MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

Miss Howard

1971 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 10/71

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

STAFF

H W Hill	(until 22 September)
A R Folkard	(from 13 September)
G C Baxter	
J W Read	
R L Keable	
A J Bower	I C O T (until 13 September)

DURATION

Left Lowestoft 0920 hours 3 September

Arrived Lowestoft 1300 hours 27 September

LOCALITY

Irish Sea and North Sea

AIMS

1. To moor and recover an array of 7 current meter stations in the Irish Sea to complement those moored by RV JOHN MURRAY between 27-30 August;

2. To monitor the complete 14 station BISOP 71 network during the period 3-22 September. (See cruise programme for details of the BISOP 71 project);

3. To carry out GEK measurements and complete hydrographic sections along the lines of current meter stations in the North Channel, between Anglesey and Dublin, and between Milford-Haven and Waterford;

4. To make 25 hour DRCM measurements throughout the water column on the North Channel and Milford-Haven to Waterford sections;

5. To release 50 sea bed drifters at each current meter station;

6. To test new chemical techniques for determining the soluble organic matter in sea water;

7. To service the ICES permanent current meter stations in the North Sea.

NARRATIVE

After a delay of about an hour to recruit an extra crew member, RV CLIONE sailed from Lowestoft at 0920 hours 3 September, and proceeded to the Irish Sea arriving at Station L at 1040 hours, 5 September where the first current meter station was moored. The remaining six current meter stations were laid by 0606 hours 7 September the route being arranged so that the complete network of buoys could be monitored, and a grid of surface and bottom temperature

and salinities covered in the process. 50 bottom drifters were released at each current meter station, and all buoys were inspected and found to be in approximately correct positions by 1740 hours 7 September. The ship then anchored near Station B and carried out a DRCM station until 2130 hours, 8 September, after which a hydrographic section consisting of six series stations was worked along the line of current meters A, B, C. Two GEK tows were also made across the North Channel perpendicular to the current direction indicated by the DRCM data.

RV CLIONE left the North Channel at 2209 hours, 9 September, steaming to the Anglesey-Dublin Section via Station N where the surface buoy could not be located in the darkness of the early hours on 10 September. A hydrographic section of 6 series stations was worked along this line of current meters as the wind gradually increased to 25 knots from the south-east. In view of the weather forecast and the prediction of better weather in the southern Irish Sea, the GEK run along FGM was postponed and the ship proceeded to the most southerly sections H, J, K, L, all stations being checked as a hydrographic section of 7 series stations was worked, but neither J nor K buoys could be seen in the early morning visibility. A search was therefore mounted for each buoy, J being found at 1040 on 11 September, but Buoy K could not be located after intensive searching. It was therefore presumed Buoy K must be the buoy reported adrift by Anglesey radio 8 miles NE of this position on 7 September. A 25 hour DRCM station plus a repeated hydrographic series station were then worked between Station J and the ICOT sea level gauge some 4 miles to the SW. A GEK run was carried out across the section and buoys H, J and L checked again before sailing for Holyhead at 1105 hours, 13 September which was reached at 1845 hours. RV CLIONE anchored off the breakwater and Dr Bowen was taken ashore in the rubber dinghy. He was replaced by A R Folkard and the ship sailed again at 0030 hours on 14 September to carry out a search for the surface buoy at Station N. After an hour, searching in good visibility and calm seas, it was presumed that buoy N was no longer on its correct position and course was set for the North Channel Section where Station B was recovered at 1415 hours since it had previously been noted that the buoy was 1½ miles NNW of the correct position, as published in the Notice to Mariners, and clearly too close to the shipping route. On recovery it was found that the sub-surface buoy had collapsed and all four meters had been on the bottom. It was therefore decided to lift Station P and use the sub-surface float from Station P to replace Station B in its correct position, using new tapes brought by Mr Folkard from Lowestoft. This was completed by 1215 hours on 15 September when the GEK was rerun over the line A, B, C, and all three rigs were checked before sailing to the east of the Isle of Man to carry out a temperature and salinity grid and begin the chemical sampling in Liverpool Bay. The chemical sampling for soluble organic matter was interrupted off Station D in the early afternoon of 16 September to call at Douglas for fresh water, supplies and fuel oil, the ship berthing at 1605 hours.

RV CLIONE sailed from Douglas at 1120 hours on 17 September, and continued the chemical sampling grid at 1339 hours checking Station D en route. At 1410 hours a MAYDAY signal was received and work was discontinued to proceed to the aid of the Fleetwood trawler DINAS on fire off Haverigg Point. RV CLIONE was the second vessel on the scene and picked up four survivors from three liferafts. Six more survivors were subsequently transferred to CLIONE from the Fleetwood lifeboat and these were taken back to Fleetwood and disembarked into a motor launch off Fleetwood at 2000 hours. A full report on this incident is submitted separately by the Master. RV CLIONE then completed the chemical grid, noting that the light on Buoy E was not working at 0027 hours on 18 September.

During the afternoon of 18 September the GEK was run across the line F, G, M and all three buoys were found to be correct. RV CLIONE then sailed for Station N to begin salvage operations at first light on 19 September. Dredging was carried out without success until 1305 hours when a box search for the surface buoy over a 10 mile x 12 mile grid was commenced. The buoy was sighted at 1845 hours 4 miles to the SW. The surface buoy and one meter were recovered but the meter line was torn apart between the bottom and middle meters. The snap shackles on the surface buoy strops had been removed and the line rejoined with ordinary shackles. Clearly the surface buoy at least had been aboard another vessel and relaid. The whole rig had been dragged some distance through thick mud. Two observers on RV CLIONE thought they saw a partially submerged sub-surface float near the ship on recovery but a search with the searchlight while the ship steamed in a circle around the position failed to find any trace. A message was sent via the Laboratory to all District Inspectors around the area asking for the help of local fishing vessels to recover the sub-surface float which may still have two meters attached. A number of pair trawlers were seen in the area working from the Isle of Man, together with French and Irish vessels.

RV CLIONE then set course for Station F but was diverted to Holyhead at 2135 hours to land a crew member at Holyhead via the rubber dinghy. During the night (and also on the previous night) sightings were made of two PRINCE MADOG's drifting dahn buoys which had been released in the vicinity of Station N. The positions of the buoys were radioed to PRINCE MADOG next morning. Both appeared to have had southerly residual drift. The ship weighed anchor again at 0330 hours on 20 September and recovered Stations F and M by 1808 hours. The snap shackles had again been stolen from the surface buoy strops on Station F and some damage was found to the sub-surface float on buoy M, probably caused by a ships propeller.

A fault developed on the ship's radar during the evening of 20 September, but Station D and E were recovered successfully during the morning of 21 September before the ship berthed at Holyhead at 1245 hours.

After an overnight stop at Holyhead where Mr Hill left the ship to return to Lowestoft, RV CLIONE sailed at 0750 hours 22 September and proceeded to Buoy L. This buoy was recovered at 1800 hours when the meters where seen to be fouled but no damage was sustained to the meters. Buoy J was located in position at 2110 hours after which course was set for the Longships and thereafter to the North Sea. The ship arrived at the Clay Deeps at 1130 hours on the morning of 25 September and Buoy C was successfully laid by 1300 hours in a moderate wind and a heavy northerly swell. After steaming for 10 hours, Buoy B was reached and raised by 2350 hours when the ship laid for an hour and a half to renew parts of the rig. Buoy B was relaid by 0145 hours on 26 September in good weather. The position of Buoy A was reached by 0500 on the 26 September when the ship laid to assemble the rig and await slack water in the early afternoon. Laying of the rig was completed by 1530 hours when CLIONE set course for Lowestoft. The ship anchored off Corton at 0335 hours on 27 September and moored alongside in Lowestoft at 1300 hours.

Radio contact was made with both JOHN MURRAY and PRINCE MADOG while each vessel was in the area and information exchanged.

RESULTS

1. Seven current meter stations were moored and recovered but two meters and a sub-surface float are missing from Station N. Station B was relaid in the correct position using the sub-surface float from Station P;

2. The 14 station network was monitored through the cruise. The 6 of the stations moored by JOHN MURRAY were still in position when RV CLIONE left the area of each buoy. The surface buoy at station K was adrift, probably since 7 September;

3. GEK measurements were carried out in the North Channel (3 runs) and on the Anglesey to Dublin and Milford-Haven to Waterford sections. Hydrographic sections were also completed across each line of current meters and a repeated section at high and low water was completed near Station J;

4. DRCM measurements were made each hour over 25 hours at 10 m depth intervals down to 60 m at Stations B and J;

5. 50 sea-bed drifters were released at each of the 14 current meter stations;

6. A grid of chemical sampling of soluble organic matter using an ultra-violet spectrophotometric technique was worked at approximately five mile intervals in the area of Liverpool Bay between Red Wharf Bay - Station D and Morecambe Bay. Preliminary examination of the results showed UV absorption to be high in the east of the Liverpool Bay area particularly off the Mersey, Ribble and Lune estuaries. Water entering the area from the west was characterised by low UV absorption;

7. ICES permanent current meter Station A and C were relaid in the North Sea and the meters changed on Station B;

8. A surface temperature and salinity grid at approximately 15 mile intervals was worked over the complete Irish Sea. Bottom temperature and salinity data were obtained at approximately 30 mile intervals at the request of ICES;

9. No working time was lost on the cruise due to bad weather.

H W Hill

A R Folkard
29 September 1971

SEEN IN DRAFT JEB (Master)
AHB (Fishing Skipper)

INITIALLED DHC

DISTRIBUTION

Basic list
Mr Folkard
Mr Baxter
Mr Read
Mr Keable
Dr Bowen (I C O T)
Mr Lennon (")
Mr Hughes (Department of Oceanography, Liverpool University)
Mr Hunter (Department of Oceanography, Menai Bridge Marine Laboratory)
Dr Simpson (Department of Oceanography, Menai Bridge Marine Laboratory)
Mr Bridger (N E R C) HQ

THE BISOP 71 CURRENT METER NETWORK (PLANNED POSITIONS)

Station	Latitude N	Longitude W
A	55° 06'	05° 50'
B	54° 58'	05° 36'
C	55° 02'	05° 19'
D	54° 00'	03° 55'
E	53° 36'	03° 42'
F	53° 24'	05° 50'
G	53° 26'	05° 33'
H	52° 10'	06° 12'
J	52° 05'	05° 46'
K	52° 05'	05° 26'
L	52° 05'	05° 08'
M	53° 24'	05° 07'
N	54° 04'	05° 19'
P	54° 14'	04° 11'