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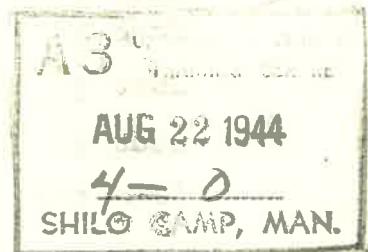
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Canadian Ops - Mediterranean Area
Extracts from Memoranda (Series 23)

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[Handwritten signature: M.P. Johnston]
 (M.P. Johnston),
 Lieut.-Colonel, G.S.,
 for Chief of the General Staff.

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S E C R E T

23/AAI/1/5 (Hist)

CANADIAN MILITARY HEADQUARTERS

31 Jul 44

CANADIAN OPERATIONS - MEDITERRANEAN AREA

Extracts from Memoranda - (Series 23)

1. Further to my 24/AAI/1/4 (Hist), dated 21 Jul 44, attached are further extracts from Memoranda dealing with the operations of Canadian formations and units in the Mediterranean Area.
2. The present series consists entirely of the text of the report of H.Q. 1 Cdn Corps on the operations in the Liri Valley, 15 May - 4 Jun 44.
3. These extracts are circulated for general information only, and opinions stated are not to be considered as necessarily expressions of official doctrine.

(K. Stuart) Lieut-General
Chief of Staff
CANADIAN MILITARY HEADQUARTERS

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CANADIAN OPERATIONS IN THE MEDITERRANEAN AREAMAY - JUNE 1944EXTRACTS FROM MEMORANDA(SERIES 23)1. THE LIRI VALLEY BATTLE: 1 CDN CORPS NARRATIVE OF EVENTS
(APPENDICES OMITTED).Part I THE PLAN

1. The gen plan for 1 Cdn Corps in the battle of the LIRI Valley was:

- (a) To relieve fmns of 13 Corps operating in the left sector of the LIRI Valley.
- (b) To adv to the HITLER Line in conjunc with 13 Corps.
- (c) If necessary, to break through the HITLER Line.
- (d) To exploit in the direction of FROSINONE.

Part II APPROACH TO THE HITLER LINE

2. This report intends to show how the various phases of the battle developed from orders and instrs issued by HQ 1 Cdn Corps. In some cases it may seem from the dates that instrs and orders were issued rather late, but normally the written orders were confirmation of verbal orders issued direct by GOC 1 Cdn Corps to the GsOC 1 Cdn Inf Div and 5 Cdn Armd Div.

3. On the 15 May 44 orders were issued in 1 Cdn Corps Ops Instr No 8 (Appx 'A') for 1 Cdn Inf Div to relieve 8 Ind Div to be prepared to pass through them on the line they had reached by first light 16 May, and to continue to ADOLPH HITLER Line. One Inf bde gp was to be prepared to move across the R GARI from 1200 hrs 15 May. In order to assist in this mov 1 Cdn Inf Div Engrs were ordered to construct at Cl 40 br areas 871135 to be known as Quebec br.

4. It was decided between Comds 1 Cdn Inf Div and 8 Ind Div that 1 Cdn Inf Bde would relieve 19 Inf Bde night 15/16 May on line PIGNATARO SOUTH to the LIRO. The move commenced at 1500 hrs 15 May and the relief was completed that night without incident. In the meantime it was arranged that 3 Cdn Inf Bde relieve 21 Ind Inf Bde night 16/17 May, comd to pass tentatively midnight 17 May from 8 Ind Div to 1 Cdn Inf Div. This relief was carried out without incident and comd actually passed at 2215 hrs night 16/17 May.

5. The bridging op was not so successful as it might have been. Work commenced at 1430 hrs 15 May and was completed at 1830 hrs, but approaches were bad so it could only be considered as a CL 9 hr and opened for traffic at 2000 hrs 15 May.

6. During 16 May 1 Cdn Inf Bde adv to the SPALLE BASSE and on 17 and 18 May both Bdes made steady progress against enemy resistance. Both Bdes had formed a hrhead over the FORME D'AQUINO before dark 18 May, where they consolidated and patrolled strongly. During this phase numerous prisoners were taken. 1 Cdn Inf Div Engrs constructed two 30' SS Baileys across LE FORME D'AQUINO at G774177 and G773174, and a 60' DS Bailey at G7831 3.

7. 1 Cdn Corps Op Instr No 9 was issued at 2220 hrs (Appx 'B') 17 May 44 to the effect that 1 Cdn Corps was to adv, breach the HITLER Line and exploit towards FROSINONE. 1 Cdn Inf Div were to press on vigorously to close on the HITLER Line, and to clear an area approx 8314 for 11 Cdn Inf Bde Gp which was to come under comd 1 Cdn Inf Div. In order to comply, 5 Cdn Armd Div were to have 11 Cdn Inf Bde Gp ready to move fwd and the bde was to be prepared to relieve 3 Cdn Inf Bde. Comd of the sector would pass to 5 Cdn Armd Div on completion of relief.

8. 11 Cdn Inf Bde moved to and concentrated in an area on the near side of the FORME D'AQUINO but the relief of 3 Cdn Inf Bde was NOT carried out.

9. On 19 May 1 and 3 Bdes made contact with the defs of the ADOLPH HITLER Line and intensive recce were ordered. Three additional hrs were constructed over the FORME D'AQUINO, a 20ft and 30 ft SS at G790151 and a 50 ft SS at G777158. This meant that three routes were now opened beyond this obstacle.

Part III - HITLER LINE - THE BREAK IN

10. The plan for breaching of the HITLER Line was originally issued on 20 May 44 in 1 Cdn Corps Op Instr - No. 10 (att Appx 'C'). The object was that 1 Cdn Corps would breach the HITLER Line and exploit towards CEPRANO. 1 Cdn Inf Div was ordered to make the breach on night 21/22 May or early 22 May, 5 Cdn Armd Div were to be positioned to sp with all available resources and to be prepared to pass through the breach and exploit towards CEPRANO. In the meantime 1 Cdn Inf Div were to dominate NO MAN'S LAND, prevent further enemy wiring or mining, keep enemy in a state of tension and recce minefds and suitable places for gapping, employing snakes.

11. Plans were slightly changed as a result of discussion and recce and Corps orders were issued verbally at 1400 hrs 20 May. Those were confirmed in the form of 1 Cdn Corps OO No 1 issued on 22 May 44 (Appx 'D'). The op was to be called 'CHESTERFIELD' and would be carried out in two phases. In the first phase 1 Cdn Inf Div were to breach through the HITLER Line and secure the high ground approx 1000 yds beyond, with a view to fanning outwards to destroy the enemy. In phase two 5 Cdn Armd Div would pass through 1 Cdn Inf Div and seize crossings over the R MELFA with a view to exploiting towards CEPRANO. It was decided snakes would NOT be used. H hr was set for 0600 hrs on 23 May.

12. As a preliminary to 'CHESTERFIELD' the GOC 1 Cdn Inf Div decided to test the strength of the HITLER Line on the left. He positioned 4 PLDG between the rd PONTECORVO-PIGNATARO and the LIRI night 20/21 May. This unit had considerable success on 21 May so it was decided that 1 Cdn Inf Bde would attack the HITLER Line at 100 hrs 22 May, moving approx due NORTH, with the 73 EASTING as the axis. If this was successful 2 Cdn Inf Bde could be passed through and results obtained more quickly, and at less cost, than waiting for 'CHESTERFIELD'. However, though both the 4 PLDG and 1 Cdn Inf Bde met with some success, it was not enough to warrant changing the 'CHESTERFIELD' plan.

13. At 0600 hrs 23 May the attack on the ADOLPH HITLER Line commenced. By 1300 hrs it appeared that 2 Cdn Inf Bde had made some progress but were not at all firm. On the other hand the CARLT and YORK, leading bn of 3 Cdn Inf Bde had got their first objective, and some progress was being made in 1 Cdn Inf Bde sector on their left. Accordingly the GOC 1 Cdn Inf Div ordered the second phase of the attack to be carried out on the 3 Cdn Inf Bde front using R22eR, WEST NSR and 12 Cdn Armd Regt. This attack went in at 1650 hrs and met with outstanding success, as enemy res were caught on the move in the open. By 1800 hrs it was clear that the breach was successfully made and held. Terrific damage was inflicted on the enemy, prisoners alone numbering 700. At 1730 hrs verbal orders were issued to 5 Cdn Arm Div to pass through. However, due to rain and difficult tracks it was not possible for their adv beyond the brhead to begin that night.

Part IV - HITLER LINE - THRE BREAK THROUGH

14. 5 Cdn Armd Div intended to commence the break through at 0600 hrs 24 May, but due to difficulties in getting the armour into posn it was delayed until 0800 hrs. Once the battle did start it was completely successful. 5 Cdn Armd Bde with the Ir RC under comd was divided into gps. The first gp consisted of the BCD and the Ir RC and the second gp LdSH and WESTMR R. Flanking protection was provided by GGHG.

15. The first gp reached area MANCINI and although they were not firmed up the second gp was ordered through to the MELFA R. The MELFA was reached by 1500 hrs but tks were unable to get across owing to steepness of banks. Some elements of the WESTMR R managed to get over however. During this phase several enemy tks, PANTHERS and SP guns were knocked out and numerous prisoners taken. Our own tk cas were hy however, although the inf suffered very little.

Part V - FURTHER OPS IN LIRI VALLEY

16. At 1800 hrs 24 May, 1 Cdn Corps Op Instr No 11 (Appx 'E') was issued. It ordered 1 Cdn Inf Div to press on vigorously on the present axis and cross the R MELFA as soon as possible mopping up enemy en route. 5 Cdn Arm Div were ordered to carry out two tasks. The first was to organize a strong brhead over the MELFA night 24/25 May with a view to moving 25 May on CEPRANO. The second task was to block as many crossings over the R MELFA and prevent the escape of as many enemy as possible.

17. 1 Cdn Inf Div had already been conforming with this by moving a mixed force on the left of 5 Cdn Armd Div to the MELFA and succeeded in establishing a brhead by first light 25 May.

18. 5 Cdn Armd Div although it had elements across the MELFA did not est a firm brhead that night owing to difficulties of ground but reed up an attack to press at first light. This was carried out by the Ir R6 and WESTMR R and the brhead was firmly established by 1235 hrs.

19. Two brs were constructed over the MELFA night 24/25, one in each div's sector.

20. At 1630 hrs the CB HIGHRS supported by 8 NBH passed through the brhead formed by 5 Cdn Armd Div and by nightfall were approx 1500 to 2000 yds ahead. Here they were ordered to firm up and the PERTH R moved up on their left to complete the extension.

21. The next morning (26 May) the adv was continued with CB HIGHRS and one sqn 8 NBH right and PERTH R with one sqn 8 NBH left. This adv was very slow due to difficult terrain, and tks and supporting arms were unable to keep up with the inf. The result was that although 11 Cdn Inf Bde had expected to be in CEPRANO by nightfall, they only reached a line 623281-618270-619260-620257 and were ordered to est a firm base there. The Ir RC were to send patrols to recce crossings of the LIRI R and if possible to mop up CEPRANO that night.

22. In the meantime, 1 Cdn Inf Div conforming on the left had pushed fwd on foot and managed to est a brhead across the R SACCO S. of CEPRANO Sta, night 26/27 May. No bridging could be got during 27 May due to enemy shelling and mortaring.

23. 1 Cdn Corps Op Instr No 12, Appx "E" was issued at 1125 hrs, 26 May. 1 Cdn Corps was to continue the adv on gen axis CEPRANO-POFI - FROSINONE and destroy as many enemy as possible. First objective was the lateral rd CEPRANO - STAZ DI CEPRANO 6024. Second objective was the rd POFI - STAZ POFI CASTRO 5026. When the first objective was reached 1 Cdn Inf Div were to come into res and 5 Cdn Armd Div were to continue on.

24. Night 26/27 patrols of Ir RC reced the LIRI R near CEPRANO and found the river deep and swift. Some patrols got into CEPRANO by swimming across and reported the town unoccupied.

25. 1 Cdn Inf Div having crossed the R SACCO in sq 6023 during the night 26/27, completed a Cl 40 br night 27/28 May and remained in that area.

26. At 0600 hrs 27 May PERTH R made an assault boat crossing of the R LIRI. They encountered opposition and the brhead was not deep but the crossing continued until the whole bn was across. The CB Highrs followed at 1630 hrs and during the night both bns formed up for an assault at first light, 28 May 44.

27. A br was commenced across the R LIRI at 602260 at 2330 hrs 27 May, but was not opened until 1730 hrs 28 May which held up the adv somewhat.

PART VI -- OPS BEYOND CEPRANO

28. 1 Cdn Corps op Instr No 13 was issued at 2035 hrs 27 May,

(Appx "G"). It ordered 5 Cdn Armd Div to continue the adv on 28 May, to secure line MAIDA (rd POFI - STAZ POFI CASTRA 5026). When 5 Cdn Armd Div had passed through 1 Cdn Inf Div would come into Corps res. Early 28 May 44 11 Cdn Inf Bde adv to the 58 EASTING on a two bn front and consolidated to form a strong brhead. As the br BALACLAVA (602260) was not completed supporting weapons were rafted across under continuous shellfire.

29. Some difficulty occurred when Army ordered that BALACLAVA br on completion would be used exclusively by 78 Div. This seriously affected the plan of 5 Cdn Armd Div but suitable arrangements were mutually made with 78 Div. The br was completed at 1730 hrs and the f echs of the inf ~~was~~ were taken across.

30. At 0030 hrs 29 May instrs were issued in 1 Cdn Corps Op Instr No 14 (Appx "H"). 5 Cdn Armd Div were to press fwd vigorously, regain contact with the enemy and drive in his rear gds. One inf bde gp from 1 Cdn Inf Div was to move to and come under comd of 5 Cdn Armd Div on the afternoon 29 May 44 relieving 11 Cdn Inf Bde on arrival. A second bde gp would move fwd on the afternoon 30 May and 5 Cdn Armd Bde would be withdrawn. The comd of the sector would pass to 1 Cdn Inf Div who would continue the adv beyond FROSINONE on the axis of Highway 6.

31. At 0500 hrs 29 May 5 Cdn Armd Bde commenced to cross the LIRI using BALACLAVA br and by 1120 hrs the leading elements had reached POFI. At 1250 hrs 11 Cdn Inf Bde was ordered to follow and by last light elements of the Armd Bde were WEST and NORTH of POFI and the Inf Bde were in and around POFI.

32. 5 Cdn Armd Div plan for 30 May was for the armour to push ahead and capture TOM (488333) DICK (464323) and HARRY (475355) to be followed immediately by the inf. As it turned out the armour had difficulty in getting over obstacles but the inf pushed ahead and occupied TOM and DICK at approx 1030 hrs. The Armour joined them later.

33. Enemy tks were reported in area 4934 and were successfully engaged by 2 Cdn Armd Regt (LdSH) who remained astride Highway that night. In the meantime 5 Cdn Armd Regt (8 NBH) contacted the French at CECCANO and moved fwd NW of that town. They made little progress due to mines and laagered that night protected by WESTMR R.

34. In the meantime 2 Cdn Inf Bde during the day moved through 11 Cdn Inf Bde and took up posns areas 4535-4632. 2 Cdn Inf Bde took over from 11 Cdn Inf Bde at 2010 hrs 30 May. Comd of the sector passed from 5 Cdn Armd Div to 1 Cdn Inf Div at 0615 hrs 31 May.

35. at 1140 hrs 31 May, 1 Cdn Corps Op Instr No 15 was issued (Appx "J"). 1 Cdn Corps would secure the line FROSINONE 4637-TOMACELLA 4034 and continue the adv on the axis of Highway 6 towards VALMONTONE. 1 Cdn Inf Div were to lead while 5 Cdn Armd Div remained in res. One inf bde gp of 6 SA Armd Div with a regt of tks was to move fwd 1 Jun and come under comd 1 Cdn Inf Div. A second bde gp also with an armd regt was to move fwd 3 Jun at which time comd would pass to 6 SA Armd Div.

36. On 31 May 44 2 Cdn Inf Bde patrolled beyond FROSINONE and found no opposition. On 1 Jun they were firmly established in and around FROSINONE. In the meantime 1 Cdn Inf Bde had moved up on their left.

37. The general plan of GOC 1 Cdn Inf Div was for 1 Cdn Inf Bde with 4 PLDG to capture the high ground FERENTINO, and 2 Cdn Inf Bde to capture M RADICINO. On 2 Jun 12 SA Bde would adv along the SACCO R and take the high ground in sq 3143 - 3243 - 3142 - 3242. The following day 24 Gds Bde Gp would move fwd and responsibility of sector would pass to 6 SA Armd Div.

38. On 1 Jun the L EDMN R commenced the attack on M RADICINO and after some fighting occupied the objective completely by 0050 hrs 2 Jun. Numerous prisoners were taken. This was the last fighting in which 2 Cdn Inf Bde took part.

39. 1 Cdn Inf Bde had some difficulty getting fwd due to hy mortaring and mining of rds and tracks, but by noon 2 Jun were well established with the RCR in FERENTINO, 48 HIGHRS 3848 - 3743, HAST and PER 3742 - 3841.

40. At 2210 hrs 2 Jun 44 1 Cdn Corps Op Order No 2 was issued (Appx "K") 1 Cdn Corps were to continue to attack the enemy and press on to the NW. In 1 Cdn Inf Div, 1 Cdn Inf Bde was to capture the high ground about ANAGNI 2949 and est a firm base, 4 Cdn Recce Regt (4PLDG) was to secure the stream crossing 264481, and one bn of 2 Cdn Inf bde was to move to FERENTINO 3743 and patrol towards FUMONE 4147. In 6 SA Armd Div, 24 Gds Bde Gp were to pass through 1 Cdn Inf Bde on axis FERENTINO - rd junc 336463 - ACUTO 3154 - PIGLIO 2858 and patrol to FIUGGI 3555. One bn gp were to adv through ANAGNI towards PALIANO 2166. , and contact patrols were to be made with FEC on left flank by patrols from 1 Cdn Armd C Regt (RCD), a sqn of which was under comd. Comd of the sector was to pass from 1 Cdn Inf Div to 6 SA Armd Div at a time to be arranged mutually by Comds concerned.

41. 1 Cdn Inf Bde Gp pushed fwd towards ANAGNI and by noon 3 Jun were established as follows:

4 PLDG	2348 - 2847 - 3346 - 2649
48 Highrs.	3148 - 3149
Hast & PER	2847 - 2948 - 2947

This was the limit of their adv.

42. In the meantime 12 SA Bde had been advancing and at 0815 hrs 4 Jun reported the capture of PALIANO 2156. On 3 Jun 44 24 Gds Bde passed through 1 Cdn Inf Bde in the ANAGNI area and advanced to 268507 where a blown br halted the coln and enemy was again contacted.

43. The adv by the 6 SA Armd Div and 1 Cdn Inf Bde was greatly hampered by blown brs and craters which considerably extended the engr resources. During this period, the SA engrs built three Bailey brs, one of them 130 ft long, and the Cdn engrs built two.

44. 1 Cdn Corps Op Instr No 16 was issued at 1745 hrs 4 Jun 44. (Appx "L"). 6 SA Armd Div passed from under comd 1 Cdn Corps to 13 Corps. All fmns and units of 1 Cdn Corps were ordered to stand fast in present posns until further orders. The Corps came into Army res, and took no further part in the fighting.

2. THE "SET - PIECE" ATTACK : LESSONS FROM THE BREAKTHROUGH OF THE HITLER LINE (FROM H.Q.1 CDN CORPS).

INTRODUCTION

1. Most of the lessons which follow merely confirm the experience of attacks on fortified posns, both in this war and in the last. Comds generally were aware of the principles which should have been followed, but the circumstances and gen situation at the time of the attack (as will be explained below) were such that there was no time for some measures and preparations which would have been desirable and others were overlooked or ignored.

GENERAL SITUATION AFFECTING THE OP

2. On the 13th May, POLISH Corps had captured the MONTECASSINO MONASTERY and heights to the NW, finally bre aking the stubborn resistance of the 1 Para Div in this sector, which had long provided a hinge for the def of the LIRI Valley.

3. On the 20 and 21 May, 1 DMI of the FEC advanced to MONTE DEL MANDRONE 6814 and MONTE LUCCIO 6717, turned the HITLER Line from S OLIVA 6912 to the LIRI river and advanced to the suburb of PONTECORVO on the WEST bank of the LIRI and various pts on the river to the WEST.

4. The Int indicated that the enemy had no fresh tps with which to garrison the HITLER line between AQUINO and PONTECORVO, but would have to rely on the 361 GR, together with elements of other fmns which had been thrown into the fight in the LIRI Valley, and had been roughly handled by 13 Corps and ourselves.

5. Thus, the HITLER line, broken loose at both ends, scarcely appeared to be tenable, and it was considered highly probable that the enemy would withdraw from it before the 23 May, which was the date selected for the attack.

6. The object of the ops, however, was to destroy the enemy forces opposing us, or at least, exert hy pressure on them until the attack out of the ANZIO brhead could take effect, and for this reason it was important to bring him to battle and to strike him an effective blow.

7. Balanced against this was the hope that he could be turned out of the HITLER line b pressure from the flanks, since a frontal attack was bound to be relatively costly in men and tks if the def were at all well organized.

8. On 21 May, the 4 Cdn Recce Regt (4 PLDG) were able to penet- rate the HITLER Line near the LIRI and to clear a certain number of defended works. The garrison in this portion comprised personnel of a rft bn who were not willing to fight. This success and the fact that the French in light str had by this time arrived on the LIRI practically all along as far as 6917 indicated that the line might be turned from this flank by an attack directed NORTHWARDS on the high ground pt 106 in square 7317. Such an attack was made by the 48 HIGHRS supported by a sqn of tks on 22 May. The intention was, if the enemy def in this sector proved to be as disorganized and weak as had appeared from the previous day's fighting, to roll up the HITLER Line from PONTECORVO NORTHWARDS, passing the res bde (2 Cdn Inf Bde) through to make a wider gap through which 5 Cdn Armd Div could in turn be passed.

9. These Ops, which looked very promising on the 21st and 22nd, naturally distracted attention from the planned major attack (CHESTERFIELD) which was to penetrate the HITLER Line at F D'AQUINO in square 7420 and approx the 18 NORTHING grid line. In particular, the 2 Cdn Inf Bde, which was to attack on a two bn frontage on the RIGHT, instead of taking over this sector at once, was held in res about 7616, to exploit the success of 1 Cdn Inf Bde - as explained above. Although the 2 Cdn Inf Bde was ordered to go ahead with preparations for CHESTERFIELD, the fact that the bns were not in occupation of the sector of attack was considerable handicap. When they finally relieved the 3 Cdn Inf Bde at about 1700 hrs on 22 May, there was not sufficient time for all the recces and patrolling that should have been done.

10. From the accounts of 3 Cdn Inf Bde, it is apparent that much of the success of the CARLT and YORK attack was due to the fact that they were in posn on their sector of attack for several days beforehand were entirely familiar with it. On the previous day, in the course of a feint attack to distract attention from the ops of 1 Cdn Inf Bde, this bn had actually passed two pls through the enemy wire, and they penetrated a certain distance inside the defs. Thus passages through the wire and minefields had been explored.

11. The R32eR had attacked on the RIGHT sector, but it does not appear that their experience had been passed on to the PPCLI. Also, patrols had been pushed up right to the enemy wire, but it does not seem as if the infn they obtained reached the attacking coys and engr gap-clearing parties.

12. The above circumstances illustrate the danger of being diverted from an op which is intended to be decisive by minor successes attained elsewhere, even if they seem to open an easier way to achieve the object. It is certain that a single div cannot properly prepare for an attack of this nature and conduct other ops of bde scope on its front at the same time. On the other hand, there is no doubt that the attack of the 1 Cdn Inf Bde SE of PONTECORVO helped to distract the enemy's attention and contributed considerably to the success of the 3 Cdn Inf Bde on 23 May.

13. In the end, the CHESTERFIELD op was successful and the ADOLF HITLER Line was breached, the 5 Cdn Armd Div passed through and its penetration through to the MELEA and beyond finally drove the enemy from the LIRI Valley to the WEST and NORTH.

14. The losses inflicted on the enemy during the whole of the ops of 1 Cdn Corps, from 17 May to 3 Jun, on a conservative estimate must have been considerably greater than those suffered. Cas 1 Cdn Corps 2231 killed, wounded, missing. PW taken 1421; large numbers of enemy killed buried. The Corps advanced a distance of 64 Km in a straight line.

15. The results must justify the gen conduct of ops. In this paper, it is attempted to derive lessons for the future, and this implies that some things were not well done at the time. But these criticisms in detail must be kept in proper perspective in the picture of gen success.

LESSONS

16. The following lessons are intended to apply to an attack on a line of the same gen character as the HITLER Line, but properly garrisoned with fresh and undemoralized tps; the def so organized as to derive full effect from the works.

17. Frontages, Disposn of Tps

In CHESTERFIELD, three bns attacked on a front of approx 2000 yds. This was too small; the minimum which should be expected to produce a suitable gap for passing an arm'd div through rapidly is 4000 yds. A narrow frontage, of course, allows the enemy to conc arty and mortar fire, and on 25 May this caused the bulk of our inf cas.

18. On a 4000 yd front, in order to have 75% chance of success, there should be two divs. Each div should attack with two bdes up on a one bn front. The depth of the attack will of course depend on the extent to which the enemy has fortified his posn and the topography beyond the posn, but it must be deep enough to gain a brhead over any natural obstacle as well as to penetrate the enemy's fixed defs. In gen, in each bde one will be required to penetrate the foremost line of defs and form a brhead for mine clearance and may later mop up the area. The next bn, forming with tks the assault ech, should pass through the final or at least to the intermediate objective. The third bn, which should also have tks with it, should be in bde res, to pass through to the final objective, or mop up, as the op develops.

19. The minimum allotment of tks for such an attack should be one regt per bde. Two sqns should go through with each assaulting bn, while the third sqns should be with the res bns and may also be required to give cover to the brhead and gapping ops.

20. In addition, there should be a regt of tks with the inf bde in res.

21. The div res is required to exploit success, expand the gap and to carry out the "rolling out" op necessary to give space and protection to the flanks of the arm'd div in the early stage of its adv.

ECH TO COVER BREACHING

22. This ech, which will usually consist of complete bns, should be formed up on a SL as close to the enemy obstacle (wire and/or minefd) as possible. This will involve pushing fwd patrols and occupying outpost posns to narrow down No-Man's Land to 100 or 200 yds; taping or otherwise marking SLs (natural SLs running in the right direction and at the right distance will hardly ever be found) and possibly digging slit trenches in which the breach-covering ech can form up.

23. This ech will penetrate the wire obstacle and foremost anti-pers minefd, if possible, through the gaps made by snakes. (See "Gapping" below). Sub-units should also be provided with bangalore torpedoes to make gaps in any wire obstacles met farther on. A definite sub-unit must be detailed to destroy the garrison of each enemy work on the front up to the objective to which the covering ech is to penetrate. Air phs showed up the existence of every defended post in the HITLER line, though it was not always possible to determine what type it was. There were no types that were not dealt with by inf once they had been located. Very careful preliminary planning, recce and rehearsal is necessary if this phase of the op is to succeed without undue cas.

24. The tks that are used to push the snakes may also be used to give covering fire, from posns short of the enemy wire and minefds. If snakes are not used, then tks should be pushed up to a posn where they can give the most effective cover, short of actually going into the minefd.

25. The penetration by the covering parties must be protected by fire of all the arty resources available. In the CHESTERFIELD attack, the enemy succeeded in bringing down his mortar DF in and in front of the wire obstacle before our inf could pass through it. In order to avoid this in future it is necessary.

(a) to have increased counter-mortaring and CB measures
(see below)

and

(b) to time the adv of the covering inf so that they will get into the enemy posn within 10 mins of the opening of the barrage.

This means that there would be no CB fire and no bombardment of the posn itself immediately prior to H hr.. For further discussion see para 40 below.

GAPPING

26. The first essential is that routes up as far as the enemy's wire obstacle must be reconnoitred, dominated and controlled by our tps prior to the attack, and that the pts for gapping should be carefully selected. If at all possible, "snakes" should be used. Experiments subsequent to the actual attack over country similar to the HITLER line and with a similar layout of mines and wire indicated that the snake would work very well. It is true that the minefds behind the HITLER line, except the Teller minefd at about 745195, were very sketchy, and that future deff lines will probably have more effective minefds. Where these minefds are protected by wire and are under SA and mortar fire of the main enemy posns, it is a matter of the utmost difficulty for Sprs and Pnrs working unprotected to make gaps. Therefore, every effort must be made to make the gap with devices protected by armour and to bring up the Sprs and Pnrs., who must complete the job, marking, etc, in suitable armd vehs. This demands careful previous planning practice and preparation if it is to be successful and that in turn demands time. Not less than 7 days should be allowed to carry out recce, preparations and rehearsals after the leading tps arrive immediately in front of the enemy main line of resistance, after clearing away enemy outpost posns.

27. The penetration of the line and gapping should be effected under cover of darkness, being generally timed so that gaps will be completed for the passage of the assaulting ech by first lt. Alternatively, a hy smoke programme must be used. If the front is at all narrow, measures must be taken to make the enemy believe that the front of attack is considerably wider and so disperse his arty and mortar fire.

28. Three gaps per 1000 yd front should be planned.

ASSAULT ECH

29. When the gaps through the minefds are completed and so reported to bde and higher fmns as necessary, then the main assault can be launched. Tks and inf, which should have been held far enough back to clear of the enemy's DF, will then move fwd and commence the assault from a SL which should roughly coincide with the posns held by the covering tps. The pace of adv will depend on the number of enemy works that are to be overcome, and in this phase again there must be a definite allotment of sub-units of inf and tks to take out specified works. Adequate reserves must be held in hand to deal with unlocated centres of resistance or others that resist the efforts of the earlier waves.

30. Once the enemy's main defs are penetrated there should be a pause for reorg on an intermediate objective, and then the assaulting ech may commence the third phase of the attack, which should preferably be a penetration in depth enough to incl the bulk of the enemy's mortar posns. The final objective will, however, mainly be determined by a necessity of seizing a posn which can be held against enemy counter-attack, and which will provide a brhead from which the armd divs can subsequently debouch.

31. If the assaulting echs reach the intermediate objective without too great losses, time will be saved if they go through to the final objective. If they have had hard fighting and many cas, it will be necessary for the bde res to be used.

MOPPING UP

32. Once the assault ech passes through, the covering tps should undertake the detailed mopping up of the area to the intermediate objective and, if necessary, beyond. Tks should be available for sp in this phase and these may be the tks originally detailed for the covering force. The bde res should also be prepared to undertake this role, if cas in the covering force have been too hy to permit it to do so.

33. It is essential that mopping up be most carefully planned and that everyone, down to individual Pte soldiers, know what each sub-unit is supposed to do and how it will get to the enemy post it is supposed to mop up.

COUNTER - MORTAR

34. The results obtained, as detailed in the arty sec of the 1 Cdn Inf Div report were apparently good, considering the time and resources available. However, it is clear from inf accounts that the measures were not fully effective. It appears that:

(a) There should be more time available for planning counter-mortar measures,

and

(b) There should be more mortars and arty allotted to the counter-mortar role, so as to ensure that the enemy's mortar posns are kept under constant neutralising fire during the attack and until our tps arrive in the mortar area.

35. Another measure that might have been taken was to simulate attacks before the actual one, and so ascertain the locns of the enemy's DF zones, thus enabling better counter measures to be taken and the fwd routes of the inf to avoid these areas.

CB

36. The locn of hostile btys was generally accurate, and CB seems to have been effective at first. In the early stages of the op and up to nearly 0900 hrs, there were few reports of enemy shelling. It is stated that the enemy did not seem to use DF on fixed line, but to bring down observed cones where he saw our tps and tks.

He had, of course, excellent observation of the posns from the slopes of MONTE CAIRO, particularly on the PPCLI area on the banks of the F D'AQUINO. It does not appear that we took adequate measures to screen this by either smoking the line of the FORME, or by blinding the enemy OPs towards MONTE CAIRO. The latter op would have been difficult owing to the extensive OP areas available to the enemy,

37. The CB programme should provide for neutralization throughout the attack. Priority in the use of med arty should be given to CB, even if the covering fire on the enemy's main line of resistance for the attack is to be considerably less in weight than we have been accustomed to. Considering the amount of arty and amn available and the undesirability of driving the enemy from located posns prior to the attack, as a rule no programme of destructive shoots on these posns should be undertaken prior to H hr.

DESTRUCTIVE SHOOTS

38. Besides the destruction of hostile bty posns, there is the question of destruction of the def works in the enemy's line of resistance. Examination of the results of the bombardment of the HITLER line do not indicate any effectual destruction of works in spite of the gen accuracy of the placing of the cones. The results obtained were that the enemy's heads were kept down, but this is necessary while the inf are advancing, not before.

39. The works in the HITLER line are so strong that nothing less than 7.2 in Howitzers can be expected to be effective against them. As these are limited in number and amn sup, it follows that though it is desirable to destroy as many as possible of the enemy works, we can only engage the most important ones. Air ph interpretation may be able to est. where the tk turrets are and these should be selected for first attention, deliberate destructive shoots with air observation being carried out 3 or 4 days before the attack. The other types of works encountered are such that they can be destroyed by direct fire by tks (as can the tk turrets when they are located), also they cannot be manned by the enemy's inf while under barrage fire; that is, our inf, if they follow the barrage closely, can overrun such posns and kill or take the garrison prisoner.

TIMING OF BARRAGE AND ARTY SP

40. As indicated above (para 25), the whole barrage, CB and counter mortar fire should open at zero hr to enable the inf to make a rapid penetration of the enemy's foremost defs before his DF from mortars and arty comes down, and the enemy garrison has had time to man their fixed defs. The opening line of barrage should come down generally on the line of the enemy wire and should remain there until the tks have been able to get fwd and blow their snakes, this period to be calculated after recce. Thereafter, the barrage should lift at approx 6 mins per 100 yds until the depth of penetration required to cover the final gap has been achieved.

41. The barrage should continue all the time the gapping is going on until the second or assault phase commences. The opening time of the arty fire programme for the assault phase should be decided after reports as to the completion of gaps have been received at the HQ which comds over the whole front of attack(usually Corps). The fire programme should also provide for a pause on the inter-

mediate objective, and be set in motion for the adv to the final objective in accordance with developments. On the intermediate objective, a standing barrage will not necessarily be required, but arrangements should be made for DF tasks.

ARRANGEMENTS FOR PASSING THROUGH ARMD DIVS

42. The whole op of breaking through the enemy's fortified line culminates in passing arm'd divs through to complete the enemy's disorg by a rapid pursuit. In order that the speed which alone can obtain decisive results can be achieved, it is necessary, first, complete the tactical breakthrough and drive out any pockets of the enemy that might impede the arm'd div's adv up to the final brhead posn reached by the inf and secondly, to org the construction of routes fwd and TC on them to the highest degree. There should be at least one fwd route, capable of taking armour and, if possible, wh arty, fwd on each 1000 yds of frontage. The exploiting arm'd fmns should be positioned far enough in rear, behind laterals between those planned routes, so that they may be moved fwd on whichever route is most quickly developed and feasible for the break-out. Inevitably some of the routes will not be put through, and so the armour must be so positioned that it can be used where success is obtained.

43. On two occasions, it was attempted to pass divs of the adjoining fm (13 corps) through gaps or passages over obstacles which had been made by the Cdn Corps, using routes which had been within our bdys and on which it had been planned to pass fwd the 5 Cdn Arm'd Div. There were very sound tactical reasons for this manoeuvre in each case, but the actual result was that excessive confusion developed through inability to get the change of orders and plans down to units and individual divs and TC pointsmen. Great delay was caused in the fwd move of 5 Cdn Arm'd Div, with an adverse effect on the subsequent ops.

44. Nevertheless, it is clear that where a gap has been made it is very desirable to utilise it to the full to pass fmns through with the role of exploiting outwards on as wide a front as possible, turning the enemy's defs which still hold out, and so destroying or capturing as many as possible of the tps garrisoning them. It is suggested that to provide for such a case there should be an arm'd div in army res for an exploitation role as above, to be put under comd of the Corps on whose frontage the penetration takes place. To change bdys in the middle of an op like this, and still more, to endeavour to pass a div under comd of one Corps through the area of another is bound to result in traffic confusion and delay. Once the fmns have passed through the gap and the bottleneck period is over, the div may be placed under comd of the flanking Corps, if desirable.

6 Jul 44

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3. THE PURSUIT FROM THE MELFA TO ANAGNI: LESSONS (FROM H.Q. 1 CDN CORPS).

INTRODUCTION

1. There is little new in the lessons which follow, which are derived from the 1 Cdn Corps experience during the pursuit phase of

the ops in the LIRI and SACCO valleys. They are set forth for the benefit of the component fmns and units of the Corps, should we undertake a pursuit in future.

2. The Corps was NOT so successful in the pursuit phase as during the adv to and breakthrough of the HITLER line. This is clear from the record of numbers of PW taken day by day during the two phases.

CONDITIONS

3. The assumed conditions, to which the following lessons apply, are that the enemy's organized defs have been broken through; that he has no effective counter-attack force and is withdrawing, protected by rearqds, with the object of re-establishing himself on another def posn.

OBJECT

4. The object in the pursuit is to overtake and destroy what is left of the enemy's main forces; particularly, his gun, vehs and adm echs. It is, therefore, essential that we adv faster than he can get these clear. Hence, the prime requisite in pursuit is SPEED.

5. It is essential that all ranks understand the enemy's situation (which calls for good org for getting intelligence down) and that they be determined to drive on and complete the enemy's defeat. In the pursuit, bold action - taking risks which in other circumstances might be reckless - is essential for success. Comds must have it foremost in their minds to maintain contact with the enemy and maintain the pressure on him; cutting off elements of his force whenever possible. Though the adv will be by bounds, the est of "firm bases" will only be necessary when resistance is stiff, and counter-attack is possible.

CAUSES OF DELAY

6. Delay may be imposed by the fire of the enemy's arty, mortars, SA, tks and SP arty; also by natural obstacles (usually rivers). mines and demolitions.

OVERCOMING ENEMY RESISTANCE

7. The enemy rearqds will usually take up a posn on a tk obstacle. They should be dealt with by immediate and vigorous outflanking attacks by inf. supported by cons of as much arty as can be brought to bear on the enemy posns.

8. Whenever possible, armour should lead. Its speed in adv and striking power makes this obvious. When it is held up by ground, inf must be in posn to immediately take over the adv and to push on ahead until contact with the enemy is gained, even without its A tk guns or mortars.

9. When an obstacle is met, the sequence is; inf get ahead and cover, sprs clear the obstacle, tks and inf sp weapons follow through and catch up with the enemy.

10. Night advs proved successful whenever they were carried out during these ops and we should make more use of them. This demands a high standard of trg.

11. CB and counter-mortar measures, adapted to fluid ops, must be taken against his guns and mortars; especially those that may be firing on crossings over rivers. If arty or mortar fire is brought down on inf or tks in the open, the best answer is to continue to adv as rapidly as possible. Frequently, the fire is directed by FOO parties on high ground, covered by only a few inf, and these will decamp in the face of a determined adv.

12. Fire by enemy's tks and SP arty must be countered by our own tks and SP arty, which should always take up commanding posns as close as they can to obstacles pending a crossing being made for them.

RIVER CROSSINGS

13. It is essential to cross on a wide front and to put in hand the construction of enough brs to allow for delays or failure of one or more of them. Smoke must be used to blind enemy observation and to confuse him as to places where crossings are being carried out. It is to be borne in mind that the object is to get the tks across as early as possible, as this will usually be decisive in turning the enemy out of his posn.

MINES

14. Inf and armd tps must NOT depend on the sprs to clear mines on the rds or at obstacle crossings. Unit pnrs should be used, and as many men as possible must be trained to recognize the signs of mining and clear them by use of detector and prodger. Junior offrs and senior NCOs, in particular, must be thoroughly familiar with enemy methods and de-mining. "Mine paralysis" must be eliminated.

DEMOLITIONS

15. An appreciation of where the enemy may carry out demolitions must be made, based on the map and air recce. Arty and air harassing should be used to try to prevent the enemy's carrying these out effectively. A detailed engr plan for dealing with demolitions must be made and engr resources must be well fwd. It is essential that inf get on ahead so as to cover the sprs at work and prevent interference with them.

FMN RELIEFS

16. It will usually be necessary to engage fmns in succession to maintain the impetus of the attack. To effect reliefs without losing time is difficult, especially when the front is narrow and rds are few. If possible, relieving fmns should pass around, rather than pass through. If they have to pass through, it has been found that to place a bde of one fmns under the comd of another, though a good way to relieve in more static conditions, leads to delay when speed is essential.

MOV

17. Mov is the greatest problem of higher comds and staffs. More specifically, to move the fighting echs of fmns fwd to where

they are to be engaged, while at the same time keeping up the flow of adm requirements. The first essential is good planning of the route system by staffs and engrs in conjunction, and that the routes be developed according to this plan under corps direction; a minimum of effort being devoted to tracks and obstacle crossings; required for temporary tactical phases.

18. It is essential that unit and fmn tpt be reduced to the minimum, consistent with successful op, and that comds and staffs resist the temptation to overload rds by shoving more vehs onto them than can be cleared. A strong centralized system of TC on the principles laid down in the official pamphlets must be established. But, without proper traffic discipline on the part of dvrs, and vigorous correction of all infractions by offr, no system, however well conceived, will work. More detailed notes on these aspects of mov are contained in the adm lessons in the gen Corps report.

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