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FRV "Scotia"

5pt1SR87

Cruise 5/87 (Part 1)

LD

Report

20-29 May 1987

Personnel

A D McIntosh	HSO (in charge)
D M Finlayson	SSO
D C Moore	HSO
M R Robertson	SO
R D Adams	SO
T Archibald	Snr. Storeman
P R Mackie	TRS
P Simpson	TRS

Fish gear: Aberdeen 48' trawl (BT 101)

Objectives

1. To investigate the distribution of hydrocarbons in sediments around the Beryl and Forties oilfields and the proposed Ivanhoe and Rob Roy fields and along the Forth Forties Line.
2. To monitor the benthos around the Beryl field.
3. To sample invertebrates from a number of locations for subsequent enzyme analysis.

Narrative

"Scotia" sailed from Aberdeen at 1700 hrs on 20 May after a 3 hour delay in rectifying a computer failure. Passage was made to the Beryl oilfield and on arrival, due to adverse weather precluding sediment sampling, 2 trawls were taken in the vicinity to provide fish samples for taste panel assessment of taint. Sediment sampling by grab and multicorer started at 1700 hrs on 21 May and during the next 52 hours 54 stations were occupied providing sediment samples for hydrocarbon analysis and benthos studies. At the proposed Ivanhoe and Rob Roy fields, 24 stations were occupied during the period 0750 hrs on 24 May and 0500 hrs on 25 May, providing 36 grab and multicore samples for baseline hydrocarbon analysis.

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The Forties field sampling was completed between 0800 hrs on 25 May and 0800 hrs on 26 May, then a trawl was taken east of the Forties field to provide fish for taint assessment. Passage was then made for Aberdeen to put D C Moore ashore, at 2200 hrs, before making passage back to the Fladen ground to repeat some multicore sampling on the proposed Ivanhoe field. This was necessary due to DECCA problems during our first visit. This sampling was completed by 1230 hrs on 27 May and sampling on the Forth Forties Line commenced at 1800 hrs and continued until Bell Rock at 0200 hrs when we started a comprehensive sampling programme around the Bell Rock as part of a statutory monitoring programme. "Scotia" was in position between the Bridges on the Firth of Forth at 1600 hrs and completed the FFL sampling by 1700 hrs.

Further sediment sampling was carried out at the St Abb's Head dump ground until 0300 hrs on 29 May when passage was made for Leith and docking was completed by 0930 for the half-landing.

Results

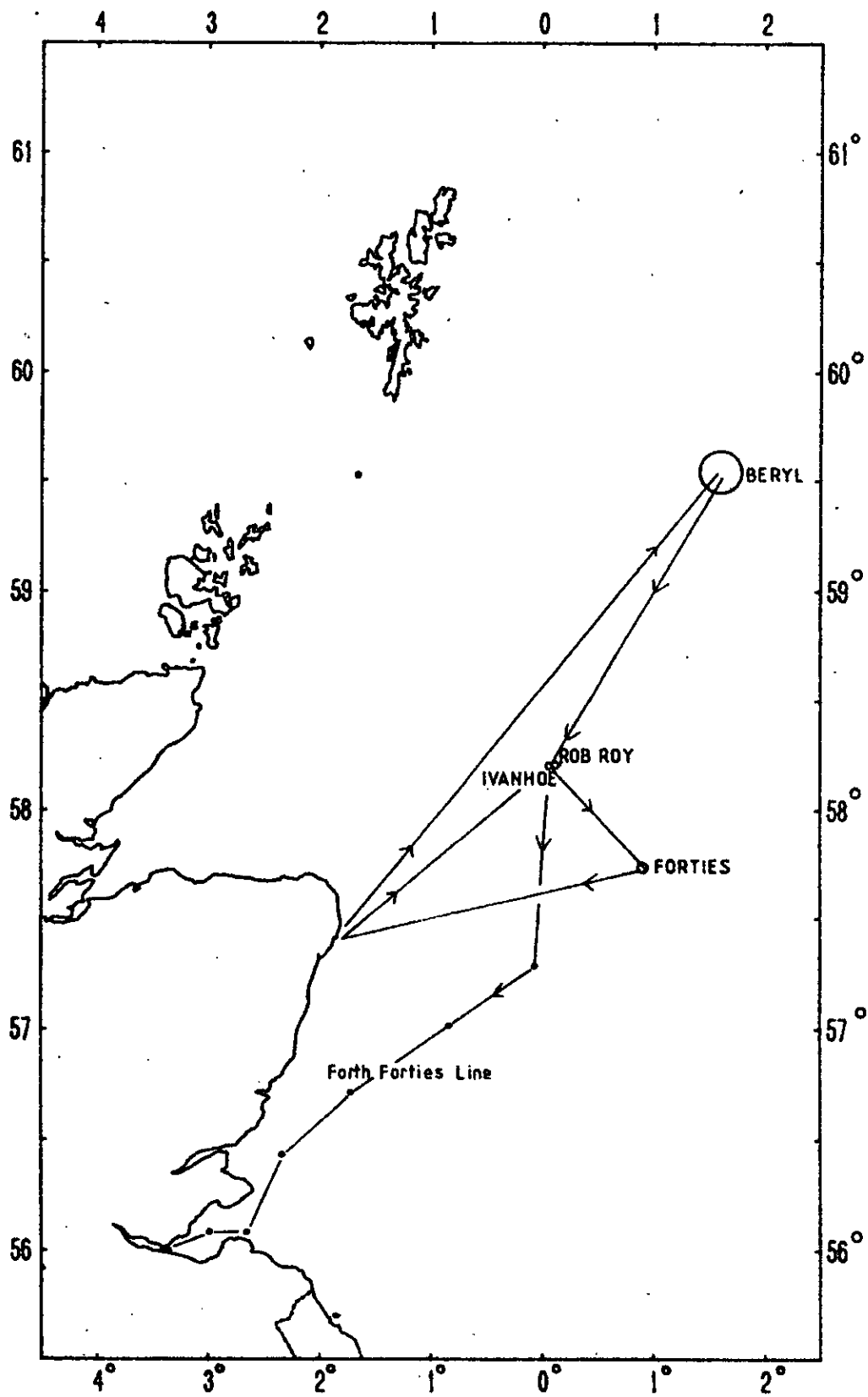
From 106 stations occupied, excluding those at the dump sites, a total of 360 sediment samples were collected and await analysis for hydrocarbon concentrations to assess the impact of oil exploration and production in the areas visited. At the majority of these stations sediments were incubated with 14 C substrates to provide information on the indigenous microbial population's capacity to mineralise hydrocarbons.

Objectives 1 and 2 were met in full but number 3 had to be abandoned because J G McHenery could not join the cruise. The extra time gained as a result was occupied in sampling at the Bell Rock and St Abb's Head dump sites to save some time on Part 2 of this cruise.

D N MacLennan

16 June 1987

Seen in draft: N E McInnes



FRV Scotia

Cruise 5/87
part 1