

Provisional: Not to be quoted without prior reference to author

RV ERNEST HOLT

Report for Cruise 11(b)/1969

Staff

Duration

H W Hill	1930 hrs 5 December 1969
G C Baxter	0200 hrs 19 December 1969
D Thompson	
J A Bedwell	
R L Keable	

Aims

1. To recover the current meter array moored in the Irish Sea during ERNEST HOLT Cruise 10/69.
2. To complete hydrographic sections across the North Channel and between Anglesey and Dublin.
3. To test the Bissett Berman TSD System.
4. To track parachute drogues in the vicinity of one of the current meter stations.
5. To collect deep frozen herring samples from Dublin for the Pelagic Section.

Narrative

The ship sailed from Great Yarmouth at 1930 hours, 5 December and arrived in Zeebrugge at 1330 hours, 6 December where a surface buoy, which had been lost on Cruise 9/69, was recovered from the Royal Belgian Sailing Club. ERNEST HOLT left Zeebrugge at 1505 hours and set course for the Irish Sea, arriving at the first current meter station off Dublin at 2040 hours, 8 December.

The three current meter rigs along the  $53^{\circ}17'30''N$  latitude were recovered successfully by 0240 hours, 9 December 1969 with the exception of one chain anchor from the western station at  $05^{\circ}36'W$ , due to a snap shackle failure. All three toroids were upright but the light was out at the central station at  $05^{\circ}20'W$ . Recovery of the current meter station off Anglesey at  $53^{\circ}39'N$ ,  $04^{\circ}34'W$  where the light was again not working began at 1030 hours, 9 December. The buoy tow parted on hauling and the station was dragged until 1740 hours before the ground rope was hooked, and the rig recovered minus the bottom meter, apparently due to a swivel failure. Both meters recovered had broken propellers and fins. One A frame was buckled, one propeller guard bent, one chain weight lost by snap shackle failure and both the meter and buoy tow wires were badly frayed. The meter wire and about half the ground wire were discarded. A dahn buoy was lost during the salvage operation at this station.

The next recovery at  $53^{\circ}31'N$ ,  $04^{\circ}31'W$  was accomplished successfully by 0005 hours, 10 December the buoy being found upright and light flashing. However, one meter was heard hissing on recovery and later exploded in the meter rack in the main laboratory blowing out the base plate of the meter case and damaging the compass. The explosion was apparently caused by gas pressure building up in the meter case due to battery decomposition after leakage through the NIO plug.

The ship then steamed to the Mid-channel Station  $54^{\circ}04'N$ ,  $05^{\circ}19'W$  and searched for the buoy, but no light could be seen and no radar contact was made in a rough sea with an increasing southerly wind. The ship therefore continued to the North Channel where the Belfast rig was recovered by 0737 hours, 10 December, although the light was not flashing on recovery. En route to the Portpatrick station at  $54^{\circ}44'N$ ,  $05^{\circ}05'W$  no sign was seen of the North Channel buoy at  $54^{\circ}40'N$ ,  $05^{\circ}18'W$ , from which the sub-surface buoy was reported found drifting off Mull of Galloway before the cruise began. Neither could any trace be found of the Portpatrick station, and after searching in a rough sea with heavy swell, in which current meter recovery would not have been possible, it was decided to steam to the Solway station  $54^{\circ}32'N$ ,  $04^{\circ}20'W$  to see whether recovery could be continued there. This station was reached at 1230 hours. The buoy was found to be upside down and the light was full of water (unmodified design) but the rig was recovered without incident by 1300 hours. The ship then returned to search in daylight unsuccessfully for the rig at the Mid-Channel Station, and later recovered the current meter rig at the last station  $54^{\circ}04'N$ ,  $04^{\circ}59'W$  by 1908 hours.

All buoy stations had now been visited and all those where the buoy could be seen had been recovered. The ship therefore began salvage operations at the Mid-Channel station, dragging the anchor in a close grid over the ground wire position. CORELLA was then contacted by radio and asked to help in the salvage operations, since she was known to be working nearby at Rockabill. Salvaging was discontinued at 0230 hours, 11 December in order to steam to Dublin to land a deckhand for compassionate reasons. ERNEST HOLT arrived in Dublin at 0915 hours, 11 December and took on fuel and water, samples of deep frozen herring and sprats for the Pelagic Section, and arranged for repairs to a broken dead-light in the deck and replacement of the towing block sheave which had been badly scored during the salvage operations. Although all hands were ordered back aboard by 1430 hours the ship could not sail until 1959 hours due to delays in effecting the repairs.

Dredging commenced at 0900 hours, 12 December at the Portpatrick station. Meanwhile CORELLA conducted a 3 x 2 mile sonar search and subsequently continued the salvaging operations at the Mid-Channel Station, regular radio contact being maintained between the two vessels. A short break was made at 1230 hours to recover the sub-surface float (from North Channel station) from the Portpatrick coastguard, but otherwise dredging continued at the Portpatrick and North Channel stations until 2130 hours when a cable was hooked in the vicinity of the North Channel rig, at a distance of 8 cables south of the nearest charted telephone cable. In attempting to clear the cable from the anchor, the cable parted at 2255 hours. The laboratory was informed and further salvage discontinued at this station.

Trawling at the Portpatrick station was begun at 0830 hours, 13 December but after two trawls it became apparent that there was difficulty in keeping clear of the explosives dumping area, and trawling was therefore abandoned at this station at 1318 hours. In the meantime CORELLA had badly torn her trawl at the Mid-Channel Station and had steamed north to Portpatrick overnight to carry out a sonar search, but during the morning reported that her Decca Navigator was out of action. CORELLA therefore abandoned salvage operations at 1330 hours and continued with her shellfish programme.

ERNEST HOLT set course at half speed in a heavy swell for the Anglesey buoy station to attempt recovery of the meter lost during dredging operations there, but by 2040 hours was forced to dodge in worsening weather. At 0915 hours, 14 December when abreast of the Anglesey Station, the ship lay waiting

for an improvement in the weather. The weather moderated slightly by 1535 hours and the ship steamed to the station beginning trawling at 1850 hours. Only two hauls were made, and on each the belly of the trawl was badly torn on the rocky bottom and needed repairs. The ship began dodging again at 0400 hours, 15 December and at 0800 hours in worsening weather with gales forecast all round the coast, salvage operations were finally abandoned.

The ship reached Great Yarmouth at 1635 hours, 17 December and the scientific staff left the ship. All hydrographic equipment was unloaded during 18 December and the vessel left on the evening tide for Grimsby arriving at 0200 hours, 19 December.

## RESULTS

From 11 current meter stations containing 29 current meters, 8 rigs were recovered including 20 meters. Two surface toroids are still adrift in the Irish Sea (DIs and radio stations have been informed) and one has been washed ashore in the Isle of Man and is now in the MAFF store in Port Erin. One sub-surface float, recovered from Portpatrick coastguard, has been badly damaged by a propeller or trawl warp but is repairable and one awaits collection from the coastguard at Aberdaron, N. Wales. Of the nine missing current meters, eight are Plessey and one a German recording current meter.

Of the 17 Plessey meters recovered, 12 appear to have a complete record, 4 have part records due to leakage, battery decomposition or tape trouble and one has a completely tangled and useless tape. The three German meters recovered were not dismantled aboard the ship.

The new lights appeared to be a success - only one was not functioning correctly after a month at sea and the redistribution of the weight resulted in all buoys with the new lights being found upright.

Two chain weight anchors were lost from the rigs recovered due to failure of snap shackles. There were also snap shackle failures on three of the surface buoy strops; in each case the toroid was held by the auxiliary strop. This may have accounted for some of the toroids breaking loose although interference by fishing vessels is a more likely explanation. At one station (Anglesey) the surface float was three cables S.E. of its launch position, although the sub-surface float (indicated by surface pellet) was in its correct position. It is not clear whether the surface buoy dragged in the gale force winds over the month during which the rig was in the sea but there was some tangling of the wires which may have been caused either during salvage or by interference previously.

Of the meters recovered three meter fins were broken, two A frames bent, two propeller guards bent and two propellers broken.

Aims 2 and 4 were not attempted because of the time which needed to be devoted to salvage operations. The conducting cable for the Bissett Berman TSD system did not arrive before the ship sailed and the equipment could not therefore be tested at sea.

Deep frozen herrings and sprats were collected from Dublin for the Pelagic Section.

The catch of fish on the stations where trawling was carried out never totalled more than  $2\frac{1}{2}$  baskets of mixed fish, mostly small skate and rays, but

there were a few hake and coalfish.

No evidence of the missing equipment was found at any of the four stations at which salvage was attempted during the sonar, dredge and trawl searches.

H W Hill  
18 December 1969

Seen in draft: E A Binnington (Captain)  
G E Argumont (Fishing Skipper)  
A J Lee (Deputy Director)

Distribution:

Basic list plus the following:-

H W Hill  
G C Baxter  
D Thompson  
J A Bedwell  
R L Keable