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FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1975 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 17 PART A

(PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF

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* Part-time

DURATION

Left Lowestoft 1155h 3 December

Docked Lowestoft 2120h 5 December

Left Lowestoft 1115h 6 December

Left Vessel 1515h 6 December

LOCALITY

Benacre Ness area

AIMS

1. To strengthen the lashings holding down the deck cargo on Data Buoy I (DBI).
2. To lay the remote current meter and water level sensors.

NARRATIVE

The ship sailed for DBI at 1155h 3 December. Surface waves at the Buoy were relatively small even though there was a 20 knot wind and a long swell in the water. The ship's boat was launched and put both scientists and crewmen on board DBI without any trouble. In the next two hours the deck cargo was thoroughly secured, the broken part of the wireless aerial cut away and the below-deck compartment inspected. Even in the swell the buoy's motion was kindly.

Meanwhile RV CLIONE practised moving in towards the buoy and also mooring itself to it and maintaining a fixed distance of 50 metres. By 1500h the swell had abated a little but it was felt that there was still some danger of breaking the cables that had to be laid and so after the buoy-landing party had returned to the ship the vessel set course for Lowestoft Ness. At 1615h Captain Sellers and Messrs Read and Wall went ashore in the Zodiac which

returned with Messrs Baxter and Currie. The ship lay at anchor overnight in Gorleston Roads.

By 0630h the next morning the vessel lay off DBI and at 0710h Messrs Ramster and Rusby went on the buoy to inspect the cable leads. It then became clear that the current meter cable had to be laid first and that this work had to be done on a north-going tide. Consequently the ship lay until 1230h when the first northerly flow began.

Within minutes of the operation beginning RV CLIONE was moored up to the buoy and the ship's boat was bringing the buoy-end section of the cable junction box across the 50 metres separating the vessel and DBI. By 1320h the junction box had reached RV CLIONE and the task of linking it the other half of the cable began. This was done by 1430h when the mooring line was slackened off and the ship began to back-off from the buoy paying-out 310 metres of cable as it did so.

At one point a buff attached to the junction box had to be let go by the ship's boat and in the strong tidal stream the length of line attached to it was swept aft of the ship. The danger to the ship's propellor was immediately apparent and the launch operation curtailed. In very difficult conditions the buff was recovered by the ship's boat and held on board whilst the paying-out operation continued.

Eventually the mooring-line had to be thrown off the buoy and a combination of the fierce tidal stream, the ship's boat being forced to hold the buff, the difficulty of hauling-in quickly the heavy rope and the on-going operation of launching the sensor-base and sensors at the peak of the tide led to the rope flying aft of the ship and lying bar-tight along the whole length of the port-side.

The anchor base was launched at a distance of 310 metres from the buoy instead of the planned 250 metres and the current meter wire was put over too after some difficulties with a "stretched" messenger rope. Towards the end of the launch operation the load came off the mooring rope and it came aboard with an estimated 50 metres missing.

By 1530h the task of launching the current meter sensor had been done and because of the gathering gloom, the cold and the need for work to be done on a distinct tidal stream as opposed to around a slack water period no other work was attempted. The ship anchored off Southwold for the night.

At 0900h, 5 December the Zodiac went off to the Data Buoy with scientists and crewmen whilst preparations were made on the deck of the RV CLIONE for laying the temperature-pressure sensor cable. A local fishing vessel, MN 68, lay close to the ship at the time carrying 9 scientists from Harwell, the Meteorological Office, IOS Wormley and Hawker-Siddeley. This party was ferried over to the RV CLIONE together with their gear during the morning and a UHF wireless sent across from RV CLIONE so that the movements of the two vessels could be easily coordinated.

At 1215h RV CLIONE picked up the pellets marking the current meter wire, hauled in the wire until the anchor was clear of the bottom and carried the base towards the buoy until it was only 255 metres away. It was then lowered down to the bottom again. It is hoped that this will provide enough "slack" in the cable for the junction box to be recovered relatively easily.

By 1300h the north-going tide had begun to make and the ship tried to maintain a position 50 metres off the SW point of the Data Buoy. This proved to be impossible with both bow - and quarter - mooring lines respectively and so there was no alternative but to anchor the ship in the SW sector as close as was safe to the Data Buoy. This manoeuvre was successful at the second attempt and at 1500h the ship's boat began to tow the junction box from the Data Buoy across the tidal stream to the anchored ship. By 1515h the junction box was aboard and the linking operation underway. A great down-tide bow of cable and the rush of water at the southern face of the Data Buoy was a constant reminder of the stresses in the system.

At about 1600h the junction box connections had been made and the vessel began to creep up on its anchor and straighten up the cable lead from the buoy as the junction box was lowered. The ship's boat took the junction box's surface buff away eastwards and was suddenly caught by the tide and swept downstream. Its engine cut out and could not be restarted. MN68, which lay at anchor some way off the buoy, was called up on UHF radio and went to pick up the boat which drifted about $1\frac{1}{2}$ miles in the tide.

Meanwhile the marker buff was recovered by the Data Buoy, the cable paid out as the ship crept up on its anchor and by 1635h the sensor cable and associated sensors had been laid and the main anchor was being recovered. The ship's boat was then taken back from MN68 and the ship then took up station near the Data Buoy so that the searchlight could illuminate the task of inserting the rods of the Harwell current meter through the hull. By 1915h when RV CLIONE left the area this job had been completed and MN68 was taking the Buoy-landing party on board. The ship tied up at 2120h.

In the period 0830-1030h, 6 December all the gear associated with the Data Buoy project was stripped off the deck and from the Laboratories apart from three simple acoustic release mooring systems. Messrs Ramster, Gaunt and Philipps sailed with these and the staff of cruise 17(b) at 1115h and during the early afternoon slack water the surface buffs marking the two junction boxes and the temperature-salinity sensor were replaced by submerged acoustic release systems. The residual cruise 17(a) staff left the ship via the Zodiac in Gorleston Roads at 1515h.

RESULTS

1. The "remote" Data Buoy sensors were laid and consequently it was possible to insert the Harwell current meter's rods and spars into the wells in the Buoy hull. This means that the Data Buoy is ready to meet the winter gales.
2. Current meter data were not being received at the buoy after the sensor had been laid. The situation will be assessed shortly.
3. Temperature and pressure data from the bottom-mounted package were received at the buoy after the cable had been laid.

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31 December 1975
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