

TRANSCRIPTION.

APRIL 1917 WAR DIARY – OPERATION OF 4-4-1917

“J” Special Company R.E.

ARRAS 13.4.17

J Special Company R.E. SPECIAL COMPANIES R.E. (and Att H Coy Sectn) continuation of JB/1506 of 5.4.17

Report on discharge of LIVENS PROJECTOR April 4th 1917
PART II Technical Details

Para 12 **TRANSPORT OF MATERIAL** As the lorries arrived very late on the first night of carrying it was decided to take them all up and unload at the Dumps instead of ARRAS. This was done, the whole of the projectors for the second and third nights being in houses at the dumps. On the night 3/4 April, the convoy of lorries containing drums was diverted owing to shelling of BAUDIMONT GATE. The NCO i/c lorries lost his way after misdirection by the TOWN MAJOR and arrived, minus one lorry three hours late. The last lorry did not arrive until 2.0 am. Hence the carrying parties did not complete the carrying until one hour before Zero. Even then many drums were left in the C.Ts and men had to come down to fetch them. Despite of all this, all except four were found and fused and loaded just in time.

The carrying parties were a source of trouble in upsetting the electrical connections. Seeing wires stapled in the sides of the trench they hauled themselves round corners thereby the resulting slack then became tangled and broken by following men. This went on up to nearly Zero, so that practically all jointing and testing had to be redone at the last moment.

13. **LAYING OF PROJECTORS** DIGGING

The ground was exceedingly soft and there was no revetment. Four push picks per section therefore quickly allowed the projectors to be dug in. The laying was rendered difficult by the lack of good clinometers but improved clinometers were made and used. On the third night clinometers and sighting sticks arrived. It was impossible to use base plates, improved base plates of angle irons would have been used had we been able to get the latter commodity.

14 **CIRCUITS**

The circuits were prepared by using ordinary laped joints in most cases, though the copper connectors were used to some extent. In the absence of the proper crimping pliers, the latter were found unsatisfactory. The main leads were doubled and with a coil of about 40 feet slack dug slightly in near the end of the battery. Unfortunately the ideal arrangements were to some extent upset by the carrying parties and this was of course aggravated by the lack of staples. Each battery had from 16 to 20 projectors to one exploder the exact number depending on the natural boundaries of batteries (eg the ends of bays or traverses).

15 **MATERIAL**

The material supplied was in good condition. On arrival in the trench as the pistol heads were unscrewed, the fuses and detonators inserted and the heads screwed on. Many pistol heads were choked with mud on arrival owing to their having scraped the sides of the communication trenches or having been dropped in the mud on their way up. These were cleaned out as far as possible (just one or two duds were found due to this in TILLOY subsequently, see para 13). The charge blocks were excellent, a few duds. No. 14 fuses were found, but replaced by good ones which we had in reserve.

16. **FIRING** At Zero the great majority were discharged but still several batteries failed to fire. The synchronisation of 'J' and 'O' Companies was excellent. Failure to fire was entirely due to cut circuits and had the trench been of fair firmness it is probable that, even with an inadequate supply of staples, this would have been largely avoided. The shock of the firing batteries (a fraction of a second earlier than the other) brought down avalanches of earth breaking circuits & burying them in mud. Hence great difficulty was experienced when attempts were made to fire them but owing to very fine work on the part of Officers, NCOs & men, their attempts were completely successful (Report Part 1 para 5 & 6). The projectors buried themselves about five feet & are now being reclaimed.

17 **INVESTIGATION OF TARGETS**

Parties have ransacked TILLOY on April 9, 10, 11 & today (12). The information obtained is as follows.

- (1) Enemy gassed. These must have been removed none were found.
- (2) Dugouts. Only a few left the whole place was one mass of debris & shell holes. Such dug outs as were entered smelt slightly of gas in some instances and contained kit respirators, spare respirator drums (also found everywhere in the village) and many tins of Vaseline, obviously to protect arms.

- (3) Anti Gas Appliances. No curtains, blankets, gas cartridges or fans were found.
- (4) Location of Drums. These were well distributed in the three areas corresponding to the three targets intended. They were found in the S.W. corner of the village all along both sides of the roads leading N.E. through the village to the CAMBRAI road & about the CAMBRAI ROAD, but many of the latter group had been blown by the wind to the northern side.
- (5) Number of Drums. Evidence of the falling of many drums was found and in many cases the ground smelt strongly of gas where they had landed. About 50 duds were found not properly exploded of which 26 were in a leaking condition & therefore buried. 24 were brought back & investigated.

18 **INVESTIGATION OF DUDS.** 24 were investigated, 6 were complete, the BROCK lighter having failed to ignite the fuse of these. 1 because pallet was jammed and did not hit cartridge. It was found that in 2 cases the detonator had broken off from the fuse. 3 were full. Explosion had not occurred in the GAINÉ TUBE. Detonator had exploded. 8 had exploded charge & all but had blown off the thread for filling Pistol Caps. 1 left the GAINÉ TUBE intact. Of these 2 were empty owing to a crack in the drum's central tube. 3 Empty GAINÉ tubes had split. Drum had emptied through this. 1 partly empty, gaine tube blown off inside still leaking. 1 Stokes pistol head still on, but gaine tube burst. Chemical action had then taken place on the cap the drums being partly empty. 1 complete explosion appears to have taken place but not sufficiently to burst the drum. The gas had emptied through the twisted copper tube. 1 leaked badly as soon as unscrewed slightly & had to be buried.

The conclusions seem

- (1) That the bursting charge is not sufficient.
- (2) That the detonator is apt to break off from the fuse thereby preventing its explosion even if the fuse had burned.
- (3) That there is plenty of opportunity for a 'set back'.

19 **FURTHER SUGGESTIONS**

It is believed that the suggestions in para 10 re increase of establishment of luminous compasses, cells and galvanometer, laying sticks, clinometers & staples and the undue length of charge block leads are receiving attention. In addition the following points are brought up.

- (1) The painting of galvanometer needles with luminous paint.
- (2) The protection of the holes & exposed parts of the pistol leads from mud (even if carried in sandbags.)
- (3) The conclusions in para 18 (on 'dud')

Capt J.A. Carpenter R.E.