

NOTE

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Directorate of History
National Defence Headquarters
Ottawa, Canada
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20 AUG 41

Demonstration of "Offensive Demolitions"
by 5 Corps, 18 Aug 41.

Canadian Military Headquarters,
2 Cockspur Street, S.W. 1,
London, ENGLAND.

The Director,
Historical Section,
General Staff,
National Defence Headquarters,
Ottawa, CANADA.

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by 602 for DHist NDHQ
Date: NOV 13 1986

1. A further report is presented. This deals with a demonstration of "offensive demolitions" staged by 5 Corps near BROCKENHURST in the NEW FOREST on the afternoon of 18 Aug 41. It is designed to provide a record of some aspects of current R.E. practice, and may also perhaps throw some light on the present state of tactical doctrine in connection with assaults on prepared positions by infantry and tanks.

2. I attended the demonstration in company with Lt.-Col. G.C. SMITH, C.A.C. There was an audience of several hundred officers, including about thirty from 1 Cdn Army Tank Bde (which provided the tanks for the demonstration), representatives from H.Q. Cdn Corps (including Brigadier HERTZBERG, the Chief Engineer), and ourselves from C.M.H.Q.

PRELIMINARY DEMONSTRATION: ANTI-TANK DEVICES

3. The demonstration opened with a showing of the use of two types of improvised anti-tank weapons: the "flying mine" and the anti-tank "trolley" or torpedo. These devices can be employed where cover is available near the roadside. In this demonstration dummy mines and trolleys were fired at tanks and carriers as they passed along a road.

4. The flying mine consists of an anti-tank mine fixed to the end of a length of pipe, and discharged from an improvised fixed mounting by the agency of a small charge of gunpowder. The pipe with the mine attached flies through the air and the mine will, it is hoped, strike the side or the turret of the passing tank. The chief drawback seems to be the difficulty of accurate aim. In at least one case in this demonstration the mine flew too high and missed the target completely, although the range was only a few yards.

5. The anti-tank torpedo is discharged from immediately alongside the road in much the same manner; but instead of flying through the air it runs on small wheels, and it carries a charge of ammonal in addition to an anti-tank mine. Where suitable conditions are present it would appear to be a useful device. In the present case such a "trolley" was successfully discharged at the tracks of a carrier, which actually ran over the dummy mine and crushed it. The carrier would certainly have been put out of action and would probably have been destroyed.

DEMONSTRATION I : SILENT ATTACK

6. The spectators were then conducted to the site of the main demonstrations, where a shelter-trench had been constructed overlooking an elaborately-prepared position which was to be the object of attack. The defences consisted of (a) a thick belt of wire (triple concertina between two double aprons); (b) a minefield laid with puff-mines; (c) an anti-tank ditch, consisting for half its length of the older type with a flat bottom and an almost-vertical revetted scarp, and for the rest of the simple V-section unrevetted type (10 feet wide at the top and 9 feet deep) which is now standard. The ditch was enfiladed by a pillbox protected by wire. In rear of the ditch was (d) a further belt of wire, and between this and the enemy trench was (e) a system of "McNaughton Tubes" - pipes loaded with explosive and laid by the pipe-pushing technique developed by 1 Cdn Tunnelling Coy (now 1 Cdn Special Tunnelling Coy) R.C.E.

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7. The first demonstration was a "silent attack", designed to show how far it is possible to advance the preliminary stages of an attack on such a position before making noise and arousing the enemy. It was assumed that the operation began in the dark. The intention was that the infantry would assault the enemy position and make a bridgehead for the tanks, which would cross the ditch at first light. The attack was delivered by an infantry company aided by detachments of R.E. to undertake the demolitions. The tank attack was delivered by one troop (three tanks) of 14 Cdn Army Tank Bn (CALGARY REGT) supplemented by four carriers.

8. The infantry advanced in four parties led by wire-cutting parties, two of which used wire-cutters only while the others also used wire mesh. In addition a cutting-out party was detailed to deal with the garrison of the pillbox. Passages were speedily cut through the first wire and the infantry advanced into the ditch, it being assumed that in this case reconnaissance had determined that the intermediate minefield consisted only of anti-tank mines which would not be detonated by the passage of personnel. Behind the infantry came R.E. parties with picks and shovels, explosive charges to use against the tank ditch, and a Cordtex net to destroy the minefield. Bangalore torpedoes were placed in position in the second wire barrier. The loud detonation of these was the first noise made, and would in actual operations have been the signal for the artillery barrage to come down. The infantry now delivered their assault through the very effective gaps made by the torpedoes, and cleared the enemy trench, the cutting-out party dealing with the pillbox.

9. The bridgehead having been established, it remained to clear the minefield and make it possible for the tanks to cross the ditch. The former was to be accomplished by the net of Cordtex (detonating fuse) which when fired would detonate the mines by blast, and also by a party using a mine-detector. For the latter object, explosives

would be used to render the ditch passable, and one party would work to make a passage by digging alone. One party laid the necessary explosives in fifteen minutes, another in ten; the ditch charges and the net were then fired simultaneously. The working parties then came forward again with fascines and proceeded to improve the crossings, which were four in number, all requiring some work to make them practicable. A tank officer came forward to reconnoitre the crossings and on his reporting them satisfactory a Veroy light was fired as a signal for the tanks to advance. All three of the tanks (which were of the Mark II A ("Matilda") type - see my Report No. 42) negotiated the crossings without delay or difficulty, as did also the four carriers.

10. An interval followed, during which special demonstrations took place. These dealt with the use of a rocket gun for firing a Cordtex net across a space known to be sown with anti-personnel mines, and the use of mine-detectors, which were stated to be of two types: "High Frequency" and "Magnetic". Both demonstrations were successful, though the rocket-gun at first declined to fire. In developing this device the Royal Navy has given valuable aid.

DEMONSTRATION II: NOISY ATTACK

11. The second attack demonstration followed. Although this was assumed, like the first, to deal with a first-light assault preceded by preparations undertaken in the dark, it differed in other respects. The object was not to establish a bridgehead for tanks, but the tanks were to precede the infantry, moving at infantry speed. The sapper detachments, with infantry protective parties, led the way to clear passages for tanks and infantry through the wire and the minefield and to effect demolitions in the ditch. In this case silence was not imposed and it was possible to employ explosives from the beginning.

12. The forward belt of wire was cut by the use of Bangalore torpedoes. One of these was only long enough to deal with the wire

and with any mines that might be present in the wire barrier; the other, however, was very long (140 feet, I believe) and was designed not merely to clear the wire but to detonate the mines in the field beyond. The short torpedo was supplemented by the use of the rocket-gun to clear a path through the minefield.

13. After the explosions, two carriers rushed forward through the wire and the now innocuous minefield to the edge of the ditch. One carried a Bren gun party to cover the sappers' subsequent operations, the other the explosives for the demolitions to be carried out in the ditch. Fixing these charges, the heaviest of which was 500 pounds in weight, required eight minutes. After they were fired, the working parties came forward as before with fascines and in seven minutes more completed the crossings.

14. At this point the McNaughton Tubes were blown. The programme for the demonstration had proposed that this should be deferred until the tanks had crossed the ditch and were approaching the tubes; but the official commentator who explained the demonstration over a public address system told us that the Canadian tank men had declined to carry out this part of the scheme. In view of the magnitude of the subsequent explosion, this refusal seems no more than sensible.

15. The assault was now delivered. All three tanks successfully crossed the ditch, followed by the infantry. The obstacle just created by the McNaughton Tubes was a different matter. Two of the tanks became hopelessly "bogged" in it and were unable to climb out either forward or backward. The third, attempting it at a point where it was not quite so deep, negotiated it upon the second attempt; it would, however, have been an easy mark for anti-tank weapons in the process.

16. Those in charge of the demonstration emphasized that it presented merely certain "suggested measures" for overcoming anti-tank

obstacles - various means that could be employed and could no doubt be improved upon. For purposes of demonstration and comparison, as many methods as possible were being shown in simultaneous use.

17. The demonstration had been very carefully prepared and in general was thoroughly successful.

C.P.S.

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5 CORPS DEMONSTRATION AND EXPERIMENT.OFFENSIVE DEMOLITIONS.Ref. 1268/G.
- 11 Aug 41Detailed Programme and Notes.Ref this H.Q. 1268/G dated 6 Aug 41,
para 2 (b).1. Programme of Events with timings and brief
descriptive notes is subjoined.2. PROGRAMME.

The Programme consists of four distinct events:

Timings.(a) Tank Torpedo.A preliminary demonstration is given of the
method of use of the Tank Torpedo; a device which
can be used in ambush on rds (where cover is avail-
able at the roadside) for the destruction of
Enemy A.F.Vs.1430-
1445 hrs.(b) Offensive Demolitions.(i) The object of this demonstration, which is
in two parts, is to show various methods of attacking,
in the deliberate assault, a defended posn protected
by wire, A/Tk minefield and A/Tk ditch.(ii) Demonstration I: Silent Attack.1505-
1540 hrs.Inf, followed by R.E. demolition parties, move
through the wire obstacle and across the A/Tk minefield
into the A/Tk ditch by silent methods under cover of
darkness. (Darkness is assumed for the purposes of the
demonstration).Inf will demolish a further wire obstacle with
a Bangalore Torpedo and assault enemy posns.R.E. meanwhile clear a passage for tanks through
the minefield and across the ditch.Army tanks then advance at tank speed, cross the
obstacle and move forward to their objective, passing
through forward inf. (This action would take place at
first light).(iii) Interval.

During which spectators will see:

1540-
1600 hrs.

Mine detectors at work.

Firing of CORDON net by rocket gun.

(iv) Demonstration II: Noisy Attack.1600-
1630 hrs.The same posn is assaulted as in Demonstration
I. R.E. make preliminary preparations under cover of
darkness, placing Bangalore Torpedoes, which are fired
at first light.R.E., with protective inf, move into the A/Tk
ditch and clear a passage, using different methods from
those shown in Demonstration I.The assault is then delivered by Army Tanks
followed by inf. During this assault, and after the tanks
have crossed the ditch, a secondary obstacle will be
blown across the line of their advance by means of
detonating a series of McNaughton Tubes.

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