

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

1981 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 5

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

STAFF

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DURATION

Left Lowestoft 1305 h, 10 April

Arrived Lowestoft 0837 h, 22 April

All times are Greenwich Mean Time

LOCALITY

Central and Northern North Sea

AIMS

To collect samples of subsurface (1m) water and surface sediment from the vicinity of producing North Sea oil platforms (Beryl, Montrose, Piper and Thistle) and surface sediment samples from a non-production area. Water samples to be analysed for total hydrocarbons by fluorescence spectroscopy at sea, and frozen to await further analysis in the laboratory. Sediment samples to be frozen for later extraction, and analysis for both hydrocarbons and barium. This was the second part of a study (begun on CORELLA 10/80) to investigate the fate of hydrocarbons from discharges of oily water and drill cuttings from production platforms (2.1.7B).

NARRATIVE

CLIONE left Lowestoft on 10 April and proceeded to the Montrose field, where the collection of water and sediment samples began in good weather at 0823 h on 12 April. Work in this area was completed at 1845 h on the 13 April and CLIONE steamed overnight to the Beryl oil field. Some difficulties were experienced here with the 0.1m² Day grab, and it was changed for the 0.15m² Day grab carried as a spare. All subsequent sediment samples were taken with this grab. Sampling of water and sediment was carried out between 1203 h on 14 April and 1846 h on 15 April, and CLIONE then steamed overnight to the Thistle oil field. Water and sediment samples were collected between 0939 h 16 April and 1348 h 17 April, and CLIONE continued westward after completing the grid to allow collection of further sediment samples at 10, 20, 30 and 35 miles from the production platform to provide background data for barium. The collection of background samples continued the next day (18 April) in a non-production area on the Bressay Bank, beginning at 0755 h and finishing at 1703 h. CLIONE steamed overnight to the Piper oil field, where a heavy swell prevented work starting before lunch on 19 April. Water and sediment samples were collected between 1209 h and 1034 h on 20 April, and CLIONE continued south to Lowestoft, docking at 0837 h on 22 April.

RESULTS

With some modifications to avoid areas around the platforms in which work was being carried out, all grids were successfully completed. Stations worked were as follows:

Montrose 35 stations between $\frac{1}{2}$ and 5 miles from the platform N, E, S & W
Beryl 37 stations on a grid between $\frac{1}{2}$ and 5 miles to the S & E of the platform
Thistle 30 stations between $\frac{1}{2}$ and 5 miles from the platform N, E, S & W, and four stations 10 to 35 miles west.
Bressay Bank 25 stations within a 4 x 4 mile grid.
Piper 25 stations, $\frac{1}{2}$ to 5 miles from the platform, between NE and SW.

All water samples were extracted and analysed for total hydrocarbons at sea. The recent modifications to the fluorimeter eliminated the instability problem seen previously and the analyses went smoothly.

R J Law
27 April 1981

SEEN IN DRAFT: G R Oliver - Master
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