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

1976 RESEARCH VESSEL PROGRAMME

REPORT: RV CIROLANA: CRUISE 9b/1976

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

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DURATION

Left Liverpool 1600 h 4 October
Arrived Immingham 1115 h 29 October

All times are Greenwich Mean Time

LOCALITY

Irish Sea, North Atlantic, Norwegian Sea, Denmark Strait, Faroes - Faroe Bank Channel and North Sea.

AIMS

1. To collect samples from the North Atlantic, Greenland Sea and Norwegian Sea for dissolved metal analysis. (AB.1.2.)

2. Concurrent with Aim 1, samples to be filtered and the particulate matter to be analysed for metals by X-ray fluorescence techniques (Edinburgh University).

3. To collect 2700 litres of sea water in the North Atlantic for the International Standard Sea Water Service at I.O.S. Wormley.

4. To recover current meter rigs at Stations NE1, NE2, NE3, NE4, JONSIS 1 and JONSIS 2, and to relay JONSIS 1 and JONSIS 2 (E.3.3.)

5. To collect samples for Caesium analysis in the Norwegian Sea and North Sea.

NARRATIVE

CIROLANA sailed from Liverpool at 1600 h 4 October. Samples were collected for caesium analysis on passage through the Irish Sea and along the ship's track to the first hydrographic station to be worked in the Rockall Channel. The first station was reached at midnight on 5 October where the ship then dodged in a southeasterly gale until midday 7 October. On station Niskin bottles were attached to the

hydrographic wire, lowered and allowed to wash for 30 minutes to overcome "first station syndrome" effects that had been noticed on previous cruises. After completion of this first station course was set for OWS Station INDIA which was worked at 0830 h 9 October after dodging for approximately 13 hours. Water for the Standard Sea Water Service was collected between 2200 and 2340 h 9 October after which the ship then altered course to the north east after receipt of a storm warning in operation for sea areas to the south west of Iceland. By the afternoon of 11 October the ship had reached a position north of the Faroes where she dodged until 0630 h 14 October when a station was worked in the deep water of the Norwegian Sea. Thereafter stations were worked to the north east of Langanes, to the north of Iceland and in the north of the Denmark Strait with just one period of dodging in the early hours of 17 October. A further station in the Greenland Sea to the south of the overflow channel in the Denmark Strait was worked on the morning of 18 October. After steaming for 10 hours followed by 20 hours dodging a station was worked in marginal weather conditions to the west of the Reykjanes Ridge. A station to the east of the Ridge was abandoned due to adverse weather conditions. Course was set for a station in the Faroe Islands - Faroe Bank Channel which was worked at 2300 h 22 October in good weather. High winds prevented an early passage through the Fair Isle Channel and the ship dodged to west of the Orkneys from 1300 h 23 October to 0800 h 24 October. Caesium sampling commenced near Papa Bank and further stations were worked along a grid in the North Sea, including the current meter positions. Current meter recovery began at NE and continued in the order NE1, JONSIS 2, JONSIS 1, NE4 and NE3. Rigs were relaid at JONSIS 2 and JONSIS 1.

CIROLANA anchored at the Bull Anchorage at 1830 h 28 October and berthed at Immingham at 1115 h 29 October.

RESULTS

1. Samples for dissolved metals and particulate metal analysis were taken at 9 stations at selected points in the North Atlantic, Norwegian Sea, in the area to the north of Iceland and in the Denmark Strait. Because of weather conditions prevailing in the area, it was decided that it would not be feasible to attempt sampling in the Jan Mayen area.

2. 49 carboys of 55 litre capacity were collected for the Standard Sea Water Service.

3. Of the six current meter rigs to be recovered in the North Sea only one (JONSIS 2) was found to have its surface buoy still in position and at the remaining five it was necessary to use the grapnel for recovery. Stations NE2, NE1, JONSIS 2 (after parting the buoy tow on hauling) and NE4 were recovered in this manner but attempts were unsuccessful at JONSIS 1 and NE3. At JONSIS 1 faint signals were heard on the acoustic release equipment but in bad visibility ($\frac{1}{2}$-$\frac{3}{4}$ mile) and rapidly closing darkness the search had to be abandoned. At NE3 four unsuccessful attempts were made before abandonment of the station. Stations JONSIS 1 and JONSIS 2 were relaid.

4. Most of the sea water collected for Caesium analysis was processed at sea. At the deep stations samples were taken for nutrient analysis. Silicate and nitrate analyses were carried out on the Auto Analyser and phosphate analyses were made by manual technique.

A R Folkard

3 November 1976

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DISTRIBUTION

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