S.
1st Aust Div

MEMORANDUM ON ENGINEERING POLICY IN LONE PINE.

1. The successful defence and retention of LONE PINE depends upon :-
 - (i) The unremitting vigilance and staunchness of the garrison with special regard to hostile surprise assault, and the daily minor bomb attacks.
 - (ii) An intelligent and definite engineering policy as arranged between brigade commander and his engineer officers, and the careful execution of all plans under the closest engineer supervision.

2. This policy embraces -
 - (a) Tunnelling and sapping forwards and outwards.
 - (b) Internal repair and improvements.
 - (c) Extensions within the work and additional inside communication.
 - (d) Extensions beyond the work and outside communications.

3. As regards (a) - Tunnelling and Sapping - LONE PINE is separated from the enemy by practically merely an empty trench, a sort of 'No man's land' from which communication trenches lead back to the enemy works, and forward up to our parapet. In the latter case, where such communication trenches strike our parapet, they have been 'dead ended' by us; in addition we have driven forward a certain number of short tunnels through our parapet, with loopholes looking into 'No man's land'. These tunnels and the 'dead ends' have hitherto enabled us to prevent the enemy from occupying 'No man's land', which latter may, when favourable circumstances offer, be occupied in whole or in part by us, in which case, the tunnels and 'dead ends' will afford means of concealed access and easy subsequent communication. They are thus potentially offensive engineering measures.

The enemy is now, however, attempting to undermine at a depth below that of our present tunnels, and he has to be met accordingly by means of, first, shafts, and thence, "deep down" tunnels, which will probably be used as mines to attack the enemy mines. Since, therefore, more tunnels or shafts are still required in addition to those in existence the points at which they will be commenced should be carefully selected early; the two kinds of tunnels ^{should} be more or less in pairs, and each should be given a number, to include those completed, those in hand, and those yet to be commenced.

Every tunnel or shaft when finished will require either listeners or a guard, and these should be provided under brigade arrangements at the request of the engineers.

(b) Internal repairs and improvements - These must be supervised by the engineer officer of the section in which they are required, who must make definite arrangements for working parties, which will usually be drawn from the garrison. Repairs are daily required for parapets, loopholes, head cover, etc., damaged by shell or bomb fire. Improvements include making new loopholes, deepening and widening trenches, new head cover, new traverses etc.

(c) Extensions within the work - Under this heading fall, the making of new ~~interior~~ ^{interior} communication trenches, tunnels or covered ways to give ~~garrisons~~ shelter from shell fire etc., etc. No work of this kind should be undertaken by the garrison without due authority from the Brigade Commander who should also have consulted his engineer advisor. Close engineer supervision during their construction is essential.

(d) Extensions outside. - When, and wherever possible, more ground should be taken in with the view of further consolidating the position. The main considerations which limit any such expansions are - the lie of the ground; suitability for defence; command or otherwise of enemy trenches; garrisons available - possible extensions exist, on S.E., S.W. & N. sides. This proposition is exclusive of the occupation of more enemy trenches on the Eastern face, which involves a tactical operation and must be considered separately.

In addition to the B5 and B8 communications between LONE PINE and the old firing line at the PIMPLE, a new open sap has been commenced from the South side of the first names work towards B4. This will give three main communications which should be sufficient.

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9th September, 1915.

D. G. ...
1st Aust Div

- GENERAL -

ORGANIZATION.

1. (i) The line at present held by the 1st Australian Division is divided into the following sections :-

(a) No. 1 SOUTH, from the sea to and including RYRIES POST; frontage 620 yards - now held by 2nd Light Horse Brigade.

(b) No. 1 NORTH, from TASMANIA POST inclusive to ^{tunnel} B3; frontage 700 yards - now held by 3rd Infantry Brigade.

(c) LONE PINE, - now held by 1st Infantry Brigade; requires a garrison of 750 rifles.

(d) No. II Section, from LONE PINE (exclusive) to COURTNAYS POST (inclusive). Frontage about 900 yards - now held by 2nd Infantry Brigade.

(ii) Each of these sections (except LONE PINE) embraces localities which lend themselves to the development of effective rifle and machine gun fire, sweeping most of the ground over which the enemy can advance; by strongly holding these localities as "points d'appui" it is possible to reduce the number of troops for the defence of the intervening ground.

A list of "points d'appui" is given in appendix 2. and a list of important enemy works in appendix 3.

(iii) The arrangements for artillery co-operation are given in appendix 4.

(iv) The arrangements for engineer co-operation and the policy which dictates the construction of works are dealt with in appendix 5.

(v) Trench mortars are disposed under Divisional Arrangements (see appendix 6.)

(vi) Machine guns are disposed under Brigade arrangements (see appendix 7).

(vii) Method of meeting gas attack is dealt with in appendix 10.

PROCEDURE
ON POSTING
NEW UNITS.

2. When new brigades and battalions are posted in the trenches the O.C. the unit being relieved will formally hand over to the incoming unit commanders. All information regarding the line, the location of sentry posts and machine guns, will be communicated in writing. Copies of standing orders for the trenches, instructions for new units, and orders for groups and sentries will be formally handed over. These instructions apply equally to smaller units e.g. companies.

DISCIPLINE.

3. (i) In the interests of good order and discipline, it is essential that all bodies of troops should in all circumstances be properly controlled. Men will therefore be regularly marched in charge of an officer or n.c.o. when going to or returning from any duty. This does not prevent the officer or n.c.o., in charge moving the troops in a formation which will ensure safety from fire.

(ii) Individuals will not be allowed to leave their unit lines except for a definite purpose in which case they should be in possession of a pass. Men are forbidden to loiter about roads or communication trenches.

FOR NOTES AND CORRECTIONS.

ORDERS FOR
SENTRY
GROUPS.

4. Orders for groups and sentries will be prepared and displayed on notice boards in each post. Suggestions as to the subject and form of such orders are attached hereto for guidance, ^(see appendix 1) Requisitions for notice boards will be submitted to the engineer depot.

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RELIEF OF
SENTRIES.

5. In each brigade there will be definite hours for the relief of sentry groups - these may vary in each sub-section but will be clearly laid down in each case.

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ALARM
SIGNALS.

6. By day the alarm signal will be the whistle as laid down in Infantry Training (a succession of alternate short and long blasts) supplemented by local arrangements definitely prepared and recorded by unit commanders. By night, in addition the voice will be used and other prompt measures taken.

PATROLS.

7. (i) Patrols will be sent out to get information as opportunity offers; all rifles, ammunition and equipment will be brought in, as well as papers etc., found on dead bodies (see appendix 11)

On leaving our lines, patrols will make known to all concerned, the direction in which they are going, the ^{probable} duration of their absence, and the point to which they will return. All ranks are to be warned when patrols go out, so that no firing takes place in their direction.

(ii) It is known that Turkish scouts creep up close to our lines by night to observe. The best way to deal with these parties is to send out patrols to lie up for them ~~in~~ in likely lines of approach. A few successful ambushes will have an excellent effect.

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RIFLES TO BE
COLLECTED.

8. The Turks are believed to be short of rifles and ammunition.

Every effort will be made to prevent our rifles and ammunition falling into the enemy's hands as well as to collect his. When it is impossible to bring away rifles the bolts will be removed.

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EFFECTS OF
ARTILLERY
FIRE.

9. - When our guns are shelling enemy works confronting our trenches reports of the observed effects of fire should be made to Divisional Headquarters.

The officer commanding divisional artillery has been directed to inform units concerned when a bombardment is intended.

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FIELD
ENGINEERING.

10. (i) New works and structural alterations will not be carried out except in consultation with O.C. Divisional Engineers (See appendix 5).

(ii) Repairs to parapets, deepening and improvement of trenches will be carried out on the ~~initiative~~ initiative of officers commanding units in the trenches.

(iii) The questions of drainage and overhead cover must be considered as it is unlikely that fine weather will continue. Overhead cover must not be raised so as to be conspicuous.

FOR NOTES AND CORRECTIONS.

SAPS AND TUNNELS.

Construction of saps. 11. (i) Saps will not be constructed without the approval of section commanders who will discuss the proposal with the engineer officer detailed to the section, and report thereon in detail to the O.C. Divisional Engineers.

Working Parties. (ii) Sap working parties will not be required to stand to arms with the remainder of the trench garrison.

Removal of earth from tunnels. (iii) Officers commanding battalions will arrange to keep clear at night, for the passage of men carrying earth from tunnels, such communication trenches as the engineer officer in charge requires.

Listeners. (iv) Experienced miners, who are trained listeners, as required by the O.C. the field company, will be detailed from each infantry brigade to the field company allotted to the brigade. These men will be employed as listeners in tunnels.

Precautions. (v)(a) Experience has emphasized the need of exercising every care to prevent the enemy from locating our tunnels. The voice increases in volume and travels far in such confined spaces. Strict silence will therefore be observed not only in the tunnels but at the tunnel entrance.

(b) In those tunnels in which hostile picking can be heard the listener or worker will always have with him a loaded firearm (revolver if available).

If either side breaks through a continuous guard will be mounted on the hole until the responsible officer arrives to take charge.

(c) As a precautionary measure all men working in tunnels will have with them a filled waterbottle and emergency ration.

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TRANSMISSION OF INFORMATION.

12. (i) Information gained in one section or portion of a section, which is of importance or interest to others, will invariably be communicated directly to the section or part of the line concerned as well as to section or Divisional Headquarters.

(ii) Similarly, when ~~action~~ is being taken in one part of the line, all other portions affected or whose assistance is required, should be communicated with directly, and the action reported to section or Divisional Headquarters.

(iii) The signal service and regimental signallers are primarily responsible for despatching these communications by the quickest and most reliable means, and for properly advising all concerned in case of any interruption or delay in the intercommunication system. Commanders are not thereby absolved from the responsibility of satisfying themselves that the system is efficient in so far as it affects their command, and they should promptly report any defects discovered.

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CONCEALMENT FROM AIRCRAFT

13. The increased activity of enemy aeroplanes renders the following precautions necessary to prevent hostile aircraft observers getting information of our dispositions :-

FOR NOTES AND CORRECTIONS.

- (a) All movement of guns and work on gun emplacements will be carried out under cover of darkness.
 - (b) Artillery positions, guns and vehicles will be concealed or disguised when not in use.
 - (c) Machine guns will also be concealed when not in actual use.
- (ii) On the approach of hostile aircraft -
- (a) All movement will cease; men will not look up, as upturned faces are easily noticeable to aircraft observers. Field glasses will not be used except from cover. Working parties will sit down and keep quiet.
 - (b) Strict silence will be maintained; the presence of troops has often been detected by sounds from positions where nothing has been visible.
 - (c) No guns will fire unless necessary during the progress of an action.
 - (d) Rifle or machine gun fire will not be opened on aircraft except by order of an officer. When ordering fire, officers will remember that fire is usually effective, only when directed in the same line as the aeroplane is travelling. Crossing shots are useless; the machine is bullet proof underneath.
- (iii) Friendly aeroplanes are marked :-
- | | | |
|------------------------------|---|----------|
| Red and white circles | - | British |
| Red, white and blue circles | - | French |
| Red, white and green circles | - | Italian. |

(iv) Hostile aircraft are usually marked by a black cross, or are painted black, and have the ends of the wings turned back. Aircraft should be reported "unknown", if doubt exists.

TROOPS NOT
TO EXPOSE
THEMSELVES.

14. Troops are forbidden to stand about on hill tops and other points of vantage when shelling or other operations are in progress.

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TRENCHES
VISITING
OF.

15. Officers visiting trenches of other units of their own brigade will make their presence known informally to each officer they meet. When visiting trenches of other brigades they will do the same, but before leaving their own area they will report their intention to the brigade or section commanders of the section or sections they intend visiting, so as to be able to establish their identity quickly in case the officer to whom they introduce themselves doubts their bona fides. Any man entering the trenches of another battalion is to be provided with a pass establishing his identity and mission. Officers in trenches who find in their command any officer or man who is not known to them are to ascertain whether he is a member of the forces at Anzac. If they have any doubts they are to detain him or take him to Post or Section Headquarters while enquiries are being made.

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PERISCOPES.

16. (i) Men are forbidden to use periscopes in rear of loopholes which have been blinded only and are not bullet-proof. Definite orders will be issued to battalion commanders that periscopes are not to be used except in rear of bullet-proof cover.

(ii) All ranks are to be warned that when using the periscope or periscope, rifles, the head-dress is to be worn, as the peak or brim may often prevent injury to the face and

FOR NOTES AND CORRECTIONS.

eyes from splintering glass.

(iii) By smoking, slightly, the lower glass of a periscope the glare can be lessened; this reduces also the reflection of the sun towards the enemy.

(iv) Care must be taken never to raise the periscope any higher over the parapet than is necessary to see or observe. The general tendency is to show too much of the periscope.

When the enemy are shelling our trenches, periscopes should not be kept up continuously, but raised for short periods so as to maintain observation.

Long periscopes which can be used from the bottom of the trench are best during a hostile bombardment. The observer is thus not subjected to the risk of mounting the parapet.

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AMMUNITION
SCALE OF

17 (i) The following scale of ammunition will be maintained per gun, rifle and machine gun :-

| | Rounds per gun, rifle and machine gun. | | | Total |
|--------------|--|---------------------------------|--------------------|--------|
| | 'A' with unit | 'B' stacked as bde. resv. | 'C' on Beach | |
| S.A.A. Rifle | 220 | 130 | 150 | 500 |
| Machine Gun | 11,500 | 10,000 | 11,000 | 32,500 |
| 18-pdr. | 176 | 76 | 276 | 528 |
| 6" Howitzer | 40 | 40 | 155 | 235 |

These numbers will not be exceeded without special authority and the total amount on charge of units and on dumps will be regulated as carefully as possible. The amount therefore to be drawn from the beach will only be sufficient to replace expenditure.

(ii) Daily Returns. Every morning by 0800, brigades will inform Divisional Headquarters the number of rounds remaining in brigade reserve after the rifles and machine guns have been provided for, also the amount expended during past 24 hours, and quantity ammunition collected or received.

Divisional Artillery give similar information regarding gun ammunition.

(iii) Weekly Returns. Brigades furnish to Divisional Headquarters not later than 0800 each Monday the number of rifles and machine guns on which their ammunition requirements for the forthcoming week will be based.

Divisional Artillery also furnish a return each Monday by 0830 giving complete lists of ammunition in stock at 0800 and amount expended during past week. This list also includes cartridges, fuzes, tubes etc.

(iv) Both Daily and Weekly Returns should distinguish between different kinds of shell used.

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UNEXPLODED
SHELLS.

18. All troops will be forbidden the practice of digging and examining unexploded shells. Such shells frequently contain high explosives and are fitted with delay action fuzes. All unexploded shells should be left untouched for a period of ten minutes, after which they should be removed by artillery personnel if possible and either buried or dropped into deep water.

FOR NOTES AND CORRECTIONS.

FATIGUE DUTIES.

19 (i) Regimental and other fatigue duties will as far as possible be effected between 6 p.m. and 9 a.m. provided that the fire trench garrisons are not denuded thereby.

- (ii) Parties for
(a) work in trenches
(b) other fatigues

will be told off under battalion arrangements; effective supervision will be provided.

*D. S. G. M. G. S.
1st Aust Div*

FOR NOTES AND CORRECTIONS.

STANDING ORDERS FOR UNITS IN THE TRENCHES.

General

1. The line held by a division is divided into sections and subsections; each battalion, company and platoon (or corresponding unit) will be allotted a definite frontage for which the unit is responsible. In each section certain points d'appui have been selected.

Scheme of Defence

2. The garrison required for the adequate defence of the trench, of a section inclusive of points d'appui, may be calculated at one man per yard of perimeter plus half as much again in support. In addition to the above, reserves, if available are disposed as required. In each section a plan will be maintained, and kept up to date, recording :-

(i) The disposition and proposed manner of employment of supports, which are to be in definitely prepared positions, from which ample means of communication will be made to the fire trenches. The hours at which supports stand to arms, the sentry posts and orders for same, and all similar details are to be definitely laid down.

(ii) Details, similar to above, relating to the action of reserves; alternative schemes should be prepared detailing the places and arrangements made to enable troops to cross trenches to deliver counter attack.

Positions of Headquarters

3. Brigade, regimental and battalion headquarters must be central and close to a main communication trench; squadron and company commanders must have their headquarters either in the fire trench or behind a traverse at the head of a main communication trench close to the fire trench. Troop and platoon commanders will live actually in their fire trenches.

Duties of Officers.

4. (i) Brigade commanders will make a careful and minute inspection of their fire trenches at least once a day; regimental commanders at least twice daily. At the morning inspection arrangements for the day e.g., repairs, loopholes, etc., should be attended to. The evening inspection should be devoted to arrangements for the night and possible attack e.g., wire entanglements, ammunition supply, and every detail of defence should be considered. "Sapheads" and arrangements for their defence and concealment must be carefully studied daily. Improvements in methods and systems are to be continually considered.

(ii) Troop and platoon commanders are responsible to their commanding officers for the well being of their men, and the efficient condition of arms.

Distribution of rations and water will be supervised by squadrons and company commanders. Rifles will be inspected frequently and when not in use kept in horizontal or vertical niches in the reverse slope of trenches. Issue and expenditure of ammunition will be carefully controlled. On the alarm or at the early morning "stand to arms" all officers will be present with their commands.

Garrisons and Observation Sentry Posts.

5. (i) In every length of trench, sentry posts will be maintained; it is impossible to lay down the exact intervals between these posts, but they must afford good "sniping" facilities during the day, and ensure that the enemy cannot advance unseen, either by day or by night.

(ii) For each sentry post a sentry group consisting of 1 n.c.o., and 6 men in three reliefs of two will be detailed. Sentries will be posted in pairs both by day and by night, two hours on duty and four hours off; both sentries are to be awake and alert during their tour of duty.

By day, one sentry will watch and the other will shoot; by night both will watch and both shoot if necessary.

Sentries will be formally and properly posted and relieved by a n.c.o.; they will be made to understand they are as much on duty as if on battalion guard. Sentries will remain standing during their tour of duty except in machine gun emplacements or other places where this is impossible or where they would expose themselves by so doing.

Reliefs to sentries will sleep near by and the procedure for outpost duty as laid down in the training manuals will be adhered to.

When a sentry observes any movement on the part of the enemy he will at once warn the n.c.o., in charge of his group. Officers and n.c.o.'s will when necessary warn the troops by the whistle "alarm blast" (a succession of alternate long and short blasts) to turn out and occupy previously arranged positions. By night in addition, the voice will be used, and other prompt measures taken.

The use of the term "observer" ~~is prohibited~~ as applied to a sentry is prohibited.

(iii) By day a garrison of 6 men to each 12 yards or trench provides a reasonable minimum. Brigade and battalion commanders will however determine the number of sentry posts actually required on each portion of their frontage - the principles governing selection being that all ground must be under unceasing observation and effective fire. The number of rifles available and the necessity for reliefs must be taken into consideration.

(iv) In case of sudden attack at night, the groups must be sufficiently close together to provide an adequate firing line, and in the fire trenches, there should in addition, be sufficient men to rest between the posts to establish a firing line of one man per yard.

(v) At night all supports will occupy the support trenches before dusk, and each man must know exactly where he has to go should the supports be called out. Reserves will be close to a main communication trench and all arrangements made to enable them to file rapidly into the communication trenches and thence to the position required. It may be necessary to pass reserves over the top of the trenches to make a local counter attack; the best places to do so will be selected. A few ladders for this purpose have been issued to brigades; others will be extemporized.

(vi) The hours for "standing to arms" are fixed from time to time by the divisional commander or higher authority.

Firing.

6. Wild firing and waste of ammunition will be prevented. Close and careful sniping should be maintained during the day at definite objectives or hostile loopholes. At night expenditure will be governed by circumstances, the principle being that fire should be reserved till the time it can be delivered with a maximum of effect.

By the exercise of energy and initiative and the use of such devices as periscopes, rifles, tubular loopholes etc., every effort must be made to maintain superiority of fire over the enemy.

'Sniping' must be encouraged, and 'sniping posts' will be maintained until discovered by the enemy when others will be sought for.

Range.Cards.

7. Range cards fastened on a board must be maintained at all sentry posts.

Trench
Discipline.

8. It is necessary that trench discipline for all ranks concerned should be rigid and closely maintained. It is impossible to avoid a certain amount of cooking in the trenches but there will be no fires after dusk and matches used by smokers will be struck under cover or in a recess. Smoking is strictly prohibited on the parapet except during the day. Care and method is required in stowing equipment, rations, water and tools. Ammunition, especially must be carefully stowed ready for use; it is not to be allowed to get clogged with mud or dust or lie at the bottom of the trench where it gets trodden upon and rendered useless. Loose ammunition and expended cases are to be collected under regimental arrangements.

Sanitation will be carefully observed and the orders of medical officers in regard thereto strictly obeyed.

Messages.

9. Messages involving movement of our troops or containing important information of the enemy must invariably be signed with the name, rank and unit of the sender; no attention is to be paid to unsigned messages. The object of this order is to prevent ruses or panic struck demands for reinforcements by irresponsible individuals.

Loopholes.

10. Loopholes are intended to enable the riflemen to use his weapon to the best effect with due regard for cover and concealment. The dimensions and position of loopholes vary according to the ground over which the enemy may advance and nature of the firing point; they should always be tested by actually pointing the rifle, correctly sighted, at all possible objectives. Owing to the difficulty of siting loopholes correctly, it is advisable to entrust their construction to a special party of proved skill. When not in use loopholes will be blocked up with a sandbag three quarters full of gravel and other bullet proof material.

Machine
Guns.

11. (i) Alternative positions are to be prepared for machine guns; each emplacement is to be provided with a range card.
(ii) Every effort is to be made to locate hostile machine guns by taking cross bearings; the direction and range of the enemy's machine guns is to be recorded on boards placed at intervals along our trenches so that steps may be taken to silence the guns when we advance.

Dress.

12. The active garrison in the fire trenches will invariably be properly dressed and equipped, packs excepted. At nights, supports will likewise wear their equipment but without packs. Reserves may remove their equipment but keep it handy.

The object of this is that the men may be prepared in case a forward movement becomes necessary.

Miscellaneous.

13. Other points to which attention is directed are :-

- (i) All officers and other ranks must study the ground for which they are responsible and acquaint themselves with the adjacent works.
- (ii) Prompt reports will be sent in when it is possible to give information regarding the enemy. There will be a definite intelligence system in each brigade.
- (iii) Every effort will be made to conceal our movements and dispositions; needless exposure is to be checked.
- (iv) Care is to be exercised to maintain equipment and tools in a serviceable condition.
- (v) Men are not to be permitted to quit their units.
- (vi) Each man in the firing line and supports must know what he has to do in case of attack, by day or night; supports are to be practised in taking up their position in the trenches.
- (vii) In each battalion there will be a proportion of trained bomb throwers in each platoon and section.

All ranks should know what to do in the event of bombs and hand grenades falling into the trenches. (see appendix 8 Grenades).

(viii) Brigade and battalion commanders in consultation with the engineer officer attached, must be constantly on the alert for opportunities to advance their trenches and make improvements in the following respects :- rebuilding parapets, deepening communication trenches, constructing bomb proof cover for supports and regimental aid posts, provision of recesses for rifles, sanitation, care of latrines, ample supply of disinfectants.

(ix) It is to be clearly understood that in no circumstances is a trench to be vacated or given up to the enemy. If proper precautions are observed, a trench should never be surprised. If the necessary arrangements have been made supports should always be in the close vicinity of the fire trench and reserves always available. In any alarm or actual attack battalion commanders will maintain close touch through the telephone with their brigade commanders.

*D. Stasford Col G.S.
1st Aust Div*

A P P E N D I X 1

- SUGGESTED ORDERS FOR SENTRY GROUPS AND SENTRIES -

(A) SENTRY GROUPS.

1. The group will consist of a non-commissioned officer and six men and will be responsible for twelve yards of trench front by day and night.
2. Groups will be numbered from right to left of units and will be posted and relieved at .. daily.
3. The group will post a double sentry in a sentry post on its allotted frontage.
By day one of these two men will be employed in sniping while the other observes; by night both men will perform look-out duty.
All sentries will be formally posted and relieved.
4. In the event of alarm the group will man the fire trenches right and left of sentries and the n.c.o., of the guard will at once warn the officer of his company on duty and all other men in his fire trench up to adjoining posts.
5. Men of the groups not on duty will be allowed to rest as on guard duty, but they will always be located in the immediate vicinity of the observation post.
6. Groups will not at any time during their tour of duty remove any portion of their equipment.
7. Groups will stand to arms from (at the hour appointed) daily.
8. The n.c.o. in charge of the group will inspect sentries at frequent and irregular hours throughout the day and night.
9. During a hostile bombardment of our trenches only one sentry will remain and watch, the other will be withdrawn to cover in 10 minute reliefs.

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(B) SENTRIES.

1. By day sentries will keep a sharp lookout over their front and by sniping take every opportunity of inflicting loss on the enemy.
2. Any unusual movement of the enemy will at once be reported to the n.c.o., in charge of the group; the enemy meanwhile being kept under careful observation.
3. By night both sentries will be on the lookout. If isolated targets appear one will shoot while the other observes. In the case of a good target appearing both will shoot but the n.c.o., in charge will invariably be warned.
4. In the event of alarm the group will at once be warned.
5. Neither sentry will leave his post without the permission of the n.c.o., in charge of the group.
6. Sentries will be relieved every..... they will not sit or lie down or remove any portion of their equipment during their tour of duty.
(In posts where it is not possible for sentries to stand e.g. restricted spaces and machine gun posts, special orders on this subject will be issued by battalion commanders.)

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D. Glasford Col G.S.
1st Aust Div

A P P E N D I X No. 2

P O I N T S D ' A P P U I .

CHATHAMS POST.

1. (i) CHATHAMS POST is a group of trenches on HARRIS RIDGE in front of our extreme right flank. The post has a frontage of 50 yards and a garrison of 100 rifles; it was first occupied by the 5th Light Horse on 21st June. The post commands all approaches on the seaward slope of HARRIS RIDGE, a narrow feature which runs south from a point about 200 yards from the enemy works known as the "BIRD TRENCHES" and "ECHELON TRENCHES" are under fire from the POST. Cross fire is also brought to bear on the TURKISH DESPAIR works which face both CHATHAMS POSTS and RYRIES POST the next post on our right. Fire can also be directed on PINE RIDGE. In the POST there is one machine gun, which is employed solely to bring cross fire on all ground in front of RYRIES POST.

(ii) CHATHAMS POST is separated from RYRIES POST by POPPY VALLEY, 80 yards in width and which has been heavily wired. A machine gun in the Inner Line commands any approach by the valley. A line of trench 100 yards in extent runs towards the sea from the POST, the remaining length being entanglements and commanded from the Inner Line.

(iii) A torpedo boat destroyer patrolling the right flank in the vicinity of GABA TEPE sweeps her searchlight along HARRIS RIDGE at regular intervals during the night and also shells points along the Ridge, particularly the GREEN KNOLL (from which run out the BIRD TRENCHES) and communication trenches along near the crest as far as the BALKAN GUN PITS.

Whenever an operation is being carried out at night and Naval support is desired, it is usual to send an officer from the unit holding the right flank, on board the destroyer in order to point out the particular points on which it is desired to bring fire, and generally to arrange co-operation between the destroyer and the unit carrying out the operation. Should it be necessary to direct fire on a special target during an operation, communication with the destroyer from the brigade is obtained through W.5 Station (wireless).

A Red light is also placed on the POST at night to mark the flank for the destroyer.

(iv) Two main communications connect the POST with the INNER LINE, one tunnel (205 ft.) has been run out along the Ridge and concealed fire pits are being made. It is not intended to open these up until found necessary.

RYRIES POST.

2. (i) RYRIES POST on HOLLY RIDGE marks the left flank of the Outer Line of Defence of No. 1 Section-Southern. The POST has a frontage of 250 yards and a garrison of 400 rifles, its firing line is 160 yards in advance of the old firing line, from which it is separated by POPPY VALLEY. It was first occupied by the 6th and 7th Light on 17th July.

(ii) In order that necessary communication could be established with the new position four tunnels ranging from 50 to 150 ft had to be cut through to the valley. From the Valley there are five communication trenches to the support line and ten from the support line to the firing line.

(iii) The firing line has been heavily traversed and is a series of firing positions, cut forward from the trench. Each position holds from 3 to 4 rifles. From the firing line four tunnels have been run out towards the enemy's trenches known as TURKISH DESPAIR WORKS which are from 55 yards to 60 yards away. The tunnels vary from 129 to 138 ft. From each of these tunnels four listening galleries have been constructed in order to detect any mining that the enemy may do towards this POST. Already one Turkish Sap, which was being run towards the POST between No. 6 & 7 tunnels was detected by means of these listening galleries and was blown up within about 20 ft. of the Turks' lines.

(iv) There are three machine guns in the post, placed on the left, centre and right respectively. The left and centre guns have only a small field of fire but sweep all ground in front of the TURKISH DESPAIR works. The gun on the right flank is employed mainly to sweep the Eastern Slopes of HARRIS RIDGE as far as the ECHELON TRENCHES, but is also employed to sweep portion of POPPY VALLEY and the Western side of TURKISH DESPAIR works.

LEANES TRENCH.

3. (i) LEANES TRENCH was captured on 1st August 1915, by 11th Battalion as it constituted a threat to TASMANIA POST, and has since been held by 12th Battalion. It was heavily attacked by bomb fire on August 5th and the Turks effected a lodgment in the Southern corner from whence they were again ejected. Since the latter date the work has been gradually improved. There is much dead ground close in front but this is being gradually obviated by forward tunnels and low recesses. The right of the work nearest to the TURKISH DESPAIR works is the weakest portion, but this is rapidly being made more defensible. There is much artificial parapet, which should gradually be improved.

(ii) The work requires 120 rifles for its fire positions. The machine gun in Sap TIA is valuable to the defence of LONE PINE.

(iii) Communications from TASMANIA POST are ample. (5 saps). The work should be held with great vigilance, not only because of dead ground and the element of surprise, but because the moral effect of the loss would be great if recapture was effected.

(iv) Drainage of the work is being prepared.

THE COMB.

4. (i) This is the small tambour of 7 recesses (21 rifles) covering the head of Tunnel B3 North of SILT SPUR.

(ii) The value of this work lies in the fact that it acts as a good retrenched flank defence against any enemy attack made from this present ground against our LONE PINE position. It also commands the head of COOBE CULLY.

LONE PINE

5. (i) The LONE PINE work consists of a group of trenches (see map) the perimeter of which is 730 yards, and the garrison 750 rifles.

(ii) These trenches were captured from the Turks on the 6/7th August by the 1st Infantry Brigade in spite of heavy casualties, and have been held up to date in face of constant enemy counter attacks, severe bombing and heavy shelling.

This is a "Point D'Appui" of the utmost importance which must be held at all costs, and which required to be continually strengthened and repaired. Under the present arrangements the garrison is relieved every 48 hours, the attached brigade orders show the method by which this is effected. It will be noted that units always return to the same sections; as opportunities offer, the area should be gradually extended by sapping etc., under the supervision of O.C. Divisional Engineers.

(iii) Attention is directed to the attached 'Note on LONE PINE.'

TUNNEL B 24.

6. Tunnel B 24 consists of a forward firing line, in recesses underground running south eastwards towards LONE PINE, at a slight angle, from the main firing line. From this post enfilade fire can be brought to bear on the enemy if he attempts to attack up OWENS GULLY. The garrison is 32 rifles; if more men are available the parados in rear of main firing line can be manned, this has firing positions for about 20 men.

GULLY POST and MOORES POST.

7. GULLY POST and MOORES POST are about the centre of the southern sub section of No. II Section. The garrison of the former is rifles, that of the latter rifles; both these posts have parados fire positions. They are so placed that they can bring a cross fire to bear, at a range of about 450 yards, upon any attempt of the enemy to assault the northern face of our LONE PINE position. They can also sweep OWENS GULLY with effective fire.

CRATER POST.

8. CRATER POST which consists of firing line and a short length of parados has a garrison of rifles. This is an important "point d'appui" because OWENS GULLY runs up towards its right flank and the strong and extensive enemy work known as JOHNSTONES JOLLY faces it at a distance of about 80 yards. In front of our lines is a large crater which is known to be connected to JOHNSTONES JOLLY by a sap. The above points are all under fire from the POST as are also the enemy trenches to the east of our advanced works on LONE PINE.

A series of tunnels, connected by a gallery, runs forward from the main firing line and listeners are posted to detect enemy counter mining operations. Hostile movements must be kept under strict observation in vicinity of this POST.

THE TAMBOUR.

9. The TAMBOUR is immediately south of WIRE GULLY upon which rests the left flank of this POST. The garrison is rifles. A forward firing line curves, in a south westerly direction, from the edge of the Gully towards our main firing line making a second tier of fire towards JOHNSTONS JOLLY which is here about 70 yards distant. From the observation post on the left of the POST, one can obtain a comprehensive view of all enemy works from LONE PINE northwards as far as WALKERS RIDGE. The steep bank of WIRE GULLY, which is here a low cliff, protects the left flank of this POST from assault, as does also an open sap along the edge of the Gully which could be manned in case of emergency. There is an excellent underground sniping post commanding the rear of GERMAN OFFICERS TRENCH. Its three loopholes should always be manned by selected snipers.

SCOTS POINT.

10. SCOTS POINT is some 60 yards in rear (that is west) of the TAMBOUR, with its right resting on WIRE GULLY. The Garrison of this POST is rifles; its field of fire includes the lower part of WIRE GULLY and SNIPERS TRENCH, but in the immediate foreground there is a strip of dead ground about 60 to 70 yards in width down which runs the OLD MARINE TRENCH. This dead ground is covered, however, by machine gun fire from the vicinity of THE TAMBOUR and also from our trenches further north.

From this POST fire could be brought to bear on the enemy if he advanced up WIRE GULLY or from the southern end of GERMAN OFFICERS TRENCH. There is a double tier of fire for a short stretch where a forward fire trench, capable of holding about 12 rifles, has been constructed near THOMPSONS LOOKOUT.

CLAYTONS (also known as)
STEELES POST.

11 CLAYTONS (also known as) STEELES POST which has a garrison of rifles, is situated on the crest of a slight rise facing GERMAN OFFICERS TRENCH at a varying distance of from 60 to 100 yards. From this post fire can be brought against GERMAN OFFICERS TRENCH, JOHNSTONES JOLLY, MORTAR RIDGE, and on the enemy works opposite QUINNS. The ground between GERMAN OFFICERS TRENCH and our lines can be swept by machine gun fire from the TAMBOUR, SCOTTS POINT, POPES HILL and WALKERS RIDGE. The post is frequently shelled from BATTLESHIP HILL and TURKS HUMP; when this takes place the garrison is withdrawn either into the forward tunnels or to the terraces on the cliff face in rear, enough men being left in the trenches to ensure effective observation.

The open recesses of our forward firing line are blocked with barbed wire an advanced post at the head of tunnel D 21 would give early warning if the enemy attempt to advance from GERMAN OFFICERS TRENCH.

Owing to the proximity and enterprise of the enemy, constant vigilance is essential, especially in view of the fact that in this vicinity our line has practically no depth and recovery would be difficult.

COURTENAYS POST.

12 COURTENAYS POSTS is a line of works with about 120 yards frontage, between CLAYTONS and QUINNS. It blocks the head of the Gully running up from Mule Valley past the north end of GERMAN OFFICERS TRENCH, is a most important post and its loss would allow the enemy to overlook MONASH GULLY and its recapture difficult owing to lack of depth and steep slopes in rear.

A network of small tunnels has been constructed in front of this work; they are so short and shallow that only small charges can be exploded in them, otherwise craters might be formed or our own works endangered.

A P P E N D I X 3

I M P O R T A N T E N E M Y W O R K S .

D E S C R I P T I O N O F .
HARRIS RIDGE.

1. On the seaward side of HARRIS RIDGE and close to the crest, from GREEN KNOLL southwards, the enemy have communication trenches - portions of these have been improved into fire trenches, particularly around the BALKAN GUN PITS.

TWIN TRENCHES.

2. These ^{two} trenches running down a knoll in continuation of HARRIS RIDGE. The trenches are connected at the foot. They are 1100 yards distant from CHATHAMS POST.

ECHELON TRENCHES.

3. A line of Echeloned trenches on HARRIS RIDGE 450 yards from CHATHAMS POST and connected by communication trenches with PINE RIDGE and TWIN TRENCHES. It is believed that the enemy keep a considerable reserve in the low ground immediately in rear of these trenches. The Turks constructed these trenches immediately after we occupied CHATHAMS POST.

BIRD TRENCHES.

4. On HARRIS RIDGE running down the E. slope from GREEN KNOLL to POPPY VALLEY, and about 200 yards from CHATHAMS POST.

These works were constructed early in July, they are about 50 yards in length and there are at least 2 lines close together. The first line was destroyed by the 5th L.H. on 23rd August, but has since been rebuilt. Communication trenches connect this work with the ~~ECHELON~~ TRENCHES.

TURKISH DESPAIR WORKS.

5. On the S. side of HOLLY RIDGE immediately opposite RYRIES POST. These works commence opposite No. 8 Sap and follow the crest of the ridge to its Southern extremity, at a varying distance of from 50 to 60 yards from RYRIES POST, while a portion extends to within 100 yards of CHATHAMS POST. These hostile works were constructed immediately after HOLLY RIDGE had been occupied by us. In case of assault they could be supported by nearly all the enemy trenches in the vicinity, particularly PINE RIDGE, BIRD and ECHELON TRENCHES. A communication trench connects them with PINE RIDGE and there is also a communication trench from their S.W. end with BIRD TRENCHES.

PINE RIDGE.

6. These are strong works running from PLATEAU 400 behind WEIR RIDGE to opposite the centre of Northern Section (where they are very strong) and thence following two branches, first, a branch running due south (only just visible from this section) and a second ~~branch~~ an arm coming away in a S.W. direction on to the crest of the VALLEY OF DESPAIR opposite LEANES and thence away southwards. There is a communication trench opposite LEANES from PINE RIDGE south down to the KNIFE EDGE and several down to the valley opposite RYRIES POST.

THE KNIFE EDGE.

7. The KNIFE EDGE is a small razor backed spur running northwards from PINE RIDGE SOUTH. It's southern end is opposite the right of LEANES. Ranges from our firing line vary between 150 and 200 yards. It has plenty of loopholes and headcover, but poor command.

SNIPERS RIDGE.

8. SNIPERS RIDGE joins the KNIFE EDGE (Northern End) and carries on up to close to our LONE PINE trenches. There are a few red sandbags on this ridge and it has two machine gun emplacements on it. The RIDGE is opposite SILT SPUR, but the enemy is not known at present to be working towards us. His defensive works are very strong and are protected by wire obstacles on trestles.

WEIR RIDGE.

9. WEIR RIDGE works ~~form a second enemy line of defence~~ immediately east of SNIPERS RIDGE form a second enemy line of defence. They have been newly loopholed and appear to be very strong. Two clearly cut communication trenches from PINE RIDGE join its Southern End. Its Northern end has apparently a machine gun emplacement.

LONE PINE.

10. (i) The enemy works known as LONE PINE have gradually grown up since we first occupied the PIMPLE soon after landing on 26th April. The Turkish trenches nearest our original line were gallantly captured by the 1st Infantry Brigade on 6/7th August and are now held by us as a "point d'appui" (see appendix 2). The Turks still hold part of their communication trenches, which they have improved into fire trenches and in many places, they are separated from us by under twenty yards.

(ii) Ever since we got a footing in this work, the enemy has displayed almost unceasing enterprise and activity both offensive and defensive. His offensive chiefly takes the form of vigorous bomb attacks supported by fire from rifles, artillery and machine guns. His defensive measures include constant sniping; construction of head cover, bomb screens and machine gun emplacements; new lines of entrenchment; and quite recently there are indications that he is mining towards our right flank.

The works are known to contain more than one machine gun; they are supported by a small calibre gun as well as by machine guns on JOHNSTONES JOLLY and by artillery from almost all enemy guns from OLIVE GROVE to BATTLESHIP HILL.

(iii) The enemy is known to have attached great importance to holding LONE PINE which he considered impregnable and the loss of which is a serious blow to him.

(iv) The situation here necessitates constant vigilance and resource; lack of either may easily lead to disaster.

JOHNSTONES JOLLY.

11. (i) JOHNSTONES JOLLY is a strong hostile work, with an all-round field of fire, sited on rising ground and supported by fire from BATTLESHIP HILL, CHESSBOARD, GERMAN OFFICERS TRENCH and the enemy works on LONE PINE. (ii) According to reliably confirmed information, the hostile garrison had never been less than 2 battalions; some weeks ago, when an attack was anticipated, a third battalion was placed there. It is probable that including the recently made extension overlooking OWENS GULLY, 3 battalions would now be permanently required to man the whole work adequately.

(iii) This work has at least three tiers of fire; the forward trenches have overhead cover throughout.

(iv) The ^{machine} guns are well concealed; it is estimated that there are at least 12 in this work.

GERMAN OFFICERS TRENCH.

12. (i) GERMAN OFFICERS TRENCH is a hostile "point d'appui" which covers the valley to the east and is strongly supported by enemy machine guns at CHESS BOARD and JOHNSTONES JOLLY, as well as by guns on MORTAR RIDGE, BATTLESHIP HILL etc.

(ii) The Turkish garrison is vigilant and inclined to be enterprising; consequently the work has to be kept under constant observation. Two of our attacks on this work have failed, but it will have to be taken sooner or later and a method of doing so will have to be devised.

(iii) Its mining operations against our trenches in front have to be kept under strict observation and no lack of vigilance can be permitted.

(iv) Its ~~mining operations~~ ^{is} known to contain more than one machine gun which it is desirable to knock out.

(v) The garrison is believed to consist of 1 battalion; there may be another battalion in support. The Headquarters of 16th Turkish Division are believed to be in the valley immediately east of MORTAR RIDGE so there are probably more troops in the vicinity and, the communications being good, the enemy line could here be quickly strengthened.

SNIPERS TRENCH.

13. SNIPERS TRENCH appears to be a long improved communication trench, running westwards from MULE VALLEY, with an irregular "T" head fire trench facing, roughly the head of WIRE GULLY. The southern portion of the cross head has overhead cover, and from time to time a trench mortar has fired from there. The southern communication trench from GERMAN OFFICERS TRENCH is roughly parallel to this work and forms another tier of fire facing WIRE GULLY.

MORTAR RIDGE.

14. MORTAR RIDGE is an under feature which runs southwards from BATTLESHIP HILL into MULE VALLEY. It is lined with trenches, including five conspicuous gun emplacements - but never more than two guns (about 3 inch) have fired from this work. The existence in this work of machine guns which fire over GERMAN OFFICERS TRENCH is known, but no idea can be formed of their number, as they are constantly moved. MORTAR RIDGE is about 450 yards from our firing line. At the southern extremity is SIGNAL HILL, a small conical knoll above MULE VALLEY; this is also entrenched and contains machine guns, flanking GERMAN OFFICERS TRENCH and SNIPERS TRENCH and covering WIRE GULLY.

THE CHESSBOARD.

15. THE CHESSBOARD is a mass of fire and communication trenches which reaches from in front of QUINNS POST, round the head of MONASH GULLY and (each successive trench rising slightly) up to the high ground near BABY 700. This network of enemy trenches overlooks most of our line between WIRE GULLY and COURTENAYS POST, so our trenches must be effectively traversed. In the vicinity of QUINNS POST the enemy's trenches are completely covered over and bomb encounters take place nightly.

There are believed to be shelters for supports in the valley also, including east of the CHESSBOARD; along this valley also, including its branches there are covered communications between the following enemy works, JOHNSTONES JOLLY, SNIPERS TRENCH, GERMAN OFFICERS TRENCH, MORTAR RIDGE and the CHESSBOARD.

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Instructions for obtaining artillery fire.

(i) In the case of G.O.C. Division, either the C.R.A., or his representative must always be with the G.O.C. Division. When the G.O.C. wants artillery fire brought to bear on any objective, he tells the objective to the artillery officer with him, who knows which particular battery can best engage it. If their objective can be taken on by batteries (including mountain and 6" howitzer) of his own division, he sends orders direct to the battery concerned. If it can best be taken on by a battery of another division, he sends to C.R.A. of that division.

(ii) In the case of O.C. Light Horse or Infantry Brigades, each is in touch with the senior artillery officer in his section.

Artillery in sections is allotted as follows :-
~~2nd Light Horse Brigade~~ Third Artillery Brigade less one battery
 3rd Infantry Brigade) Heavy Battery.

No. 2 Section.

~~2nd Infantry Brigade~~ Second Artillery Brigade and 8th Battery 3rd Bde

In addition there are two 5" Howitzer Batteries, 'A' Battery 69th Brigade, R.F.A. and 5 C. of G. Battery R.F.A. (T). These batteries are under control of Divisional Artillery Commander, but their fire can be called for direct by senior artillery officer in either section in urgent cases.

The O.C. in LONE PINE is in direct communication, through artillery observing officers in the position, with batteries allotted to defence of this position, and these observing officers are also in communication with Divisional Artillery Commander and senior artillery officers in each section.

Officers commanding

(iii) ~~infantry battalions or smaller units~~, should tell nearest artillery to them, or if this is not feasible send to their brigadier the objective to be fired at, who will proceed as in (ii).

(iv) It must be clearly understood that small numbers of men near our line, or working in trenches are not an artillery target. Field guns only fire man-killing shell, shrapnel, not material destroying. Howitzer can destroy material to a limited extent, and mountain guns (which have common shell also). Many messages come from small infantry units asking for fire on targets such as men walking about, or observation parties within a few hundred yards of our trenches. These are targets for infantry or machine guns, which should be at once used. They are not artillery targets.

(v) It must be remembered that artillery ammunition is limited and that when guns near the infantry line fire, it practically means shelling on that place from hostile guns, from which both infantry and guns must suffer.

Information.

(vi) Infantry commanders will at all times be informed when guns in their vicinity are going to open fire; in some cases, where guns are close to infantry trenches, this is absolutely necessary in order that trenches in front of the guns may be cleared.

(vii) Infantry officers can often give valuable information to the artillery observing officers in the infantry trenches. Artillery observing officers and infantry officers in the trenches should keep in close touch with each other.

(viii) Officers commanding sections of defence are to be immediately informed of any new target discovered by artillery officers.

(ix) Infantry will never approach artillery observation stations, the concealment of which is of the greatest importance; ~~W.M.~~ periscopes should not be used in the vicinity of these stations.

(x)

A list of artillery targets is attached.

LIST OF TARGETS ROUND ANZAC.

| Local Name | Square | No. |
|--|-----------------------|-----|
| Headquarters Guns | 47 H 9 | 1 |
| Headquarters | 47 M 3 -N1 | 2 |
| Hedge Emplacement | 48 A 2 | 3 |
| Stable Clump | 56 V 9 | 4 |
| Four Tree Emplacement | 55 X 8 | 5 |
| Olive Grove left Section and Mushroom Gun | 55 Y 1 | 6 |
| Asmak Heavy Howitzer | 56 W 1 | 7 |
| Olive Grove Right Section | 56 Q 4 | 8 |
| Observation Battery Station | 56 L 2 | 9 |
| Observation Station Wine Glass Battery | 68 N 6-9 | 10 |
| Collins Street | 80 S 2-3 | 11 |
| C (guns) | 80 O7 T1 | 12 |
| Turks Hump | 80 K 2-3 | 13 |
| Sand Pit or I | 81 G4-5 | 14 |
| Scrubby Knoll | 80 U8-Z2-9 | 15 |
| Battleship Hill | 81 A 2-9 | 17 |
| 4Guns | 93 W 7 | 18 |
| Guns | 80 P 3 | 19 |
| Road | 80 Z 6 | 20 |
| Battery | 80 Z 3 | 21 |
| Battery | 80 U 9 | 22 |
| 2 Guns | 81 L 6 | 23 |
| Camel House | 48 Z 22 | |
| Bushy Tree | 48 M 1-5 | |
| White House | 48 N 1-5 | |
| Yellow Road | 48 G 6 | |
| Sunken Road | 48 A 1 | |
| Green Plateau | 49 M 1-2 | |
| Kilid Bahr Parade Ground | 50 W 8 | |
| Camel Paddock | 56 X 3 | |
| Kloof Road | 57 Y 8 | |
| Sunken Road (new) | 56 Z 3 | |
| Yellow Bluff Trench | 55 T 7 | |
| Single Tree | 56 S 3 | |
| Eski Keui | 57 R 9 | |
| "L" Trench | 55 P 8 | |
| Kaba Tepe Emplacement | 55 K 1-4 | |
| Brown Trenches | 55 F 8 | |
| 68 Cement Trench | 68 V 9 | |
| The Squirt | 68 V 6 W1 | |
| Jopps Brown Trenches | 68 W 3-5 | |
| Wine Glass Cross Trench | 68 S 7 | |
| Zig Zag Trenches | 80 N 8-9 | |
| Chessboard | 80 S 2 | |
| Pine Trench | 80 P 8 | |
| Johnstones jolly | 80 X 1-2 | |
| Pine Bastion | 68 H 6 | |
| Camp | 68 C 3 | |

APPENDIX 5.

- ENGINEERING. -

1. Development. The present main firing line has been gradually developed and improved from the original irregular line of rifle pits dug under fire during the first twenty-four hours after landing. This improvement and readjustment has been effected, partly by forward "saps", and partly by underground work.

The underground work consists of -

(a) Forward "recessed" firing lines.

(b) Tunnels run forward from (a) to be used either for mining purposes or as subsequent communications.

The forward firing lines were originally tunnelled out in order to advance portions of our line, unknown to the enemy, to better fire positions; the scheme being to prepare these fire positions underground, and to open them out as the situation demanded. This tunnelling necessitated a vast deal of labour and was most satisfactorily performed.

The construction of these new firing lines, was dictated by the definite offensive object of shortening the distance in the open, to be crossed by our men when assaulting the enemy's trenches, while the improvement and extension of the forward tunnels, was intended to facilitate communication between our own line and the enemy's works when captured. Thorough preparation is necessary; the fire positions must be adapted for launching the assault, and the tunnels to be used for communication must be high and wide - without sharp turns which hinder the removal of wounded on stretchers.

The system outlined above was carried through with success in the capture of LONE PINE, and it is hoped that it will lead to other successes in future.

When a defensive attitude is necessary, the forward tunnels can be used as bombing posts in connexion with obstacles to keep the enemy at a distance, or as listening posts to detect his approach underground.

The mine system at COURTENAYS POST (which has only recently been taken over by this division,) differs somewhat from that existing in the rest of our line. It has an "envelope" gallery (about 30 feet from our main fire trench) with many short "listening" branches. The latter are so short and so little below the ground level that a large charge would damage our own works and also form a crater; their lack of depth also affords the enemy an opportunity of undermining.

2. Captured trenches. Our trenches are now, in many places, so close to those of the Turks, that in future we shall probably have to gain ground by assaulting hostile works which we will then have to adapt to our own use, as was done at LONE PINE. Captured works may be expected often to prove unsuited to our purpose and, as they face the wrong way for us, the field of fire is likely to be poor; those leading towards the enemy must be barricaded or blocked - others must be recessed and traversed.

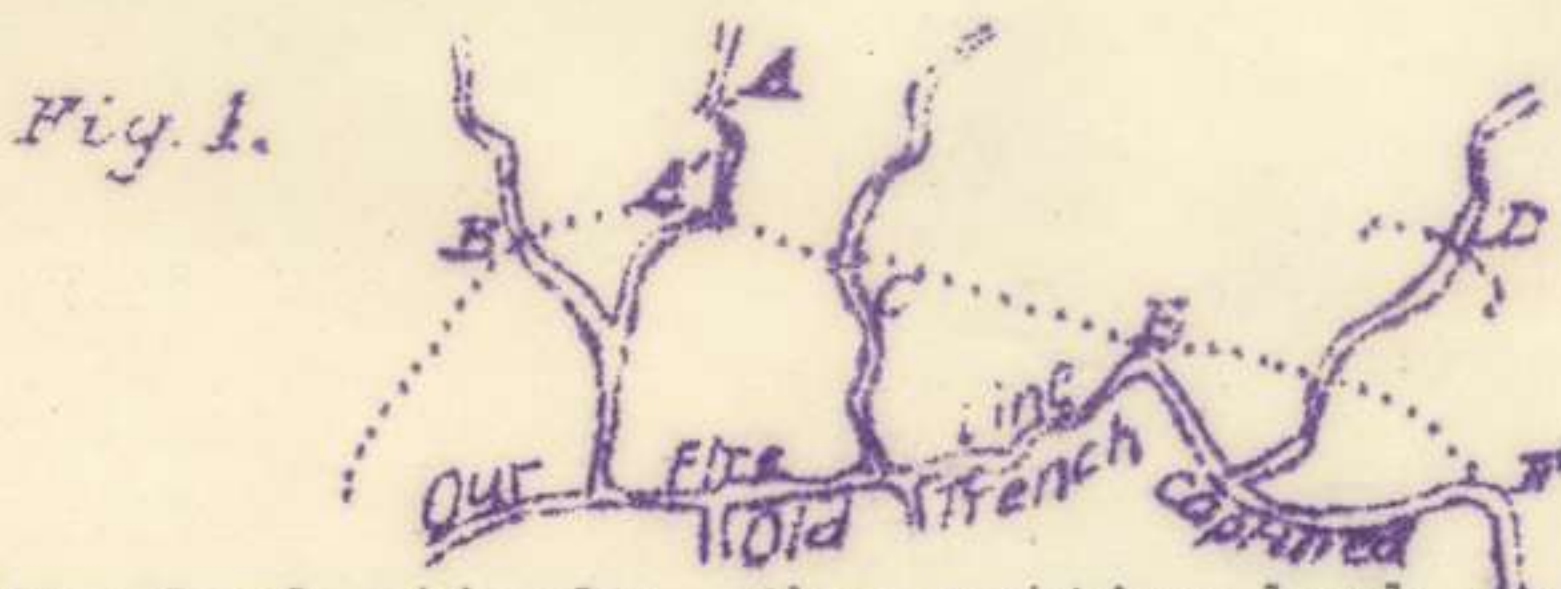
It will often be better, as well as more economical of material and labour, to sap out new firing lines or to make these by connecting captured communication trenches which run roughly perpendicular to the line we want to occupy. From the moment the captured trenches are in our hands, constant and determined hostile counter attacks may be expected; to meet these, ample engineering material will be required (sandbags, bomb screens, timber, galvanized iron, barbed wire, wire netting for bomb screens, tools etc.,) as well as a regular supply of bombs, flares and ammunition.

Provision must be made for the removal of casualties and the passage of reinforcements; if possible traffic along communication trenches should be in one direction only - in any case it must be regulated.

3. Fighting in captured trenches is nearly all hand to hand, bomb, and bayonet work, in which, the side which attacks in the most determined fashion will always have the best of it.

When the enemy's communication trenches are blocked, the barricades should be on the same general alignment - otherwise the enemy may be able to advance along some communication trenches and bomb our barricades in more advanced positions. E.g. in Fig. 1 - a barricade at A is exposed to enemy bombing from B and C; the remedy is either to withdraw the barricade to A' in line with B and C, or to advance B and C so as to be in line with A.

An isolated dead end, as at D Fig. 1, can be improved by sapping a T-head across it to obtain frontal fire for a few rifles. Open saps should be run across from one communication trench to another - not necessarily at the barricades, but wherever there is a good field of fire, as well as from salient to salient of the converted captured trench firing line, as from E to F. These new saps, properly recessed and traversed, form the new firing line, and support the barricades in the communication trenches. When our superiority in bombing has been established, our barricades can be pushed further along the enemy communication trenches and another firing line sapped across; this process can then be repeated - or perhaps another hostile line of trenches, sited conveniently for occupation as a firing line, can be captured.



4. Meeting bomb attacks. Wire netting bomb screens are, generally speaking, only really useful at particular points where the enemy repeatedly and continually throws bombs into our trenches. Short lengths of overhead cover at intervals are the best protection in trenches subjected to spasmodic bombing in different places; our bomb throwers can throw from under the edges of the cover and withdraw under it during severe bombing. When bomb screens are used in exposed places they should be erected at dusk and removed at daylight - otherwise they may be destroyed by shell or machine gun fire. In any case the wire should be tightly stretched on rectangular frames of iron or wood. During a bomb attack, sufficient men must be left in the forward trenches to keep the enemy under observation and throw at least two bombs for his one; the remainder of the men should be withdrawn a short distance and kept under cover and ready to support the forward trenches at once if required. Casualties must be replaced without delay, and an ample supply of bombs maintained.

5. (i) Ordinary fire trenches must be narrow and deep, to get really good cover; this well repays the extra labour. Traverses should be frequent and reach well across the part of the trench in rear of the fire recesses - as at T in Fig. 2; and not as at A.



(ii) Headcover, lookout posts, etc., must be kept low; if they rise above the level of their surroundings, they at once become an aiming mark for hostile artillery and machine guns. When a loophole or lookout post is destroyed, it is a common fault to build up a new one on the top of the debris, instead of clearing this away and building afresh from the original ground level. If this process is repeated, the result is a high mound which is certain to attract the enemy's fire. Sometimes overhead cover is made by laying beams on the top of the parapet or sand bag revetment, and then covering the beams and roofing sheets with sandbags and earth; this forms a conspicuous target. In order to ensure that no part of the overhead cover is higher than the surrounding parapets and at the same time to have ample thickness of earth, it is generally necessary to begin laying the cross-beams somewhat below the ground level.

In short, a general dull monotonous sameness in the appearance of the trenches, as seen by the enemy, should be aimed at.

(iii) Parapets should be no higher than is absolutely necessary for rifles to clear the inequalities of the ground surface; nine inches is often enough, eighteen inches ought not to be exceeded. It has been noticed that high parapets are often the result of careless repairs (new sandbags piled on the top of old), or of building up the parapet instead of lowering the trench.

(iv) Loopholes. It must be remembered that one sandbag laid as "stretcher" is not bullet proof. A slope of earth should always be thrown in front of the sandbags; this aids concealment; it also deflects bullets and so greatly saves the sandbags from being cut by machine gun fire. The latest pattern of iron loopholed plate should be used. They require careful building into the parapet sandbags.

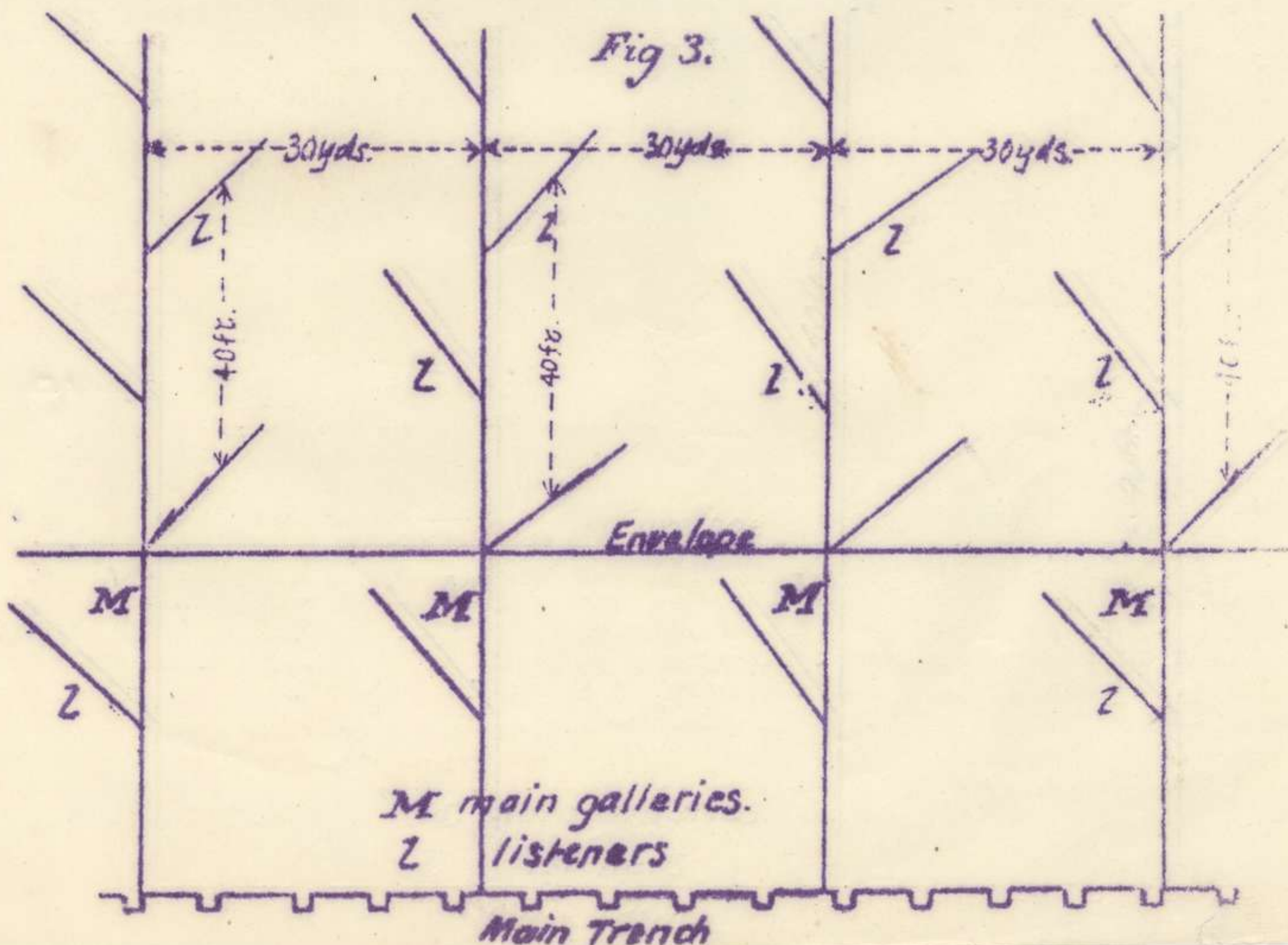
6. Future mining operations may take the form of :-

- (a) Mining operations against enemy trenches.
- (b) Meeting enemy countermine.

In both cases, it is advisable ~~to select~~ at once to select a policy for each group of mines. The general policy which has governed our mining operations is :-

- (i) Listening galleries were made on such a plan that the enemy cannot get through our lines undiscovered.
- (ii) We avoided going forward so far as to force the enemy to countermine, and thus involve us in continual mine warfare.
- (iii) We avoided firing our mines unless forced to do so by the enemy working forward; and then we only used charges large enough to blow in his tunnel without forming a crater which he could occupy.
- (iv) After firing a charge endeavour should be made to regain any ground lost by unavoidable damage to our works.
- (v) It has been found better to make no attempt to blow up the enemy's trenches, unless in preparation for an immediate assault on such trenches.

In the case of mining operations against the enemy, there should be at least 4 or 5 main galleries, about 15 feet deep (not less), parallel to each other about 30 or 40 yards apart, and running as far forward from our main trench as the enemy's works allow; a single ^{main} gallery by itself is of no use, as it is without support and easily attacked by countermine. The main galleries should have "listening galleries" branching off right and left along each side and about 40 feet apart; these branches to run down deeper than 15 feet. An "envelope gallery" (to connect the main galleries), in front of the main trench and more or less parallel to it is an advantage. (See Fig. 3.)



Mining work in galleries within earshot of the enemy should only be done by day - the noise of our picking is more likely to be heard at night.

7. Execution of work. All new works are carried out under the supervision of the engineers who are assisted by working parties, miners for tunnelling, and "listeners", supplied by the infantry. Unimportant and interior new works when completed can be handed over to the O.C. section of defence or brigade commander who will then be responsible for their upkeep and repair. The O.C. unit occupying the works is responsible for minor improvements such as repairing parapets, deepening and widening trenches; this may be done under his orders by the infantry themselves without necessarily calling on the engineers to assist.

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~~VII~~
APPENDIX

Instructions for Trench Mortar Battery.

PROVISIONAL ORGANIZATION TRENCH MORTARS. -

1. A copy of these instructions is issued to each detachment.
2. Divisional Order No. 916 of 17th August is repeated here for information :-
 - 916 (i) As a temporary measure the trench mortars on charge to the division will be formed into a "Trench Mortar Battery" (Provisional) The establishment, provisionally approved is given below -
 - (ii) Personnel allotted for duty with the "Trench Mortar Battery (Provisional)" will be attached thereto and will be shown by their units as "on command".

ESTABLISHMENT
TRENCH MORTAR BATTERY (PROVISIONAL).

| | W.O. | Q.M.S. | Serjts. or Cpls. | Privates | Total |
|--------------------------------|------|--------|---------------------|----------|-------|
| Battery Serjeant Major | 1 | | | | 1 |
| Battery Quartermaster Serjeant | | 1 | | | 1 |
| 4 detachments (Gun) | | | 8 | 40 | 48 |
| 4 detachments (Telephone) | | | | 8 | 8 |
| Totals. | 1 | 1 | 8 | 48 | 58 |

- (iii) The Trench Mortar Battery will be disposed by the Divisional Commander.

3. Men serving with the Trench Mortar Battery are therefore still on the strength of their units, by which they are paid and so on; but they will remain with their guns and take all orders from the officers or N.C.O'S of the battery.

4. The guns are put in position under orders from the Divisional Commander and are not to be moved without permission from the Divisional Staff, except to meet urgent demands of commanding officers. If guns are moved under these circumstances, the facts are to be reported without delay to Divisional Headquarters by the N.C.O, or man in charge of the gun.

5. The N.C.O., or man in charge of a Trench Mortar detachment will make arrangements for rations, water and camping his men through the adjutant or quartermaster of the battalion in the trenches.

The N.C.O., or man should report to the adjutant or quartermaster for this purpose.

6. Instructions regarding ammunition supply and expenditure will be taken from Divisional Headquarters.

7. If ammunition is running short, or if a gun is out of action from any cause, or if casualties occur, the facts will be reported without delay to Divisional Headquarters.

8. SAFETY PRECAUTIONS (i) Trench mortars are never to be left loaded detachments will camp and sleep close to their gun.

(ii) Mortars and bombs are not to be handled by any person other than those belonging to the trench mortar battery, or those under instruction.

(iii) On 22nd August a serious accident occurred whereby an officer and man were so severely injured that they have not been able to say how it occurred. Apparently a garland mortar had been left loaded and was being moved by the officer and man, neither of whom belonged to the Trench Mortar Battery. The bomb probably slipped forwards in the barrel, hit the side of the trench and exploded. The officer will probably lose a leg; the man is also badly wounded in the groin.

9. Personnel of the Trench Mortar Battery, are responsible for the cleanliness of their camp as well as for the efficiency of their gun. They should not be called upon to perform digging or other fatigues in the trenches except connected with their guns.

10. Trench Mortar Battery detachments when withdrawn from the trenches will camp at headquarters of the battery.

11. Divisional Order No. 934 of 30th August, 1915, is repeated here for information :-
Provisional Organization, Trench Mortars.

(934) In continuation of Divisional Order 916 of 17th August, 1915, add the following :-

- (iv) If personnel of the rank of serjeant-major, quarter-master serjeant, serjeant or corporal cannot be drawn from units, the men filling these appointments will be given temporary rank while attached to the Trench Mortar Battery.
- (v) When M.C.O'S are attached to the Trench Mortar Battery, their places in the unit may be filled by appointing corresponding acting ranks.
- (vi) The attachment of a man to the Trench Mortar Battery ought not to stand in the way of his promotion in his unit. Temporary rank with Trench Mortar Battery will be relinquished on reversion to the permanent unit.

12. When the personnel of the Trench Mortar Battery locate new targets which they cannot reach with the mortar, they will inform the Artillery.

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Machine - Guns

1. Machine guns will be distributed under the orders of Brigade Commanders who will appoint an officer as Brigade Machine Gun Officer.

2. It is most undesirable for machine guns to be fired direct at objectives straight in front of the line. Machine gun fire should always be oblique; this facilitates concealment of the gun, protects the detachment and materially assists in the development of cross fire.

Thus the machine gun in COURTHAYS POST now fires with effect on GERMAN OFFICERS TRENCH.

3. Good brigade machine gun officers are essential; they will devote the whole of their time to studying the ground, locating targets, improving positions and to the inspection of their personnel and material.

4. Machine guns are not to be deemed merely weapons of defence; they should be used on the offensive whenever opportunity offers. By utilizing alternative positions it will be possible to avoid being put out of action by artillery.

Should it become evident that hostile artillery is paying particular attention to any one machine gun, it will be moved to an alternative emplacement.

5. Machine Guns will not be dismantled and packed up during the day. They will be held ready for action at all times; but in emplacements where this might lead to their disclosure, they will be lowered on their tripods or otherwise concealed.

Hand Grenades in Trench Warfare.

1. (i) Organization. All men will be trained to throw hand grenades and to face bomb attacks in the same way as they face rifle fire.

(ii) In order to keep a check on the expenditure of bombs, and to ensure that bombs and detonators etc. are safely stored and carefully handled, one officer or senior n.c.o. per company and squadron will be detailed to be in charge of bombs. He will supervise the training, under the orders of the battalion and regimental commander; and he will organize and co-ordinate the work of his bomb throwers when in action. He will be responsible that no dangerous or wasteful use of bombs is permitted, and for calling on section reserves to replenish the supply in the trenches in which he is employed. He will supervise the manufacture regimentally of dummy bombs (see para(iv) below). If necessary, O.Cs. units will arrange with Divisional Headquarters for the officer (or N.C.O.) in charge of bombs to receive preliminary instruction in handling and storage of explosives.

(iii) Instruction. Courses for bomb throwers will be organized regimentally. The course will include -

(a) Practice in throwing bombs over a known distance into marked areas which are to be rectangles of not more than 3 ft. width facing the thrower and of any depth desired, to represent enemy trenches. Practice will be both from trenches and in the open. Men will be taught to throw high and with all their strength.

(b) Practice in lighting bombs fitted with dummy fuzes with the object of accustoming the thrower to the time taken to ignite and explode.

(c) The training will be carried out under as practical and realistic conditions as possible, a few live bombs may be thrown under proper supervision.

(iv) Dummy Bombs. (a) Dummy bombs for practice will be made regimentally by filling empty jam tins etc. with earth.

(b) At the final stage, three fuzed dummy bombs are to be thrown by each man; these can also be made up regimentally.

(c) A few dummy Lotbiniere bombs are also available and should be drawn and used, to accustom the throwers to their shape and weight.

(v) Bombs in action. Recently the enemys' attacks have been made chiefly with bombs. Sometimes, Turks have crept up close to our trenches into which they have thrown a shower of bombs; at other times they have advanced up communication trenches under cover of heavy bombing from the heads of their columns. The most effective reply is to throw back two bombs for every one thrown by the Turks. Properly organized "bombing" posts should therefore be placed so as to block likely enemy lines of approach; in establishing these posts, the following points will be borne in mind :-

(a) There should be overhead cover or bomb screens to protect the men composing the post and the bomb supply; the bomb throwers can throw from the edge of the cover.

(b) Bomb throwers should be protected by special jackets and masks. Arrangements are being made for these articles to be supplied to posts exposed to bomb attack; when supplied they will always be worn and will be formally handed over to relieving units (to whom their use will be explained) as part of "trench stores".

(c) Arrangements will be made for the safe storage, adequate supply and replenishment of bombs.

(d) All men not required for the bombing party will be withdrawn to positions in rear where they are within easy reach if required.

(e) If the enemy should get a footing in our trenches he must immediately be bombed or bayoneted out again; our forward posts will be supported by more bomb throwers who will promptly advance along communication trenches without hesitation and retake the trenches at all costs.

(f) If bombs fall into our trenches, they should be smothered by blankets or half filled sandbags kept ready for the purpose. Filled sandbags laid cross-wise on the bottom of

the trench have proved useful in localizing the explosion.

(vi) At close quarters, a well organized and determined bomb attack should prove irresistible. After the enemy's works are taken, bombing parties should be sent along all communication trenches, to drive the enemy back and hold him off while the captured trenches are improved and the position consolidated.

(vii) To organize a grenade party the following is suggested :-
Squad to consist of 2 men (with rifles and bayonets), 2 men for throwing (rifles slung), and 2 men to carry basket of grenades (trained as throwers to replace casualties) and 1 n.c.o. in charge of squad.

The party would move off up the trench in the following order :-

Man with rifle and bayonet - ready for use.
Grenadier with grenade.
Carrier with basket of grenades.
n.c.o.
Second thrower
Second carrier
Spare men.

As soon as the first basket of grenades is finished it should be passed back for a further supply, and the full basket of the 2nd carrier passed to the No. 1 carrier.

The grenade squad should act on the offensive bombing the enemy wherever found, and then pressing on to bomb the next section between traverses; for if they remain stationary when the enemy is approaching, they will be isolated and probably themselves bombed.

(viii) Supply of bombs. All requisitions for bombs will be submitted by units to Divisional Headquarters.

Every effort will be made to collect bombs from casualties in action; and to keep up a regular supply at all times.

(ix) Precautions (a) O.S.G. units are responsible that bombs and explosives are carefully handled and stored.

(b) Several different patterns of bombs are now on issue; care will be taken that men are instructed in handling each description they are called upon to use.

(c) All troops will be warned that, when handling boxes containing bombs, the boxes should on no account be allowed to drop heavily on the ground.

(a) Bombs stored in the trenches will have the safety fuze if protruding covered with an empty cartridge case to preserve fuse from any flash through exploding bomb or shell or other accident.

Sanitation

~~APPENDIX~~ -
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1. Responsibility. The attention of officers commanding units is directed to Field Service Regulations Part II, paras 82, 84 (1909).

The strictest supervision will be maintained so that each company, each section, and each individual soldier is continually held responsible for the cleanliness of the lines.

2. Disposal of Excreta. Latrines must be constructed immediately on arrival at area allotted to unit. Owing to the limited area available the shallow trench is not to be used. One of two systems is to be maintained.

(i) The deep latrine trench 6 to 8 feet deep and 2 ft. 6 in. wide with a low rail seat about 18 inches high above the front edge of the trench; from this seat hang sheets of biscuit box tin to prevent soiling of the ground with urine. Any disinfectant available at the Supply Depot is to be liberally used in the trench and the less earth is used to cover excreta the longer will the latrine last. It should be filled in when the excreta comes to within 2 feet of the ground level.

- or -

(ii) The pail system may be adopted using biscuit tins which should be placed within a wooden box with seat down when not in use. These pails are to be emptied into deep pits and the excreta covered with a layer of earth; they are liable to leak and should then be discarded. Dilute cresol should be placed in the tins after they are emptied. Urine tins should be easily accessible to men in fire trenches, but will never be kept in fire trenches or in main communication trenches, but always in off-shoots of communication trenches. The urine tins are to be emptied into deep pits.

3. Disposal of Food Refuse. As far as possible everything should be burnt in prepared incinerators. All tins should first be burnt and then either buried or collected into a neat heap. There should be but little liquid refuse and this mainly from Cooks' lines near by which there should be a pit periodically disinfected for reception of same.

4. Protection of Food and Water. Quarter Masters' Stores should be protected from flies by flyproof netting which is available at Ordnance Depot. The only water for drinking purposes is imported water which is pumped into storage tanks at different places. Water from wells is not to be used for drinking.

5. Cleaning up Areas used for Bivouacs. Units evacuating must before departure see that the area occupied by them is being left in a sanitary condition. All refuse must be collected and either buried or burnt. Latrines and urinals must be filled in. Medical officers of incoming units should report to A.D.M.S. for special instructions.

6. Bathing. Arrangements will be made for men to bathe by small detachments, at least once a week. An absence from the unit of two hours has been found to be ample.

A P P E N D I X 10.

PRECAUTIONS AGAINST GAS ATTACK.

1. All men will be provided with anti-gas helmets or respirators, and instructed in their use.

There is nothing to be feared from gas attack so long as the helmets or respirators are kept ready for use and the following instructions thoroughly understood and observed. These will be posted up in the trenches

(i) The helmet or respirator must be kept ALWAYS handy with the man himself and not kept in a central store.

(ii) If attacked by gas, the breath must be held and respirator or helmet quickly adjusted.

(iii) To move with the wind courts disaster - better face the gas cloud under cover of helmet or respirator.

(iv) Special attention must be paid by all officers to the direction of the wind and warning given to units in dangerous places.

(v) Sprays or syringes and buckets must be kept full and ready in selected places.

(vi) Sentries will watch the wind to notice its direction. If they have reason to suspect gas attack, the group commander will be warned in the usual manner.

(vii) On gas attack being detected the word "GAS" will be passed along the trenches quietly and without panic.

(viii) Helmets and respirators for actual use will not be used for instructional purposes.

(ix) If helmets or respirators are not available, the following improvised methods are effective :-

(a) Wet and wring out any woollen article (sock or muffler) and press it over mouth and nostrils.

(b) A pad of damp earth in handkerchief or sock.

(c) A woollen pad soaked with water and soda solution or tea.

(x) First aid to victims of gas poisoning :-

(a) Give as much fresh air as possible.

(b) Oxygen inhalation.

(c) Drain fluid out of the lungs by raising the foot of stretcher.

(d) A drink of hot milk gives relief.

(e) An emetic (salt or mustard and hot water)..

2. (i) Gas attack, as experienced up to date in Europe may take two forms

(a) Gas released from retorts.

(b) Gas released from shells fired from mortars or guns. This is the form of attack which reports lead us to believe is the more likely.

(ii) Our action if the enemy employs gas against us is to be considered under the heads

(a) How to deal with the enemy.

(b) How to deal with the gas.

3. As regards 2 (ii) (a) the employment of gas as an offensive measure is only effective when it results in panic. Forethought and previous preparation will remove any risk of panic.

The general principles upon which the defence should be conducted are :-

(i) Troops will be kept under cover and nothing will be done to prevent the enemy launching attack - the steps detailed hereafter will be taken to meet it.

(ii) The word 'GAS' will be passed along the trenches quietly and without panic.

(iii) Notice of gas attack will be given to section and divisional headquarters and the report verified.

(iv) If gas is local - as for instance when it is released from bombs troops will be moved away from vicinity of released gas; arrangements will be made in such cases for covering of front by adjacent units.

(v) Local reserve troops who are in low ground will be moved to adjacent high points. Special orders for this will be necessary. Individual freedom of manoeuvre will not be permitted.

(vi) Where supports' trenches are higher than fire trenches these will be made ready for occupation if fire trenches become temporarily untenable.

(vii) If the gas arrives in the form of a gas cloud heavy fire and bombing will assist in dispersing it. If however it arrives in shells

~~and shells will assist in dispersing it.~~

or bombs the gun or mortar throwing the shells or bombs ~~the gun or mortar throwing the shells~~ and the shells themselves will be vulnerable to artillery fire. In such a case the nearest artillery officer will be informed promptly and told the direction from which shells are coming. The artillery unit first informed will at once search and sweep the suspected area for the enemy mortar firing bombs. As soon as orders have reached the howitzers, other natures of guns will cease fire and await further opportunities.

These opportunities will be given by the massing of the enemy in his trenches and in the areas generally occupied by his reserves preparatory to the assault with the intention of which he opened his gas attack. Enemy reserve positions and approaches to fire trenches will therefore be freely shelled but the fire trenches will be left untouched unless a good human target is presented, so as not to deter the front lines of infantry from exposing themselves. These front lines will however be attacked by hand bombs, Japanese and Garland bombs until the enemy emerges to face our fire.

4. As regards 2 (ii) (b) (dealing with gas) gas cannot be localized if released from retorts. Gas released from shells which burst outside the trenches will probably not have sufficient volume to surmount our parapets. Gas from shells actually bursting in the trenches will be localized by means of wet blankets stretched across either end of affected trenches. The blankets may with advantage be wetted with the solution used for portable pump sprays. The gas can then be dispersed by using the sprays already on issue.

5. In case of gas attack, the most dangerous course is retirement, since to follow the direction of the gas cloud necessarily involves remaining subject to the possibility of ill effects for the longest time. Further, if a gas attack should be made, there is no probability of the troops being subjected simultaneously to an attack by the enemy's infantry. The enemy might launch an attack closely following the gas cloud, but his infantry will be unable to undertake a vigorous offensive in the gas cloud itself.

APPENDIX 11

INTELLIGENCE.

1. Intelligence Officers. Each battery and battalion has an observation post with observing officers or men who note :-

- (i) Any movement in enemy lines.
- (ii) Any new works or improvements in enemy trenches.
- (iii) Any general information such as use of various material in building trenches, new kinds of explosives or projectiles, lights, signals, etc.

A summary of the reports is sent by O.C. Brigades and divisional artillery to G.S.O. 3 who compiles the Intelligence Summary from this data. It is necessary for G.S.O. 3 to check the information and to observe and study the situation personally. The summary is made out in triplicate and one copy sent ANZAC at 1000 daily.

2. Trench Reports. Each brigade keeps a daily record of work done and sends this on to G.S.O. 3 daily on forms provided.

A record of progress of saps is entered in duplicate plans kept by G.S.O. 3.

These returns are put before G.S.O. 1 every morning and returned to brigades as early as possible.

3. Position maps. Every three days maps are compiled showing the positions of guns and various units in the division.

Maps are printed on duplicators. Information should be regularly supplied by units.

4 copies made - 1 G.O.C. 1 ANZAC, 1 Intelligence G.H.Q. 1 office
4. Plans. Plans of each section are kept and additions entered; duplicate plans have been supplied to ANZAC, who are to be kept advised as to alterations.

A draftsman is employed to make drawings required for staff and general work.

5. Interpreters. The interpreter staff is under G.S.O. 3. There is a good deal of interpreting at times; prisoners, letters, documents, plans etc. This is generally done in presence of G.S.O. 3 roughly first, then later carefully by interpreter. Great care is required in this work by G.S.O. 3 in getting a proper appreciation of the subject matter of documents as mistakes in dates and numbers are fairly frequent and unless statements are queried information of value is passed over.

6. Examination of prisoners. On prisoners being secured by the division, notification is at once sent to G.S. Branch and arrangements are made to interrogate them before they are handed over to ANZAC who have now entirely taken over all prisoners. As soon as prisoners are delivered to A.P.M. he hands them to ANZAC and his further responsibility ceases.

No examination of prisoners by battalion interpreters should be permitted prior to the questioning by the G.S.O. 3. It is found that statements made under the excitement of recent capture or escape are unreliable but once made often adhered to. The method of examination is a personal matter, but asking a set number of questions straight off has been found ineffective.

Turkish prisoners, as a rule, although apparently docile require most careful handling as they suppress information and if they notice a tendency to leading questions will agree.

Greeks invariably enormously exaggerate losses and conditions under which the Turks exist.

7. Documents, Discs, numerals etc. These are not always brought in by troops who invariably appear to look upon all money, trinkets and easily handled articles as perquisites.

On the finding of bodies enquiry is at once necessary regarding papers and badges, collars or anything tending to show the units opposed to us. Most interesting documents have reached headquarters by round about methods days later than they should have, and doubtless many are not given up. Nearly every Turkish soldier in addition to his disc carries an oilskin wrapper containing his regimental papers, small koran and some letters.

8. Censorship. All censor stamps have been issued and no special duties appear necessary. There have been cases of stamps being mislaid and again found and ANZAC state no more will be issued.

9. Press Correspondents, - are given facilities to acquire information under various conditions; instructions in regard to which are given to G.S.O. 3 by Divisional Commander.

10. General Information. Up till now, few intelligence officers have had any previous training in their duties. In this division, the G.O.C. has arranged that, to begin with, three well educated young privates or gunners be chosen and taught intelligence duties under supervision of G.S.O. 3. They will be employed in observation both by day and night.

11. Maps. The issue of maps to all units of importance and the system is to send them out immediately they come to hand from ANZAC. Generally speaking they do not appear to be used or studied and but few officers can read them or can recognize the country shown on them. In all cases where troops are said to be observed in a given square this should be checked as frequently it would be impossible. Present maps of country are excellent but owing to lack of plain features and broken country difficult to read.

12. Plans. Too many scales have been used and one basis only should be employed throughout the division.

13. General Duties. The General Staff Officer in charge of Intelligence should :-

- (i) Be well acquainted with all parts of the division lines.
- (ii) Be able to make a quick panorama sketch, and a plan, to take correct bearings, to make form line contours.
- (iii) Have a good knowledge of the formation of Turkish Army.
- (iv) Form logical deductions from reports.
- (v) Cross examine from a regular thoughtout basis.
- (vi) Make up a statement from translations and prisoners statements giving a coherent narrative.
- (vii) Have a capacity for estimating distances and spaces in regard especially to areas occupied by enemy troops.

14. War Diary. This must be kept up to date daily; no comments are needed, merely the selection of important matters. Details are included in the unit and other reports as appendices.

15. Spies, Suspicious characters, lights, etc. One detective has been regularly employed obtaining information on this head. There has been no foundation for much suspicion but frequently enquiries are advisable.