

DEPARTMENT OF NATIONAL DEFENCE

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(R.W. Coristine)
Lt-Col, G.S.

for Chief of the General Staff.

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CANADIAN OPERATIONS IN NORTH-WEST EUROPE

JUNE - NOVEMBER 1944

EXTRACTS FROM WAR DIARIES AND MEMORANDA

(SERIES 17)

.....

1. SOME ASPECTS OF THE TECHNIQUE OF FLAME THROWING: "WASP" AND "LIFEBUOY" (ACCOUNT BY LT GEORGE BANNERMAN, SASK L.I. (M.G.), TECH OFFICER (FLAME), FIRST CANADIAN ARMY, GIVEN TO HISTORICAL OFFICER, 2 CDN INF DIV, 26 NOV 44).

(a) THE "WASP", MK II AND II (C):

1. The "Wasp" is another weapon to add to those that the infantry already have, and must not be expected to win a war by itself. If this equipment is properly employed, it will cut down the number of casualties suffered by attacking infantry, but it must be supported by all available fire from infantry weapons, including smoke, and the infantry must follow very closely behind. In this respect the use of flame is similar to that of an artillery barrage and if the infantry do not follow closely behind, the enemy will speedily recover from his initial shock and be in a position to reply.

2. The main use of flame, in any form, is for its demoralizing effect. The success of this aspect has been demonstrated on a number of occasions where the "Wasp" was effective, in the sense of demoralizing the enemy, without causing apparent physical injury to him. All experience during operations in this theatre has shown that, when the enemy was confronted with flame, he invariably did one of three things; first, he huddled down in his positions; or, second, he gave himself up immediately or showed a white flag; or, third, he started to run away. In no case where enemy positions were attacked by flame did they attempt to return our fire. Such casualties as have occurred to "Wasp" equipments were caused by enemy weapons firing at long ranges, or by reason of the carrier running over mines.

3. In passing, it may be noted that this demoralizing factor applied also in cases where "Crocodiles", with similar flame equipment, were used. One striking example occurred during the operations to secure the Channel ports. On this occasion, an operator was improperly testing the ignition of his weapon, with the result that he produced a short flash of flame approximately 10 feet in length. The sight of this flame was sufficient to induce the immediate surrender of enemy in a strong-point at some distance.

4. Apart from the demoralizing aspect, the physical effect of actual burning was horrible. Enemy who were hit by a sizeable "shot" of the fuel died almost immediately. If only a few blobs of the burning fuel struck a man it was possible for him to smother the flame. But, if he was struck by a large blob, smothering was practically impossible and in this case the fats in the human body were literally burned up.

5. Two types of "Wasp" equipment have been used in the north-western theatre of operations: the "Wasp" Mk II, and the "Wasp" Mk II (C). The essential difference between these two equipments is that the "Wasp" Mk II has two internally mounted tanks, carrying 60 and 40 gallons, while the "Wasp" Mk II (C) has an externally mounted tank of 80 gallons capacity. In other respects these equipments are identical. The main advantage of the Mk II (C) is that the carrier may be used in its normal role, as the carrying space in the rear of the vehicle is still available. Apart from occupying this space, the internally mounted tanks of the Mk II interfere with the maintenance of the carrier's motors, and thus minimize the advantage of the extra 20 gallons of fuel that are carried. Without a strong cross-wind, or head-wind, the maximum range of either type of "Wasp" is in excess of 150 yards, although the normal effective range is from 120 to 140 yards.

6. To some extent, the accuracy of fire delivered by the "Wasp" gunner depends on the team work between the driver of the carrier and himself. Although the gunner and driver are not normally interchangeable, in cases where good team work exists the driver is sufficiently aware of the necessity of regulating the speed and motion of the carrier so as to give the gunner the best opportunity for accurate shooting. This co-operation gives a "Wasp" crew tremendous confidence in their weapon, and builds up their keen interest in the care and preservation of their equipment. Thus, on one occasion, when a "Wasp" belonging to Essex Scot was knocked out in a village, members of the crew went back at considerable risk to salvage the essential parts of their equipment.

7. The "Wasp" is particularly useful against enemy positions such as reinforced earth, or concrete bunkers, pill-boxes, etc., which cannot be knocked out by other weapons at the disposal of the infantry battalion commander. To get within striking distance of these positions, it is essential for the driver of the carrier to use all available ground as cover, and this cover should be supplemented by the use of smoke and the fire power of the infantry. The "Wasp" gunner can also assist by firing his gun when still out of range, say 200 yards from the target. Even at that range, the resulting smoke and flame give additional cover to the advancing carrier.

8. Another use for the "Wasp" was found, in the course of mopping-up operations, when insulated strong-points remained in the hands of the enemy without their former advantage of mutual defence. In these cases, a "Wasp" could be introduced without fear of fire from the flanks, with the result that these positions were successfully engaged.

9. Where a concrete pill-box is encountered, the flame of the "Wasp" can only be successfully employed against the slits of the position. It has been found that the "Wasp" can be fired accurately against these slits at ranges up to 100 yards, and that, in these circumstances, approximately half of one ignited "shot" (that is, roughly, 2 to 3 gallons) will be sufficient to put the pill-box out of action.

10. The "Wasp" may also be used against enemy occupying slit trenches in the open, when a technique known as "Golden Rain", is employed. The gun is fired at maximum elevation, in the direction of the enemy, with the result that the rod of fuel breaks up in mid air into small, ignited blobs of fuel. Depending on the wind, this "Golden Rain" will cover a very large area of ground. Under normal conditions the zone covered by the "Golden Rain" extends from roughly 40 yards to 140 yards in front of the "Wasp".

11. In recent operations over the polder country, where a carrier was often the only vehicle that could be moved, with the enemy occupying positions on one side of a dyke and our own troops on the other, the only weapon which effectively winkled out the enemy was the "Wasp". The flame was fired over the dyke, and blobs of ignited fuel set fire to straw and wood covered slit trenches. In almost every case, the enemy was driven out of his positions and was immediately cut down by the fire of supporting infantry or M.G.s mounted on the carriers themselves.

12. P.P.P. (plastic armour) has been found to be a useful accessory to the normal equipment of a "Wasp" Mk II (C). The use of plastic armour gives added protection to the front and to the sides of the carrier as far back as the bulkhead separating the driver's compartment from the rear wells. This armour is a good defence against all types of fire up to 20mm A.P. and it will even stop, or prevent the penetration of 20mm A.P. at anything except point-blank ranges and normal impact. The armour can only be used effectively on carriers mounting "Wasp" Mk II (C) equipment for the reason that the 500 odd pounds of P.P.P. tends to balance the weight of the 80 gallon tank on the rear of that type of carrier. If the armour is used on the "Wasp" Mk II, it makes the carrier nose heavy. Being very thick in appearance, P.P.P. also contributes to the feeling of security on the part of the driver and gunner.

13. In the light of past experience, some method of inter-communication between the different members of the "Wasp's" crew seems necessary, as control is difficult once the "Wasp" has been committed to action. If some efficient type of inter-communication could be introduced, reciprocal advantages would result to the crew: thus, the driver or the crew commander could indicate targets to the "Wasp" gunner, and the gunner or driver of the carrier could indicate targets, which have been missed by the flame, to be taken on by the Bren gun in the hands of the crew commander.

(b) F.T. PORTABLE LIFEBOUY, MK II:

1. When fighting in enclosed spaces such as street fighting, house or woods clearing, etc., it is obviously not always possible to manoeuvre with the "Wasp" or the "Crocodile". However, this type of work can be taken on by the "Lifebuoy".

2. "Lifebuoys" should always be operated in pairs, and should be given as much fire support as possible. These considerations apply because the equipment prevents the operator from making full use of the cover afforded by the ground, and thus a more favorable target is presented to the enemy. The "Lifebuoy" should never be used to "heat up" the atmosphere, or engage enemy in the open, because of the small amount of fuel that it carries and the fact that larger types (Wasps and "Crocodiles") are available for that purpose.

3. The equipment was found most useful for engaging targets during "close in" fighting, where grenades or other weapons would not winkle out the enemy. For example, during house clearing operations, the enemy often sand-bagged the openings in such a way that a grenade would do very little damage to the occupants. If it was possible to get close enough to throw a grenade in an opening it was also possible to shoot a flame into that opening. A combination of grenades and flame would drive out even the toughest troops.

4. As the "Lifebuoy" is extremely simple to operate, no specialist training is required and every infantryman in a battalion should be trained in the proper use and maintenance of that equipment. There are two special considerations: first, the nature of the equipment is such that it requires careful handling and reasonable attention to keep it in proper working condition; second, the weight (approximately 65 lbs, filled) makes it impracticable for an operator to carry a "Lifebuoy" any long distance. The equipment should be carried on unit transport as far forward as possible, and only off-loaded when "Lifebuoy" action is imminent.

2. THE ROLE OF SUPPORTING ARTILLERY IN THE CAPTURE OF ZUID BEVELAND (ACCOUNT BY LT-COL S.H. DOBELL, A/C.R.A., 2 CDN INF DIV GIVEN TO HISTORICAL OFFICER, 2 CDN INF DIV 15 NOV 44).

1. No new doctrine was developed or called for in the use of Artillery on the ZUID BEVELAND peninsula, but a number of unusual problems were met and dealt with. The rate of advance was largely unpredictable, and varied from little or no progress for hours at a time on one or both axes, to extremely rapid progress for considerable distances on one axis, or on both concurrently.

2. This necessitated extremely close liaison with the forward infantry at all times, to ensure that guns never found themselves out of range, a requirement made abnormally difficult by the few roads and the necessity of winching all guns and vehicles in and out of virtually all positions. However, there was no time at which at least two Regiments were not available, while the third one was being moved up.

3. One unusual deployment occurred before the crossing of the BEVELAND Canal - namely a complete recce and move of the Divisional Artillery during the night of 26/27 Oct. On the afternoon and evening of 26 Oct, the guns were well forward,

in fact were firing at a very short range, the infantry having met very determined opposition, which appeared likely to prevent anything but a very limited advance during the night. However, about 2200 hrs it became apparent that, instead of being static during the remainder of the night, the infantry of 6 Cdn Inf Bde would shortly be able to get forward, and it was anticipated that at first light, the guns would be barely within range. Accordingly A/CRA ordered 2 ICs to rendezvous at MR 469213 at 2330 hrs, and proceeded to recce and allot three Regimental gun areas. The moon provided sufficient light between 2315 hrs and 0115 hrs to see at least something of the ground, which was largely either ploughed land or under water, with many small ditches. Later the Regiments moved up in succession in total darkness and deployment was completed by first light. Fortunately neither the route, nor the fields were mined, and only one vehicle ran on a mine.

4. It is felt that, unless an area is known to be heavily mined, the risk of some losses from mines must be accepted in order to provide continuous Artillery support, even though it means going over unswept routes and areas.

5. At the beginning of the advance, 4 and 6 Cdn Fd Regts were deployed in the vicinity of RILLAND, and from there they were moved to square 4721 northwest of KRABBENDIJKE. Later, they and 5 Cdn Fd Regt which had remained on the mainland protecting the approaches to the isthmus were located EAST of the dyke in square 4225. After 28 Oct, after the Canal had been secured, 4 Cdn Fd Regt was put under command of 4 Cdn Inf Bde for movement and operated along the southern axis of advance, and 5 Cdn Fd Regt under 5 Cdn Inf Bde operating on the northern axis, while 6 Cdn Fd Regt was held under RCA control, being moved on the northern axis in such a manner as to be available to either of the forward Bdes.

6. This allocation continued until 31 Oct when 4 and 6 Cdn Fd Regts were moved to the SCHOONDIJKE area, (Square 0914) SOUTH of the SCHELDE, in order to support the attack on the SOUTH coast of WALCHEREN ISLAND. 5 Cdn Fd Regt remained on ZUID BEVELAND until 2 Cdn Inf Div moved into a rest area SOUTH of ANTWERP on 2 Nov.

7. The Divisional Artillery was supported by 118 HAA Regt RA, deployed on the SOUTH shore of the SCHELDE, so long as it was within its range of 16,000 yards for airbursts and 19,000 yards for percussion. Representatives of this Unit moved with CRA's rep at Tac HQ of the leading Bde. The support of a medium regiment from 9 AGRA was also available, and was used to a considerable extent, together with another AGRA, which for a time was available on call. The CAGRA's representative also moved with CRA's rep with the leading Bde, until the AGRA ceased to be available.

8. The few fire plans consisted of concentrations, timed and on call, and no barrages were fired. "M" targets were used with apparent success on suspected enemy gun and mortar positions, particularly after crossing the Canal. Ammunition supply required careful planning, due to the long haul, particularly after crossing the bridge that was thrown over the Canal, but the situation never became acute.

9. 3 Cdn LAA Regt was not deployed in a ground role although one SP battery was moved so as to be continually available for the purpose. 2 Cdn A Tk Regt did not play a prominent part in the operations, since no tanks or SP guns were encountered, but a portion of the Regiment was moved up to the peninsula, and it did take on one tower and a few strong points.

10. "Y" Troop, 1st Cdn Svy Regt carried theatre grid forward all the way, and did an outstanding job in quickly putting the guns on divisional and theatre grid. In spite of the frequent moves, and the two axes, BPs were established before the guns got into an area.

11. No enemy counter-battery fire was encountered. The Divisional Counter Mortar organization functioned throughout the advance, having three OPs continually deployed with the forward troops. Counter-mortar as well as counter-battery information, based on moreps and shelreps, were collated, and a number of bombards were fired.

12. Air OPs were standing by, with ALGs stepped up along the peninsula, but the weather was such that, with one exception, there was not a single day during which they could fly. So long as there was one axis of advance, a standing patrol, on command frequently was laid-on subsequently, one Air OP, was on 4 Cdn Fd Regt frequency, one on 5 Cdn Fd Regt frequency, and the other two on command frequency. Ground conditions of flat, open country intersected by dykes, was ideal for the employment of Air OPs as it was difficult for ground observation. It was considered that this was one set of conditions which would have justified a continuous standing patrol, and it was unfortunate that the foul weather so completely prohibited the testing of such a tactical employment.

3. (NOT REPEATED)

4. ENEMY MINES AND BOOBY TRAPS (EXTRACT FROM WAR DIARY
OF 20 CDN FD COY R.C.E., NOVEMBER 1944)

GENERAL

The following hints and general infm on enemy mines and booby traps have been compiled from Int summaries and from experience gained in encounters with enemy mines recently.....

1. Be suspicious of any wooden pressure plate.
2. Be extremely cautious around craters and freshly moved earth.
3. Examine ALL bridges closely, underneath as well as on the top.
4. Don't hesitate to interrogate civilians. Use an interpreter if necessary. They often can give valuable infm on enemy activities.
5. Suspect all wires, whether slack or taut, especially if one end disappears in the ground.
6. Beware of Schumines on friendly side of trees, houses, etc.,
7. If difficult to replace safety pins in any type of mine igniter, destroy the mine "in situ".
8. NEVER pull a loose wire. NEVER cut a taut wire.
9. Never handle a damaged mine or shell of any type, with its igniter in place. Destroy "in situ".
10. Always suspect any mine as being booby trapped until you have checked and satisfied yourself to the contrary.
11. When in doubt about any mine which it is necessary to remove PULL it with a cable.
12. In lifting ANY type of mine look for anti-lifting device.
13. When checking in area suspected or known to contain 'S' mines keep well dispersed (At 66' these mines are fatal and 350' capable of wounding.)
14. In future NO attempt will be made to neutralize ANY tellermine and under NO circumstances will they be stacked as pressure on fuze may explode them. Get them into an open field and blow them either by the trench method or by laying a number flat on the ground touching one another and initiating the centre one.
15. Under NO circumstances is the T.Mi Z 43 igniter to be tampered with. (It is anti lifting). This igniter used only with Tellermine 42 and pressure plate is NOT to be unscrewed.
16. ENTLASTUNGZUNDER (EZ 44) cannot be neutralized. Will be found under tellermine. Mine rests directly on pressure plate and any attempt to lift mine initiates EZ 44. DESTROY " IN SITU ".
17. Schumines have been found with butterfly pin turned upside down and attached to the lid with a piece of string so that when lid is lifted mine detonates. Pay particular attention to way butterfly is turned.
18. ALWAYS look for booby traps in fox holes and dugouts.

BOOBY TRAPS

Booby traps have been found in conjunction with the following:-

- (a) Tellermines.
- (b) 'S' Mines.
- (c) Wooden Mines.
- (d) Prepared charges.
- (e) Mortar Bombs.
- (f) Hand Grenades.
- (g) Shells.

Methods of Setting

- (a) Tellermines with pressure igniters, trip wires or anti-lifting devices.
- (b) 'S' Mines fitted with trip and pull igniters.
- (c) Prepared charges fitted with trip wires and pull igniters and concealed in rubbish, etc.,
- (d) Charge in water bottle set off by pulling cork.
- (e) Mortar bombs with fuze sockets fitted with SM1 Z 35 igniters.
- (f) Grenades fitted with pull igniters.
- (g) Many and various hook-ups of pull and pressure igniters in buildings, vehs, etc.,
- (h) The enemy booby traps his own dead.
- (i) It has been known that beet and other vegetable fds have been booby trapped by placing green painted tilt igniters.
- (j) SUSPECT EVERYTHING. Commonplace articles of every day use may be booby trapped. Remember the enemy is counting on you being careless. BE ON YOUR GUARD.

MINES MOST LIKELY TO BE ENCOUNTERED.

MINE	IGNITER
A/Tk Tellermine 35	TM1 Z 35
A/Tk Tellermine 35 (Steel)	TM1 Z 35
A/Tk Tellermine 42	TM1 Z 42
A/Tk Tellermine 43	TM1 Z 43
Reigle Mine ('R' mine)	ZZ 42 (or ZZ 35 or any friction igniter in case of booby trapping)
German Wooden Box Mine	ZZ 42
Holzmine 42 or VB 1	DZ 35) Pressure
	or ZZ 42
A/Pers 'S' Mine 35	ZZ 35
	ZUZZ 35
	ZUZZ 35 (Mod)
Schumine (A/Pers)	ZZ 42
Stock Mine (Concrete A/Pers)	ZZ 42
Pot Mine (A/Pers)	Buck chemical igniter (Crush)
A/Pers Bomb SD 2 (Butterfly Bomb)	

NOTE: When a bomb is encountered call in Bomb Disposal Pers.

5. SUPPLY PROBLEMS DURING THE ASSAULT ON WALCHEREN ISLAND
(REPORT BY CAPT A.H. INNES, 20 NOV 44; APPENDIX 4
WAR DIARY H.Q. R.C.A.S.C., 2 CDN CORPS TPS)

1. About the 20th Oct 44, I was detailed to proceed to HQ 4 SS Bde located at BRUGES to work in the capacity of Brigade RASC Offr. At the time the Brigade were planning an operation,

the object of which was to silence the guns located on Walchern Island which were a menace to any British shipping attempting to go up the Scheldt to Antwerp. My task was outlined to me by Major Orchard-Lyle, the A/Q Planning Offr for the operation and consisted of (a) to advise on ASC matters in connection with the operation and (b) to proceed with the Brigade on the initial assault and operate the Beach Maintenance Area from which the Brigade during the time they were on the island would be maintained. The "Q" plan decided on was to provide each Commando force with sufficient food, amn, pet, etc, to be carried on the pers or in their vehs to make them self-sustaining for the first 48 hrs, and to provide the additional 5 days maintenance which would accompany the force loaded in LCTs and to be landed as soon as possible after the beach area had been cleared of the enemy. A second and third 7 days supplies were to be provided and held in dumps at Ostend and Breskens. The second 7 days supplies to be landed between D + 2 and D + 4, weather and Navy permitting....

2. The plan was for 4 Cdo supplemented by 30 Armd Bde to be landed at Flushing on the morning of the 1st Nov 44, and the remainder of the force to make an assault through the Westkapelle gap 4 hrs later. Maintenance for the Flushing force was put into a dump in Breskens while maintenance for the Westkapelle force was held by 121 D.I.D. RASC in Ostend. In addition 9 LVTs were loaded with amn to form a 1st line reserve for the Cdos. A special scale of amn was worked out from figures obtained from previous operations and this scale was used for all amn calculations during the operation. The first five days maintenance for the Westkapelle force totalled some 650 tons incl POL, sups, amn, engr stores, tech eqpt and unit stores. All these commodities were distributed equally onto 3 LCTs to ensure that some part of each commodity arrived on the beaches should one or two craft be lost en route. The following order of priority was given to stores and they were loaded in this priority; (a) engr stores incl explosives, mine detectors, picks, shovels, etc (b) amn (c) POL (d) water (e) sups (f) unit stores. The first 5 days maintenance was loaded and ready to sail by D - 2 although considerable difficulty was encountered in obtaining water cans. The water ration planned was $\frac{1}{2}$ gal per man per day for all purposes and in actual fact this amount was reduced by approx one-third, but it was planned that the water taken with the force in the first phase would be sufficient until the arrival of the three craft carrying water for the second phase and it was also planned to construct a water reservoir on the beach to be filled from the water tanks of the craft....

3. On 31 Oct 44 the Westkapelle force marched down to Ostend and embarked in LCTs some of which were loaded with LVTs and Weasles in which the tps were to go ashore on the island. The weather was favourable that night and the force set sail from Ostend at about 0130 hrs 1 Nov 44.

4. As the first light broke over the horizon the force was within four miles of Walcheren Island. The sky was overcast and visibility varied from fair to good.... It had been planned that the Staff Captain of the Bde and myself would go ashore and make an initial recce of the area to be used for the BMA. It was known from Int summaries and air photos that the beach consisted only of a sand dune approx 75 yds deep with steep banks and water on either side, the whole badly cratered, the result of RAF bombing of the dyke. As we neared the shore the arty fire became more and more intense and was supplemented by heavy small arms fire from enemy snipers holding advantage points on the island... After what seemed to be an eternity, our LCT grounded against the beach, the door went down and the first LVTs began to roll off the craft.

5. We landed on the left side of the gap and followed the LVT immediately in front of us which carried the staff captain across the gap to the area where we hoped to est the BMA. At this point enemy mortar fire came into play... Our craft immediately reversed and swam around 3 wrecked LVTs finally resting upon terra firma behind the sand dune. We got out and doubled to cover in the dugout in the side of the sand dump where we met the Bde Major who istructed me to carry out the recce for the BMA by myself. I climbed to the top of the sand dune to find the area around there very unhealthy, so bidding my time in a bomb crater, waited until such time as the enemy shell and mortar fire slackened.

6. At about 1700 hrs in company with the CRE we made a rough recce of the area to find that the whole area was as per Int reports and had everything which a good beach area should not have, i.e., shell craters, bomb craters, mines, barbed wire, steep banks and the worst approach possible. Nevertheless we formed a plan as to where the different commodities were to be placed and the proposed traffic circuit.

7. My next problem was to gather up the pnrs of which there were supposed to have been one section which was travelling with Bde HQ and the remainder distributed amongst the stores craft. In all there were one Sgt and 11 men whom I parked in a shell crater for easy accessibility should they be required.

8. Later that evening I was sent by the Brigadier back across the gap to locate the principal beach master and to bring him back to discuss the time and on what beach the stores craft would land. A PBM advised that one of the stores craft had been lost by enemy action and that he would call in the other two....

9. At 0245 hrs a full moon lit the sky.... The first craft came in at an angle and grounded parallel to the beach. The skipper of the second craft mistook a wharf for the beach and crashed head-on into it but managed to make his way within 10 yds of the water line on the beach. As soon as the door dropped on the first craft all hands started to off-load and were joined within a few minutes by pnrs who were travelling on the stores craft. Maj Orchard-Lyle and Capt Lindsay of 3 Div RCASC came ashore on the first craft and it was decided that all labour would be emp off-loading the first craft and the second one would receive second priority. The pnrs displayed a wonderful effort and "humped" the goods off the ship up the steep bank of the dyke into shell craters without a break until 0800 hrs, when they were taken away for breakfast and their places taken by 250 German prisoners who had been brought in during the night. Fate was against us however and a strong wind blew up a high sea and swamped the craft, broke it away from its mooring and the sea crashed it against the beach. The hold filled with water and what was left from her precious cargo was washed out into the sea.

10. The second craft weathered the storm a little better as it was facing windward and the labour was switched over to it. A good proportion of its load was transferred to the beach before the changing wind swamped it also, filling the hold with water.

11. We now had sufficient food and water to maintain the force for 48 hrs and due to the severe veh casualties sufficient POL for an indefinite period. Our stock of amm also appeared healthy sp we were without fear of a shortage of these two commodities. A number of compo packs were still floating in the holds of the two crafts and REs assault boats and the ships dinghies were emp

as ships within a ship to salvage what we could. An urgent signal was despatched asking for more food and water. The following day another LCT reported at the rendezvous and was signalled by the PBM to beach at high tide that afternoon together with two other LCTs, one containing Weasles and the other bulldozers.

12. The REs had been very unfortunate with their bulldozers. Six were brought ashore on D day, 5 of which were casualties within the first half hour after landing and the sixth struck a mine in the BMA while attempting to make a roadway.... Of the three bulldozers which came ashore on D - 3, 2 were urgently required in the Zuteland area to clear a road for LTVs pushing on towards Flushing. The third was assigned to the BMA and succeeded in filling in several bomb craters before it too hit a mine and became a cas.

13. It will be noted that these mines were from 4 to 6 ft under the sand, too deep for detection by the polish mine detectors. On several occasions LVTs went over the same stretch of sand ten or twelve times and then on the next trip over the same ground were blown up by mines. Two types of mines were used by the Germans in this area, the French Anti-Tank mine and the wooden box mine.

14. Our third stores craft.... was caught by the heavy sea and beached broadside against one of the other ill-fated LCTs. Before we could get on board the hold was filled with water but nevertheless pnrs went down into the hold and got out the compo packs on board which were urgently required for the fighting tps. To facilitate this off-loading it was necessary to pass the commodities up out of the hold, down over the side of the craft and carry them around the stern of the LCT beached on the inner side up to the top of the dyke. This work could only be carried on at low tide and we had hoped to operate this manner for approx 4 hrs. Once again the fate was against us and an 40-mph gale blew up a heavy sea which brought this operation to an end. The waves washed everything out of the hold and carried it out to sea with the tide but it washed the cargo up on the shore the following morning when the tide came in.

15. A beach-combing party was emp to salvage what they could and considerable amount of food and pet was snatched from the hands of Davey Jones, in this manner. When everything possible had been salvaged we discovered we had sufficient water to supply this force for another 24 hrs. The PBM advised that it would be impossible to bring other craft onto the beach due to the high wind and rough sea so a signal was sent asking for air supply within 24 hrs. A reply was received that 500 compo packs would be dropped from aircraft over the area of Zuteland at approx 1100 hrs the following morning....The RAF made a very good drop over an area of approx 1 mile. Of the 500 compo packs dropped only 92 were serviceable. Of the remainder approx 100 fell into minefields and the remainder were smashed rendering them unsuitable for use as compo packs.

16. The food situation appeared somewhat critical and scouts were sent out to determine what captured food there was available on the island. The lockers of the derelict craft were pumped out and ships one month's supply of food for the companies was taken to the central dump. The method of rationing was as follows: the fighting tps were given first priority on compo packs together with the hospital patients. The total number of rations available was computed against the total number of the above and the 14 men packs some days fed 20 - 25 men. The other units of the force were fed on the contents of the broken packs, the captured German food and the canned goods salvaged from the ships lockers. This

presented complications because of the fact there were no markings on the tins containing the captured enemy food except for a letter of the alphabet on each can, but after opening one can of each a chart was drawn up showing the markings and the contents of the different tins. The fighting tps managed to obtain food from unofficial sources and showed no hardship in the food line.

17. The water situation was eased when a reservoir containing some 500,000 gallons of fresh water was discovered in the area of Zuteland and the policy of water can for water can was put into operation and two trips a day made every day by LVT to refill cans. The water was tested by the CRE in conjunction with the meds and it was found to be fit for human consumption.

18. A request was sent to HQ 2 Cdn Corps for 35,000 rations by sea or 10,000 rations by air within the next 48 hrs. These were not received but we were notified that rations would be available at Flushing. This involved LTVs being sent to Flushing to pick up rations and although the commander of the LTVs suffered severe veh casualties he came through on top and found the required vehs.

19. From there until the force was evacuated on 13 Nov, maintenance of the force progressed very smoothly.

20. A daily rum issue was authorized for all ranks of the force and this was maintained as far as possible but considerable rum was claimed by the sea.

21. Our plan for the layout of the BMA never readily materialized as our first priority was to get the stores on dry land; where they were stacked was a secondary consideration.

22. About D 9 the sappers attempted to make a circuit up one side of the dyke through the BMA and down the other side of the dyke. This they accomplished by hand. It is their usual practice when clearing barbed wire to have a bull dozer push the wire and wiring posts out of the way but as there was no bull dozer available this had to be done by hand, and it was well that they had as every post had a fuzed shell attached to the bottom of it and it required only a slight push to detonate them.

23. On the evening of 12 Nov 44 instructions were received to load our remaining food stocks on LVTs and proceed to Flushing. Amn and POL to be abandoned. About 2500 gals POL and some 80 tons of amn were left on the beach together with engr stores and some unit stores because it was considered by higher authority to be too great a strain on the now overtaxed LVTs to lift these commodities.

24. We reached the Flushing gap about 1900 hrs and had to wait for high tide at 2300A hrs in order to cross. 20 feet from shore the comd of the LVT lost his way in the dark and we milled around in the gap for nearly two hours before we finally reached the landing point on the far shore. That night we spent in Flushing and the following day were evacuated by LVT back to Breskons.

25. During the whole operation I had with me Cpl Conroy and L/Cpl Campbell both of 34 Cdn C Tps Comp Coy RCASC. These two NCOs performed magnificently defying danger and hardship. They worked day and night whenever called upon and without the slightest hesitation to carry out their share of the task of maintaining the force. They operated a composite point during a 50-mph gale off the North Sea and it was largely through their efforts that I can truly say that at no time during the whole operation did any part of the force want for food, water, pet or amn.

20 Nov 44

(AH Innes) Capt
HQ RCASC 2 Cdn C Tps.

6. THE OPERATIONS OF A TANK TRANSPORTER COY R.C.A.S.C. IN NORTH-WEST EUROPE (EXTRACTS FROM WAR DIARY, 65 CDN TK TPTR COY R.C.A.S.C., NOVEMBER 1944).

NARRATIVE OF OPERATIONS

1. There are separate and distinct phases in Tank Transportation and for conciseness and clarity it is considered that these phases should be enumerated and also illustrated by examples when possible.

2. One tptr pl was modified for commodity carrying and will be dealt with as a separate entity with regard to its operational role. Thus the first part of the report will be devoted to the two platoons engaged in tasks and phases as indicated in the first paragraph.

(a) Tactical moves of Armd Units and Amns

Shortly after the coy landed in France it was called on to do an operational "lift" in conjunction with two British tptr coys. The object of the move was to transport an armd fmn from one sector to another, making most of the move after dark. No lights were allowed, some 260 tptrs were involved, the roads were narrow and strange and because of these and many other factors, much was learned in this initial trip in France on 18 Aug 44. Smaller, but nonetheless exciting operational commitments followed, and the experience and practice gained in these, plus all the knowledge and expertness that the drivers acquired in the U.K. was put to the acid test when, on 21 Sep 44, 36 veh of the Coy were required to move 85 of the then secret Crocodiles, (flame-throwing Churchills) of the 79 Armd Div, from the area LE HAVRE to the area BOULOGNE. The round trip was 285 miles and was duplicated thus totalling 600 miles and the job had to be completed in four days. The job was declared to be nothing short of impossible at the outset and only by dint of expert driving, cheerful willingness and the utmost co-operation of all ranks was the impossible achieved on schedule. This highlight in the Coy's history was even more sustained when a gracious compliment from the 79 Armd Div Comd to the G.O.C.-in-C First Cdn Army and DDST HQ First Cdn Army was received by the coy. While a "door-step to door-step" delivery as illustrated above, is not always possible, the tank tptrs have, in this theatre, made their deliveries as close to the required off loading point as circumstances have allowed.....

Following this, and up to the present, the tactical moves in which tptrs have been employed, were on a smaller scale and consisted mainly of shifting Crocodiles (flame-throwing Churchills) and Kangaroos (Infantry carrying S.R.) on a sqdn basis. These types were carried to the LE HAVRE, BOULOGNE, CALAIS and DUNKIRK assaults, while amphibian tanks were delivered to ANTWERP and BREDA: Although necessity dictated a close to the front-line delivery to all the a/m localities, no casualties from enemy action to men or vehs were suffered.

It is interesting to note that in many cases, as it so happened, the same tptrs were used to haul the same sqdns. The result was that the armd veh crews were asking that they be loaded on "Bill Jones" tptr, because he carried us last time.

(b) Movement of A.F.Vs and S.P. eqpt for A.R.G. i.e.

From docks to tk transit pks to the tk road-head or from tank road-head and REME wksp to Del Sqns.

This second phase although not having the same degree of urgency as the first phase, has been treated with the same efficiency and despatch. This phase generally comes into being for the Coy when there are no immediate ops moves, and in Aug, Sep and Oct the respective Del Sqdns of the Cdn Tk Del Regt were moved to their required parks from the Base Area, Base-Sub-Area and L of C sub Areas.. These moves are known in the Coy as 'milk runs' and are very often welcomed by the drivers, particularly after a series of continuous ops moves.

(c) Augmenting REME resources for the recovery of dead tks from fwd areas and back loading of non-battleworthy tks to 3rd or 4th Ech Wksp.

While this is a definire phase of work in the RCASC there has been not a great call on tptrs for this almost purely REME function.

On two occasions however the Coy was asked to recover some 41 tanks at LE HAVRE from the minefields in the perimeter of the defences and again at BOULOGNE. Although very elaborate recovery eqpt is not in our possession, nevertheless, a reasonably good job was done. All ranks are conversant with most recovery problems although recovery in the minefields at LE HAVRE and BOULOGNE was rather a little more difficult than the usual.

(d) Movement of RCE, RCCS, RAF eqpt, etc., and awkward loads.

The Coy led off in this phase by coming to this theatre loaded with equipment belonging to the 1 Cdn Mech Eqpt Coy RCE and 1 Rd Construction Coy RCE. This equipment, when loaded, makes very apt its official description as 'awkward loads'. The loading of our vehs, with their awkward loads on L.C.Ts was quite a feat, as was the difficult procedure of landing. After delivering this said equipment the Coy have had numerous similar details at various times in July, Aug, Sep and Oct. Most notable was when 22 of our veh were used to carry airfield construction equipment right across France into Belgium helping to establish forward landing strips and restore airfields captured from the enemy into working order. They were employed for three weeks and on several occasions were used in the slightly novel task of rolling the air strips with the tptrs, and quite effectively too.

(I) Modified Tk Tpnr Platoon

One Pl of the Coy was modified shortly before the FALAISE breakthrough. The purpose at that time was to provide a heavy tpt lift for the Polish Arm'd Div who were expected to make a breakthrough.

The Rogers Trailers of the thirty-three 40-ton Diamond T tptrs had racks built on them by Coy Wksp assisted by a RCE Detachment and machinery vehs of other coys in 2 Cdn Gen Tpt Coln. The actual work commenced late in the afternoon and by using arc-lights during the night the work was completed the afternoon of the following day. The racks were only intended to last one trip and inasmuch as the same racks are still in use, they have been re-built countless times and to date one ton and a half of welding rod and uninterrupted welding has been required.

Two runs were made from 17 B.A.D. to #3 Army Road-Head Rear at LISIEUX and two to #3 Army Roadhead Adv carrying amn.

Loads carried averaged 21 tons per veh. One run made from a B.S.D. at 3 Cdn Army Roadhead to #5 Army Roadhead at LE TRANSLAY, hauling comp. Loads varied from 400 to 600 compos depending on the ability of the loaders in the B.S.D.

On 9 Sep 44 the pl was sent to DIEPPE for dock clearance. Due to confined space and the unwieldy nature of the vehs this was not an ideal use of the modified tptrs. During this task, many items were shifted ranging from 10 ton loads of coal to 53 ton loads of 5.5 shells. The mileages recorded were naturally very small.

Following this, and for the months of Sep and Oct, the vehs were used to stock Colombert Amn Dump for ops at CALAIS and BOULOGNE, and also stocked the King, Queen, Ace and Oostacker dumps near GHENT.

The Coy locn was situated by this time at BAILLEUX and the modified pl worked on the Railhead to Railtail run from ROUEN to ROUBAIX. Loads averaged 21 tons amn and round trip mileages were 430 miles. In addition a number of runs were made from BAYEUX to GHENT and ANTWERP with R.E. stores. Loads were matting and airfield tracks with mileage figures at 700 and 800 miles.

The railhead - railtail detail finished and OSTEND and BRUGES became the destination for Engineer and Ordnance Stores. #9 Army Roadhead was the installation this time and loads ranged from 5 to 15 tons.

The above is an indication of the type of ops that the modified pl have undergone. Details have been carried out on a section basis for the most part, and the initiative and other capabilities of the junior NCOs have been evidenced on many occasions.

It is also to be noted that on 7 Oct 44 one tptr was sent to Adv Base Wksp at ANTWERP for a modification. This modification, which has given a very satisfactory performance to date, is built in such a way as to permit the sides and ends to be detached and laid down the center of the trailer. The trailer can, in this way, be used for its intended task of tank carrying....

4. It is considered that mention should be made of the condition of veh maintenance during the period in question. The coy was issued with new vehs prior to departure from England and the wksp arrived in this theatre with a substantial supply of spare parts. While continuous running was necessary for several periods, yet 100% wksp 406 inspections were carried out each month. Since the arrival of this unit in this theatre and to date, no serious mechanical difficulties have developed, except that during the period, the question of maintaining trailer tires and obtaining replacement tires became rather acute.

(W.G. Pepall) Major
Officer Commanding,
65 Cdn Tank Transporter Coy, R.C.A.S.C.

L. L. G.

THE UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

TO THE SECRETARY OF THE INTERIOR
FROM THE DIRECTOR OF THE BUREAU OF LAND MANAGEMENT
SUBJECT: [Illegible]

1. [Illegible]

2. [Illegible]

3. [Illegible]

4. [Illegible]

5. [Illegible]

6. [Illegible]

7. [Illegible]