

R1/12

Not to be cited without prior reference to the Marine Laboratory, Aberdeen

FRV *Scotia*

Cruise 1694S

REPORT

5-14 November 1994

Ports

Loading: Aberdeen
Unloading: Aberdeen

Personnel

W R Turrell	PSO (in charge)
G Slesser	HSO
R P Payne	HSO
P A Gillibrand	HSO
R D Adams	SO

Objectives

1. To deploy four current meters to the north and west of the Shetland Islands.
2. To perform hydrographic surveys along the Fair Isle - Munken (Faroe) [SEFOS standard section 19] and Nolso (Faroe) - Flugga (Shetland) [SEFOS standard section 18] standard sections.
3. To perform hydrographic surveys along the shelf edge to the north and west of the Shetlands.
4. To survey the standard JONSIS, East Shetland (ES) [SEFOS standard section 20] and northern North Sea (EC) sections.
5. To collect the Fair Isle radio-caesium sample for analysis by MAFF Lowestoft.

Out-turn Days per Project

EBBY 10.0

Narrative

After some initial engine problems, FRV *Scotia* sailed from Aberdeen at 2330 hrs Saturday 5 November, and steamed directly for the first mooring position northwest of Shetland. The Fair Isle caesium sample was collected during the passage. *Scotia* arrived at the mooring position at 2300 hrs Sunday 6 November. As daylight was required in

order to lay the mooring, *Scotia* dodged until 0800 hrs on Monday 7 November, when mooring operations commenced. By 1600 hrs that day moorings D and C had been successfully deployed, and *Scotia* proceeded to mooring location B. By 1600 hrs on Tuesday 8 November moorings A and B had been successfully deployed, and hydrographic work commenced at 1730 hrs. A CTD section, starting inshore from the mooring A and continuing along the Fair Isle Munken standard section, was completed by 1900 hrs on Wednesday 8 November. *Scotia* then steamed north to the start of Nolso Flugga section, which commenced at 0100 hrs on Thursday 10 November. Some problems were experienced with the Seabird 9plus CTD, with the instrument failing after six stations, and work was continued in the deeper portion of the channel using Knudsen bottles. Once water depths were less than 500 m, CTD worked resumed using an Applied Microsystems STD-12. The Nolso Flugga line was completed by 0900 hrs Friday 11 November, and *Scotia* proceeded to the start of the East Shetland 3 line. This line commenced at 1542 hrs, and after nine stations were completed the weather deteriorated to the extent that work stopped. After some initial dodging in the vicinity it was clear that the weather was worsening and *Scotia* proceeded towards Aberdeen, maintaining reduced speed owing to the poor sea state. *Scotia* eventually arrived at Aberdeen at 0600 hrs on Monday 14 November.

Results

- Objective 1: This objective was completed successfully. All moorings will be recovered in January 1995.
- Objective 2: This objective was completed successfully, despite the problems with the SeaBird CTD system. Initial results reveal a warm (10°C) saline (35.32) core above the 200 m contour at the shelf edge. Deep water salinities appear to be reduced: 34.907 compared to more typical values of 34.92.
- Objective 3: Owing to the poor weather this was not achieved.
- Objective 4: The ES3 line was only partly completed owing to the poor weather.
- Objective 5: The Fair Isle caesium sample was collected.

W Turrell
23 November 1994

Seen in draft: P Ramsay

Scotia Cruise 1694S

