

Indexed #65.

PI

R1/12

Not to be cited without prior reference to the Laboratory.

FRV "SCOTIA"

Cruise 5/88 Part 1

Spt1SR88

REPORT

11 - 20 May 1988

Personnel

A McIntosh	HSO (in charge)
D Moore	SSO
J McHenry	HSO
M Robertson	SO
P Mackie	TRS
A Judd	Visitor (Dept of Applied Geology, Sunderland Poly.)

Objectives

1. To investigate the distribution of hydrocarbons in sediments and assess their impact on the benthos in the area of the Beryl oilfield to ascertain whether effects are localised or wide spread.
2. To investigate the distribution of hydrocarbon contamination in sediments from the East Shetland Basin to ascertain the extent of impact that oil exploration and production has had in this area.
3. To provide sediment samples for investigations on the distribution of periodic expulsions of fugitive gases from sediments.

Narrative and Results

'Scotia' left Aberdeen Bay at 1730hrs on 11 May, after putting the compass adjustor aboard the pilot boat, and made passage toward the Beryl oilfield. Between 1930 and 2000hrs the ship held position while a reference sediment sample was taken.

From 0730 to 0830hrs on 12 May 'Scotia' successfully located and sampled from one of a number of 'pock marks' we hoped to investigate. During the period 1300hrs on 12 May until 0900hrs on 15 May 57 stations were occupied in the vicinity of the Beryl oilfield providing 230 samples for macro benthos analysis, total hydrocarbon estimations and heterotrophic activity measurements.

'Scotia' left the Beryl field and headed north picking up 4 reference stations en route to the East Shetland Basin area where sampling by grab for sediments commenced at 1830 on 15 May. A total of 60 stations were successfully occupied until 0500hrs on 17 May when adverse weather precluded further grab sampling. 'Scotia' made slow progress north while waiting for the weather to abate. After a number of hours, and with no imminent improvement in the weather expected, the decision was made to turn and head south where we hoped to complete a contingency sampling programme in the Fladen area.

From 0100 to 0300hrs on 19 May 'Scotia' located and sampled from a well defined pock mark for geophysical and zoological analysis. Samples were then taken from 23 stations on three transects covering part of the Fladen oil development area

and this work was completed at 2330hrs when passage was made for Aberdeen, picking up a water sample for radio-caesium analysis, and docking at 1000hrs on 20 May.

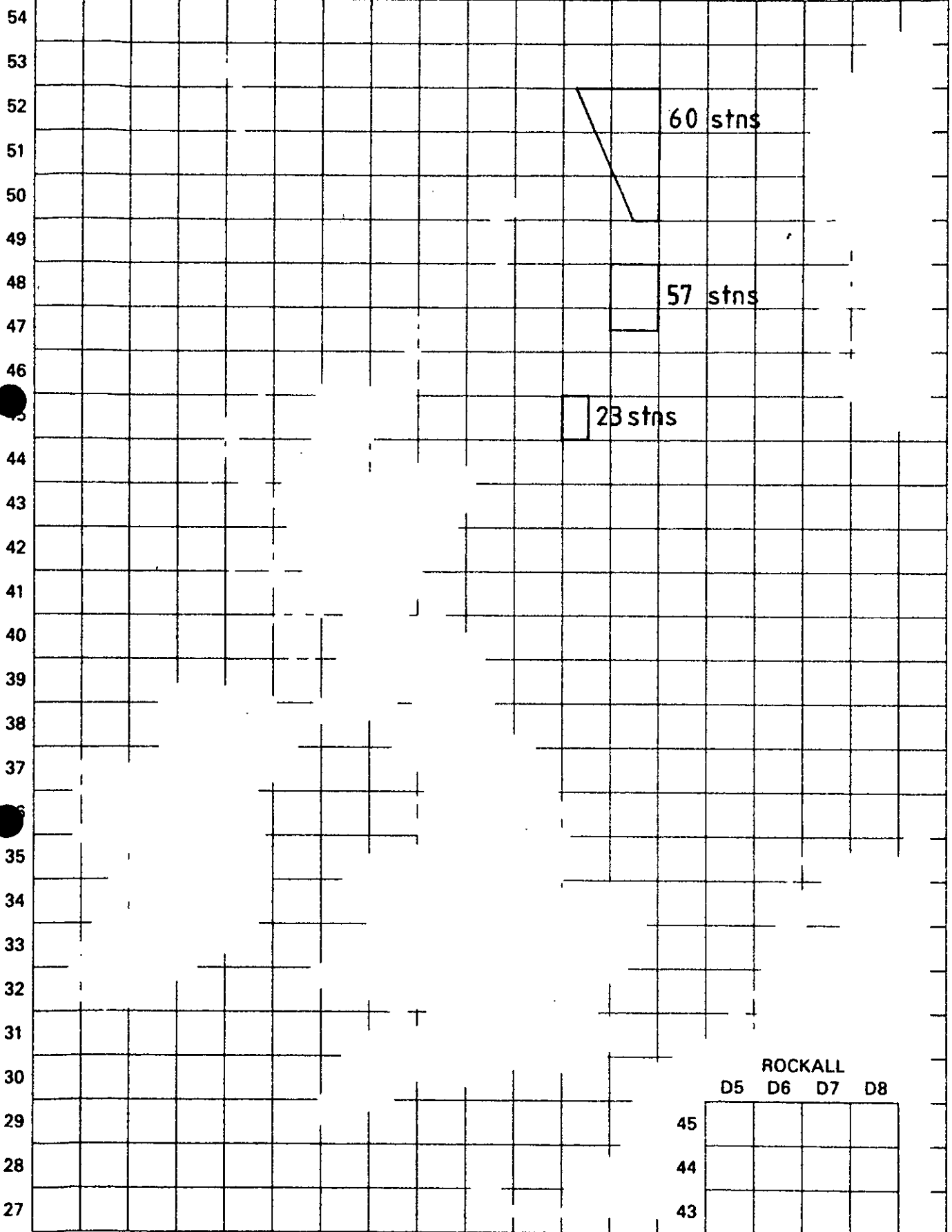
While all the objectives were met, completion of Part 2 was curtailed due to adverse weather.

All samples were returned to the Laboratory and results will become available when analyses are complete and the data evaluated.

A McIntosh
7 July 1988

Seen in draft: N E McInnes

D9 E0 E1 E2 E3 E4 E5 E6 E7 E8 E9 F0 F1 F2 F3 F4 F5 F6 F7



FRV Scotia

Marine Laboratory Aberdeen

Cruise 5/88

Part 1