

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

1983 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 5

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

STAFF:

R J Law (SIC)
M J Waldock
T W Fileman
A J Murray
A P Moule
Denise Miller

LOCATION: South-West Approaches and English Channel

DURATION: Left Lowestoft 1435 h 6 April
Arrived Lowestoft 0040 h 20 April
(All times are GMT)

AIMS:

1. To carry out pre-exploitation baseline hydrocarbon surveys in licensed exploration areas in the South-West Approaches, Poole Bay and the English Channel east of the Isle of Wight.
2. To test the suitability of the modified 'Aquatracka' towed fluorimeter for the continuous monitoring of hydrocarbon levels in subsurface sea water.

NARRATIVE:

CLIONE left Lowestoft at 1435 6 April and sailed to the English Channel, where work commenced off Newhaven at 0923 h 7 April. Samples of subsurface water and surface sediment were collected for hydrocarbon analysis from 12 stations during 7 April, the last station being completed at 1729 h. As the weather forecast was reasonable it was then decided to sail to the South-West Approaches. CLIONE arrived on station to begin sampling at 0550 h 9 April, and 7 stations had been worked by 1540 h when work finished for the day. The wind picked up during the night, and by the morning of 10 April a severe south-westerly gale was blowing. CLIONE dodged throughout the day, and no work was possible. The wind had moderated by the morning of 11 April and despite a heavy swell work recommenced at 0747 h. A further 11 stations were sampled to complete the planned work in this area by 1559 h 12 April, and CLIONE proceeded to Falmouth, docking at 0723 h 13 April. After replenishment of water and stores CLIONE sailed at 1455 h and was on station in Poole Bay to begin work again at 0622 14 April. 43 stations were worked on 14 April, and sampling in Poole and Christchurch Bays was finished by 1549 h. CLIONE anchored overnight in Christchurch Bay, and on 15 April

a trial of the modified Chelsea Instruments 'Aquatracka' system was conducted in Southampton Water and the Solent. Towing began 5½ miles SW of the Needles Channel entrance at 0906 h, continuing by way of the Western Solent to the NW Netley buoy in Southampton Water, and thence into the Eastern Solent, terminating at 1520 h off Portsmouth. The towing depth throughout was 3 m. CLIONE anchored in Sandown Bay overnight, and on 16 April returned to the English Channel sampling grid begun on 7 April. Samples were taken from a further 50 stations between 0636 h 16 April and 0856 h 19 April, after which CLIONE steamed back to Lowestoft, docking at 0040 h 20 April.

RESULTS:

Aim 1

(a) South-West Approaches

18 of 20 planned sampling stations were worked successfully; two of the most southerly stations had to be dropped from the survey as the water depth was too great.

(b) Poole and Christchurch Bays

The drilling rig 'Western Apollo II' was on site drilling the first of two planned exploration wells in Poole Bay. A 43-station sampling grid covering of Poole and Christchurch Bays north of the area sampled last year (CLIONE 5a/82) was completed successfully.

(c) English Channel

62 stations were worked east and south of the Isle of Wight. Sediment sampling was only occasionally successful in the western half of the area, near the Isle of Wight, owing to the rocky nature of the bottom.

In all cases the concentration of hydrocarbon in water samples was determined at sea by fluorescence spectroscopy, and sediment samples were frozen for later laboratory analysis.

Aim 2

The newly modified 'Aquatracka' proved to be considerably more sensitive than the version which was used last year (CLIONE 4 and 5a/82). Data capture is now carried out by an HP 85 microcomputer. Data are stored on tape, and a full evaluation of the instrument's performance will be made from this record at a later date. Discrete water samples were taken using the normal drop bottle system at five points during the 'Aquatracka' tow and results from this analysis will be compared with results obtained via the towed system.

R J Law
21 April 1983

SEEN IN DRAFT:

INITIALLED: HWH

DISTRIBUTION:

Basic list +
R J Law
M J Waldock
T W Fileman
A J Murray
A P Moule
Denise Miller
J E Portmann
R A A Blackman
J M Davies (DAFS)
A Whitehead (DEn)



