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Canadian Ops - Mediterranean Area
Extracts from War Diaries and Memoranda (Series 27)

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2. These extracts are forwarded for gen infm only and opinions stated are not to be considered as necessarily expressions of official doctrine.

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(M.P. Johnston),
Lt Col, GS,
for Chief of the General Staff.

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CANADIAN MILITARY HEADQUARTERS

25 Oct 44

CANADIAN OPERATIONS - MEDITERRANEAN AREA
Extracts from War Diaries and Memoranda - (Series 27)

1. Further to my 24/AAI/1/5 (Hist), dated 14 Sep 44, attached are further extracts from War Diaries and Memoranda dealing with the operations of Canadian formations and units in the Mediterranean Area.

2. These extracts are circulated for general information only, and opinions stated are not to be considered as necessarily expressions of official doctrine.

Sgd

for (K. Stuart) Lieut-General,
Chief of Staff,
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CANADIAN OPERATIONS IN THE MEDITERRANEAN AREA

JULY - SEPTEMBER 1944

EXTRACTS FROM WAR DIARIES AND MEMORANDA

(SERIES 27)

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1. MEMORANDUM BY MAJOR-GENERAL C. VOKES, C.B.E., D.S.O., G.O.C. 1 CDN INF DIV (APPENDIX TO WAR DIARY, G.S. BRANCH H.Q. 1 CDN INF DIV - JULY 1944.

HQ 1 Cdn Inf Div
1 CD/1/G
20 Jul 44

All COs
RCD and Inf Bns

1. I want the following simple formula rubbed home with all ranks in your units especially with coy, pl and sec leaders. They are fundamental for success.

(a) ATTACK (i) Move FAST from one tactical bound to another.

(ii) Make wide use of ground and dispersion, frontally and in depth.

(iii) Be quick to exploit success
You can only do this if your reserves are properly positioned and handled.

(iv) Make full use of the fire power of all your weapons in the assault - brens, rifles, TSMGs, grenades, PIAT, 2" mortar. Do not forget that the bayonet is a lethal weapon, therefore, train your men to use it.

(v) Outflank the enemy whenever possible. The Boche is most sensitive about his flanks and rear. Pin him frontally however.

(vi) Don't cross a skyline standing up.

(vii) Whenever you are in doubt as to what should be done - ATTACK.

(b) DEFENCE AND CONSOLIDATION

(i) Always be prepared for all round defence.

(ii) Make full use of your automatic weapons in defence. Remember that automatic fire power is the frame-work. Conserve riflemen.

(iii) Keep a reserve in hand, mainly riflemen, suitable disposed for immediate counter-attack, for which you must be prepared in advance.

(iv) Patrol vigorously, and take advantage of opportunities. Build up a clear picture

/DG

of enemy Intelligence.

(v) Study the problem of attacking from your defence posn. Remember that defence is only a momentary phase. Battles are won by offensive action.

(c) PURSUIT

(i) In pursuit, you must take risks and move fast. Remember the enemy is tired. Infiltrate on a wide front. Keep going. Live off the country.

(ii) In a break through, the object must be to overrun the enemy's mortar and gun lines, which are the backbone of his defence. Having destroyed these an orderly retreat becomes a rout.

(d) INF TK CO-OPERATION

(i) Don't forget the primeval formula, inf deal with the A Tk guns and the tks with wire and MGs - BUT remember always that inf working with tks are the eyes and close-in protection for tks.

(ii) Know your opposite number - his limitations and his advantages.

(iii) Never let the tks get fwd without your support close behind. You must get up to them at all costs.

(iv) Tks are offensive weapons more than defensive. Their role in defence is offensive action. For this they should rally behind the objective where they can be employed for counter-attack.

(v) If the tks cannot get fwd, DO NOT lose your offensive spirit but go on without them. They will follow you as quickly as they can.

(vi) Practice assiduously with 38 set inter-comn inf-tks. If sets are properly netted, and operated by personnel trained for the purpose, this system can and will work.

(e) FINALLY

(i) Remember that the object of war is to destroy the enemy.
Be correct in your treatment of prisoners, but don't be friendly or you are inviting treachery.

(ii) Remember that the German is a worthy opponent, but the German isn't born who can stand up to Canadian Infantry imbued with the will to close and destroy him.

"C. Vokes"
(C Vokes)
Maj-Gen
GOC, 1 Cdn Inf Div.

2. IDENTIFICATION OF MORTAR BOMB CRATERS AND REFERENCE IN MOREPS (APPENDIX TO WAR DIARY, H.Q., R.C.A., 5 CDN ARMD DIV - JULY 1944).

INTRODUCTION (See Page 16 for Diagrams)

At the time of the introduction of a counter mortar staff in 5 Cdn Armd Div, formed for the purpose of fighting the enemy mortars, it was decided that all sources of information available would have to be considered. Included in these was the possibility of deducing locations of enemy mortars from craters made by their bombs. A Crater NCO was att to the counter mortar staff for the purpose of making an extensive study of craters as well as sending in moreps in action.

During the latest action in which 5 Cdn Armd Div took part, this NCO compiled some valuable information which may be useful in any future ops this Div may be called upon to join. It is our intention therefore to set down in writing all that has been found up to date.

IDENTIFICATION OF CRATERS

The first item to consider in the examination of craters is the difference between shell and mortar craters.

All shell holes have common characteristics, although varying in size. The shape of these craters is circular, and the blast of the shell is forward. This blast forms furrows or grooves in the ground in the front portion of the crater (see diagram 1). Generally two of these grooves are deeper than the remainder, distributed symmetrically around the axis of travel the shell has described. The above characteristics, namely shape and grooves, are not to be found in mortar bomb craters.

TYPES OF MORTARS IN USE BY THE ENEMY

Before dealing with the actual craters it is deemed advisable to say a few words concerning the weapons we have to contend with. These will be divided into two types: the cordite propelled and the jet propelled projectiles.

CORDITE PROPELLED

Calibre		Weight of Bomb	Range
5 cm	2 ins	20 lbs	575 yds
8.1 cm	3.2 ins	7¾ lbs	2700 yds
10 cm	4.14 ins	16 lbs	3300 yds
10 cm(nebel)	4.14 ins	19 lbs	6800 yds
12 cm (French)	4.7 ins	37 lbs	8000 yds

The composition of the fins on the 8.1 cm mortar and the 10 cm mortar bombs may be useful in determining the size of the projectile used. The 8.1 cm bomb carries twelve fins on its shaft, distributed in pairs. The 10 cm bomb only carries three fins, shaped in a peculiar fashion, curving inwards (see diagram 2).

JET PROPELLED

Calibre		Weight of Bomb	Range
15 cm	5.2 ins	71 lbs	6800 yds

This latter type carries no fins on its bomb. This weapon is often fired in groups of five or six barrels, commonly known under such conditions as a Nebelwerfer or "Moaning Minnie".

In this synopsis of enemy mortars we have not endeavoured to give details of all the enemy's weapons but only of these generally encountered up to date.

BOMB CRATERS OF THE CORDITE PROPELLED TYPE

(1) Shape

The shape of the above mentioned craters is similar in all cases, they only vary in size according to the weight of bomb used (see diagram 3).

The general shape of the crater is slightly oval, the widest portions being to the sides. The deepest portion of the crater is to be found forward with a gentle slope to the rear. The ground at the rear of the crater will be torn by the blast of the bomb, whereas the front edge will be practically straight and sometimes slightly undercut when in soft ground. The shape of the crater is symmetrical around the central axis.

By probing in the crater and removing from one to three inches of dirt, a circular tunnel formed by the fuze and fins of the bomb may be found. The fuze and fins bury themselves in the direction the bomb was travelling. The fins, if found may give the necessary information to determine the type of mortar which was fired.

(2) Methods of determining the bearing from which the bomb was fired.

Two methods can be used in determining the bearing from which the bomb was fired.

(a) Standing a fair distance away from the crater, in line with the fuze and fin tunnel previously mentioned, line up the hair line of a compass with the centre of the tunnel. The angle thus obtained will give you the bearing of the direction the bomb was travelling in; to get the bearing of the direction from which the bomb came, to the angle read add 180° of the angle is smaller that 180 deg., or subtract 180 deg if the angle is greater than 180 deg.

This method is accurate if the tunnel is very plain.

(b) The other method is to insert a stick into the tunnel, and lying on the ground facing the enemy, line up the compass along the stick. The angle read is in this case the bearing to the enemy mortar and needs no conversion. (see diagram 3.)

In the case of a bomb landing on hard ground, the tunnel formed by the bomb's fuze and fins will not appear, but a rough bearing may be obtained by lining up a compass along the central axis of the symmetrical pattern. This method, though very rough, may give information of use to the CMO when compared to information provided by other sources.

BOMB CRATERS OF THE JET PROPELLED TYPE

(1) Description

(a) Soft ground

In soft ground the bomb of the jet propelled type will penetrate fairly deeply (from two to three feet below the ground level) before exploding. The result of this belated explosion is to confine the fragmentation to the crater itself. A similar tunnel to that formed in the previous type of mortar bomb crater will be found in the deepest portion of the crater. The size of this tunnel will be similar to that of the bomb. (see diagram 4)

(b) Plowed fields and pastures

In the case of bombs dropping in plowed fields or pastures, craters similar to the above mentioned are formed, but in addition the fuze and percussion cap of the bomb form a separate tunnel approx three inches in diameter and from two to three inches below ground level, the tunnel being roughly horizontal (see diagram 4).

(2) Methods of determining the bearing from which the bomb was fired.

(a) In the case of bombs landing in soft ground (para 1 (a) above), the same methods may be used as have been described for the case of cordite propelled bombs.

(b) For bombs landing in plowed fields or pastures where the additional tunnel mentioned in para 1(b) above is to be found, the following method may be applied place a stick vertically at each end of this tunnel and sight a compass along these two sticks in the direction of the offending mortar. The bearing thus obtained will be the most accurate one.

The fragments formed by small pieces of very thin metal from the forward portion of the jet propelled bomb, as well as the fuze, may generally be found imbedded in the crater. These will help in the identification of the type and calibre of the weapon in use. (see diagram 5).

CONCLUSION

It is hoped that this precis will help units in obtaining further bearings on enemy mortars, thus increasing the number of moreps received by the CMO. This in turn would increase the help the CMO can provide in countering our common enemy, the German mortar. Every bit of information, however insignificant, will help achieve our purpose.

"R.J. Mutcheson"
(R.J. Mutcheson) Capt.
CMO, 5 Cdn Armd Div.

3. LESSONS FROM THE GOTHIC LINE (DISCUSSION HIGHLIGHTS - ISSUED BY 2 CDN INF BDE).

GOTHIC LINE ACTION
25 Aug -- 2 Sep 44

The discussion highlights will be summarized under the following headings:

1. Inf Problems

2. Tk Problems

3. Arty Problems

4. Engr Problems

5. Staff Problems

INFANTRY PROBLEMS

(a) The 3" Mortar

In the pursuit battle it will very seldom be worthwhile to man-pack for the adv is then too slow and amn sup to small. Careful consideration must be given before man-packing is undertaken. In the recent pursuit one unit which kept the mortars on wheels was able to make good use of the wpns in close sp in hilly terrain where arty was handicapped and drove off an enemy patrol with the mortar.

It was suggested that further use be made of this wpn but it was appreciated that if an adv is steady only arty will have the range to sp fwd inf in many cases.

(b) The 4.2" Mortar

The policy followed in the action was approved. That is, mortars will be leap-frogged fwd by the bty comd to sp the leading bn or bns. This worked well and much valuable sp was given. They will normally be centralized in a set piece attack.

Comd 2 Bty Hy Mortars stated that 2 additional No 18 sets are required urgently to let the FOO of each det net on a fwd bn comd net.

(c) The 2" Mortar

No targets were engaged due to the speed of the adv and the presence of other sp wpns.

(d) The PIAT

All bns considered the wpn important to the pl.

Recently bombs had been used exclusively to blast buildings or doors and on sub unit when attacked by an AFV at MONTECICCARDO had no bombs left with which to engage it. It was pointed out that pl comd must ensure that a number of bombs are held for the primary anti AFV role.

(e) The Carrier

Each bn favours at least 12 carriers in F ech. In the present terrain they have a better cross country performance than any other veh of similar load capacity. It was appreciated that their present utility might decrease when the flats of the PO valley are reached.

(f) The MMG

All units made use of unit and SASK LI MMGs and at MONTE S MARIA a sub unit caused the enemy hy casualties with the wpn. Pls of SASK LI should be allocated to inf bns for the pursuit battle so that they may be leap-frogged with the inf.

/HS

(g) The 6 Pdr

The principle of keeping the wpn under bn comd was approved as the comms are not satisfactory if the guns are centralized under a bde rep. One sub unit had fired 12 rounds with good effect at buildings but there was no instance of the wpn engaging an AFV.

(h) Tactical Smoke

Very few smoke rounds were fired by unit wpns but arty and tk smoke were employed to a limited degree for flank defilade.

(i) Man Loads

The present loads are a suitable maximum. The consensus of opinion is that small packs should not be carried into battle. Present American type picks are too hy to carry and shovels alone were carried to supplement entrenching tools. Suggested that a trade be made with the RCA who are equipped with smaller English type picks. No unit found the present amn loads insufficient. It is NOT feasible for men in battle order to carry more than 24 hrs rations.

(j) Man Management

Men should not go for days without having their boots off. Junior leaders will arrange for foot inspection and that every man removes his boots at least once in each 24 hrs. This must be arranged with due regard to the demands of battle.

With commonsense qualifications, it was ordered that men shave regularly during long actions.

2. TANK PROBLEMS

(a) The system of having the tk LO work from a HONEY TK att to the bn HQ worked well. It was suggested by one unit that a small type scout car would be a less conspicuous veh for the tk LO but these are not plentiful and have a lower cross country performance.

(b) Present comn channels proved satisfactory and when one bn had no No.22 comn with bde the tk net was used by the bn comd to keep in contact with bde HQ. Where on the field of battle person to person comn was necessary for planning or target engagement, it was found that all other methods sometimes fail except personal liaison for which there is no substitute if efficient co-operation is to be achieved.

(c) It was agreed that inf may suitably be carried fwd from res on tks. When tks may be fired upon inf should proceed on foot. The working fwd halt for mutual sp and at such times inf on the tks are particularly vulnerable. Tks also draw mortar fire.

(d) It is now recognized that tks can and will op in the dusk or darkness in sp of inf.

The technique will be for tks to halt while inf search fwd and take out any small posn where a faust patronen might be located or attack areas where A tk guns are sited. When the inf have cleared an area they will send back and guide the tks fwd. This process will shake the German defenders morale and may result in our tks successfully bypassing strong A tk gun posns.

PHS

Practical limitations on how much tks can op at night are tk crew fatigue and the need for nightly petrol and amn replenishment.

Inf and tks when adv by night must ensure that the tks halt and 'laager' where at least some inf can give night protection to the tks and the tks can be ready to meet enemy tk assaults or other attacks from daylight on. Tk sqns do not want to rally in a fwd area at night except when inf can be with them.

(e) Tks will enter built up areas in sp of inf but requires protection by inf from such wpns as faustpatronen. This inf are prepared to give. In return tks anticipate engaging German tks which are often run inside buildings to op as mobile strong pts.

(f) In the recent battles there wasa period when the tk regt had one bn of inf in sp for a pursuit op. In this situation the two comds can move either in the tk regt comd tk or in two separate tks of RHQ. They are always together and no comd difficulties arise. When a sqn of tks is in sp of a bn of inf the sqn comd moves his tk with the bn HQ and fights his tks by wireless from the bn HQ. This has proven quite satisfactory. Difficulty is experienced however, when a sqn is split up to sp two bns for the comd facilities both in wireless and personnel are not sufficient for this situation. When such a special allotment of tks is necessary time must be allowed for the re-netting of tk sets to the new bn comd net.

(g) It was mentioned that the tk bde has call on an assault sqn of tks incl an 'Octopus' capable of bridging by use of a 57 ft span. This eqpt is bounded fwd behind the tk bde.

ARTY PROBLEMS

(a) When an inf force is in sp of a tk force the arty fire plan is the responsibility of the arty rep at the tk bde HQ. However situations will often arise where by the nature of the ground or the time of day inf become the primary arm in the assault. Here inf may make arty plans through the bn arty rep and tk arty sp may be arranged through the FOO with the tk sqn but each arty rep must know what the other has requested so that there is no confusion in target registration or engagement.

(b) (i) A quick fire plan can readily be produced if a large number of prospective targets in the battle area have been previously registered and recorded as Uncle Targets. If this is done the particulars can be notified by the CRA to all regts. With this basis a fire plan can soon be formulated incorporating some of these recorded targets and new targets chosen as the detailed inf plan is made.

(ii) The CRA's rep needs a minimum of 10 mins warning to commence a fire programme and it is much better to give him 15 mins warning. If it is necessary to alter the arty fire plan inf are wise to ask the gnr how long the change will take and then alter plans accordingly.

(iii) If inf ask for guns on call from ---- hrs to ---- hrs they should estimate the length of time over which fire may be required so that the gnrs can better decide

amn requirements as well as the rate of fire and the number of guns to be employed.

(iv) It was explained that POW interrogation shows the wisdom of a fire plan that is timed in bursts rather than as one steady flow of fire. Enemy move between the bursts, are caught on the move and go to ground. When the program is over enemy may keep their heads down for many mins suspecting further fire.

(v) To ask for arty fire "as soon as possible" is undesirable. It is better to demand fire in terms of mins, then inf know when all fire will terminate and there is no likelihood of a ragged volume of fire.

(vi) Fire plans may be made by div, by bde, or as impromptu fire plans by the unit FOO. When the plan is made at bde it is made by the CRA's rep with inf bde unless the tk bde is controlling the op. Where a FOO arranges an impromptu shoot he must be given complete freedom to decide scale and type of fire for he knows the fwd tactical situation and the locn of our own tps relative to the target.

(c) DF tasks will not be sent as DF numbers hereafter but as Uncle Numbers. For this bde the Uncle Numbers are 120-130. They are allotted to units as follows:

PPCLI	U 120, 121, 122
SEAF OF C	U 123, 124, 125
LER	U 126, 127, 128

The SOS task will be designated by adding the letter 'S' to the Uncle number, i.e., U123S. It is important to decide who will be empowered to call down the DF task. This will be decided by the bde cond and the CRA's rep from time to time depending on circumstances. It is important that the locn of DF tasks are NOT given away by premature calls for DF.

(d) (i) During the adv FOOs sometimes moved by bounds from one OP to another and in other cases moves with fwd coys. There will be occasions again when one or the other system is best. In hilly country such as this coy comds wanted the FOO up with them as there is so much dead ground on the hillsides.

(ii) The FOO man-packed his set fwd in two units of the bde. It w as carried over ground where vehs could NOT go and over the R METAURO. The sets were man-packed for well over 1000 yds. The FOOs found that assault cable run out by hand was a useful alternative means of comn.

(iii) Even when inf are sp tks which have their own SP arty FOOs the inf FOO continues responsible for sending in through his normal arty channels targets of opportunity. The SP FOO will use his normal channels also. This practice requires liaison between the respective FOOs for confusion can result if for example, both commence to range on the same target simultaneously.

(e) Arty reps stayed with the bn comds and kept their jeep with wireless there. Only in the night crossing of the METAURO did any units leave the arty rep back but the rep could have achieved nothing if adv on foot in the dark.

(f) The principle of the 17 pdr being used well fwd in an offensive role was endorsed by the bde comd. SP A tk guns may be given either an offensive role moving with fwd tks and inf or given a def role to counter tk attacks but with this wpn also the trend is to employ it offensively NOT defensively.

(g) It is an arty principle that a flank fmn may engage with arty targets on our front more than 1000 yds ahead of our tps but that ref must be made to the fmn whose front is involved. In a very few mins it is possible to check back in any report of fire from a flank arty unit which will endanger our tps.

ENGINEER PROBLEMS

(a) Spr and pnr co-operation in the last actions was first class. Sprs now estimate as a gen rule that one rd crater can be repaired by 1 sec of sprs in 1 hr of work. Bulldozing and preparing approach and exit at a river crossing or a diversion takes 3 hrs of work by one sec of sprs.

(b) The American mine detector is more sensitive than other types now in use and a request has been made that units be sup with them.

(c) It was noted that tks can clear a lane through a schu minefd with no danger to the tk and this will be tried out.

STAFF PROBLEMS

(a) The use of code place names when calling for arty fire must be avoided. The practice will compromise the code name. A map ref is the proper means of sending in the target.

(b) HQ of CRA's rep is to be known hereafter as FIRE CONTROL to have a uniform designation throughout the Corps.

(c) SITREPS reporting What? Where? When? are to be separated from the equally vital INTREPS reporting facts about the enemy. Brevity is desireable when these are made by R/T. They can be amplified by other means as soon as possible.

(d) Offrs must ensure that their R/T messages are broken into parts and that the procedure "Roger so far" is frequently followed. This will speed up transmission. Offr messages are much speedier than formal messages passed between signaller.

(e) As the 38 set has proven its usefulness units must be careful to keep at each pl HQ a gp of ORs - runners, batmen etc, who can use the set. Many of the poor results credited to the set in the past have been due to bad set op.

4. REPORT ON MINEFIELD, FROSINONE AIRPORT (APPENDIX TO WAR DIARY, 13 FD COY, R.C.E. - JULY 1944)

During the week of 2 - 8 July 44 a considerable area of the a/m airport was cleared by the 1 Cdn Assault Tp., who were then in training under supervision of instructors from 13 Cdn Fd Coy R.C.E. The purpose was to accustom them to the handling and neutralizing of live enemy mines.

A large strip running North through the centre of the field had previously been cleared by the 4 Cdn Fd Coy RCE, and booby traps as well as mines reported. About fifty yards to the East of this cleared strip the 1 CAT encountered a belt of mines and about 10-15 yds in depth and running parallel to the cleared strip. The limit of this belt was reached but during the week 400 - 500 yds was cleared. In this area 70 "S" mines, 16 Teller mines ("Mushroom" type)and 18 concrete picket mines were lifted.

The "S" mines were all fitted with two way adaptors and trip wires attached to ZZ42 igniters. In many cases the trip wire was attached to the hole in the head of the striker shaft rather than to the pin. The latter was usually upside down and might have dropped out if the wire had been tripped.

The teller mines were invariably laid upside down with a ZZ42 in the base and a trip wire attached. In only one case was a regular fuze found in the mine making it both A/P and A/T.

The Stock mines all were fitted with ZZ42's and trip wires attached this time to the pins.

There was no apparent pattern to the field beyond the fact that they were found in a very long narrow belt. All three varieties of mines were more or less mixed indescriminately throughout the field but most of the Stock mines were towards the South end.

No Holtz mines were lifted, but there was evidence that they had been found by the 4 Cdn Fd Coy, as several were found in a damaged condition in the cleared strip. There were also 2 or 3 5 - kilogramme prepared charges which apparently had been buried and booby-trapped.

No markings of the mine belt were found by 1 CAT. In the cleared strip several boards marked "Minen" were seen but they had been broken away from the stake and were just lying scattered about.

Both prodding and detector methods were used in clearing the area. The grass was long and it was difficult to locate both the trip wires and the mines. The growth of grass was not affected by the placing of the mines and in the case of "S" mines the adaptor and igniters were only visible after parting the grass. Trip wires were laid 3" to 4" above the ground. Apparently the field had been laid while the grass was short.

(A.H. NICOLSON) Lieut., R.C.E.,C.I.
13 Cdn Fd Coy, R. C. E.

5. FAULTS AND REMEDIES IN O.P. WORK (APPENDIX TO WAR DIARY, H.Q., R.C.A., 5 CDN ARMD DIV - JULY 1944).

Trg of BCs and Tp Comds in OP Duties

1. The recently conducted OP exercises have disclosed that much more attention must be given in all fd regts, to the trg of BCs and Tp Comds in OP duties, OP org, OP occupation, simple fire plans, etc. Many of the mistakes and omissions which occurred during recent exercises are well known to the personnel concerned,

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/HS

but little or no attent on paid to them; this is due to failure on our part to stress adequately this very important aspect of our work. Some of the errors, particularly concerning fire plans, show definite lack of knowledge orfailure to apply knowledge.

2. Att hereto is a list* of the more common faults which must be corrected before the next op. C Os will please take this matter in hand forthwith, either following the att suggested means of correction or substituting some means of their own. In particular the drawing up of simple fire plans, plan and orders for registration and engagement, the reporting of "ready" well ahead of H hr, etc., must be thoroughly gone into.

3. COs will fill in the last coln of the att form and return to me by 1200 hrs 30 Jul 44.

"H A Sparling"
(H A Sparling)
CRA 5 Cdn Armd Div.

* (For list and suggested proforma see pp 13-15)

FAULTS AND REMEDIES IN OP WORK

SERIAL	FAULT	SUGGESTED REMEDY	CO's PLAN
1	LACK OF KNOWLEDGE OR FAMILIARITY with indication of targets by coy/sqn comds, etc.	Miniature range practice of procedure at an OP.	
2	Unfamiliarity with various types of smoke screens, methods of producing and correct fire orders	Miniature range and study of AT Vol III, A.T.M. War No 8 Pt II.	
3	Failure to obtain and prepare an alternative HF task for any smoke screen; correct orders for preparing such an alternative task and being prepared to change quickly to this task if smoke unsatisfactory.	Study of pamphlets and practice on miniature range.	
4	Failure to maintain an OP log.	Every CO, BC, tp comd to carry and use standard form of OP log issued them in pads as ordered by HQ RCA.	
5	Crowding of two or more OP parties close together this putting "all eggs in one basket".	Use of common sense.	
6	Use of too many OPs for some tasks and thus endangering the reserve of OPs.	Use of common sense.	
7	Failure to organize OP.	Practical demonstration followed by all OP parties carrying out some occupation. REPEAT, frequently.	

(Cont'd)

8	Failure to send back both positive and negative infm.	Use of OP logs by ALL OPs and ensure ACPOs and regt OO made responsible for seeing that infm is sent in continuously.	
9	Failure to advise BC/CO when "ready" for a ny task detailed as soon as registration finished and guns have reported "ready", etc.	Use of OP log and use of common sense by OP offr and/or comd post concerned	
10	Non application of arty knowledge in drawing up fire plans with coy/sqn or bty/armd regt comds.	More study and application of principles taught together with fire plan discussions on minature range and ground.	
11	Faulty appreciation and orders for arranging to carry out a fire plan, unsound decentralization to tp comds of registration and preparation of tasks with consequent loss of time. Also, failure on part of some BCs to carry out registration and preparation of tasks themselves if quicker. This criticism was noticeable in the MELFA - LIRI battle.	Frequent bty and regt fire plans to be prepared for engagement on miniature ground and range. Time element to be carefully considered at all times. Alternative HE tasks must be ready for firing for any smoke task in case wind unsuitable.	

(Cont'd)

12	Incorrect appreciation of the time required to "lay on" bty and regt fire plans under varying conditions.	Time must be allowed for issue of arty orders, adequate registration and guns to report "ready" a minimum of 15 mins before H hr.	
13	In drawing up fire plans with inf/armd comds, failure to obtain ALL the infm required.	USE of "INFM PROFORMA"	
14	Faulty briefing of FOOs	Application of detail given in range table by comd sending out FOO and proper questions by FOO if he has not received adequate details.	
15	Failure to "look ahead" and posn OP resources where they will be readily available or suitably sited to "lay on" fire plans quickly.	Again, discussions within units using sand model, miniature range and out on actual ground.	

DIAGRAMS REFER TO SERIAL 2

Diagram 1.

Diagram 2

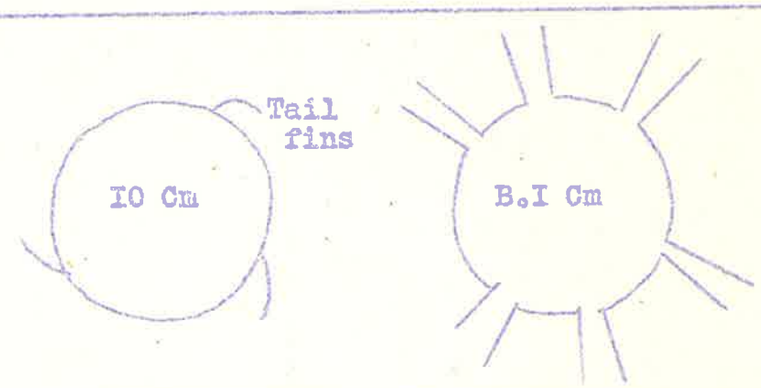

Diagram 3

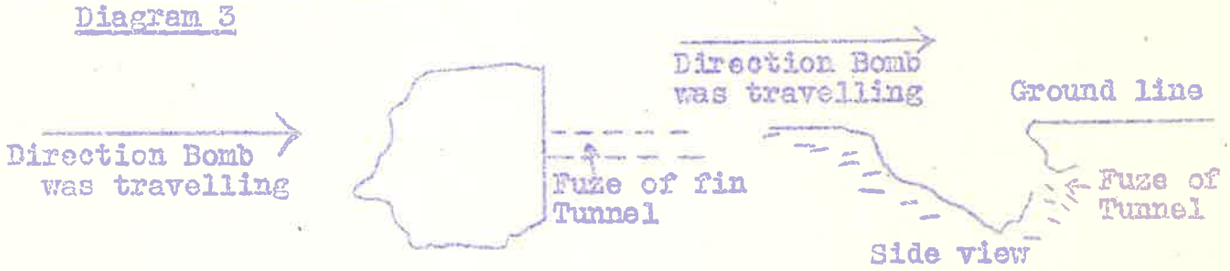

Diagram 4

Diagram 5