

R1/12

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FRV *Scotia*

Cruise 0991S Part 3

REPORT

24 September - 4 October 1991

Personnel

E W Henderson	PSO
R Payne	HSO
G Slesser	HSO
R D Adams	SO
Miss E C Devonshire	Casual ASO

Objectives

1. To deploy six current meter moorings in the northern North Sea to the east of Shetland and one current meter mooring on the NW shelf to the west of Orkney.
2. To work hydrographic stations using water bottles and CTD profilers along the Fair Isle - Munken, Faroe and the Nolso, Faroe - Flugga, Shetland sections.
3. To carry out hydrographic studies in the northern North Sea at the locations of the current meter moorings, along the JONSIS line, and along the EC line.

Narrative

Because of problems in trying to unload and load the vessel on the same day and the consequent delays due to the shortage of suitable transport and personnel, sailing was postponed for 24 hours. On sailing at 1330 on 25 September, passage was made to the first current meter mooring (C) to the west of Orkney. This was successfully deployed the following morning and the vessel then proceeded to the area east of Shetland. In order to ensure the accurate positioning of the moorings, a bathymetric survey along the line of proposed mooring positions was carried out overnight. Moorings ES6 to ES3 were deployed during 27 September and, because of variable depths and the proximity to traffic lanes, bathymetric surveys were carried out on positions ES2 and ES1 overnight. By noon on 28 September, both moorings ES1 and ES2 had been successfully deployed.

Passage was then made to the north of Shetland to the first position on the Nolso, Faroe to Flugga, Shetland hydrographic section. This section was worked towards Faroe and then the Munken, Faroe to Fair Isle section was worked. On completion of this, a short

section north and west of Foula was worked before *Scotia* made passage back into the North Sea by way of the north of Shetland, reaching the ES1 mooring position in the early hours of 1 October.

CTD stations along the line of moorings (ES1 to ES6) were worked eastwards and another section was worked westwards towards Sumburgh Head before passage was made to the start of the JONSIS line. Full hydrographic and chemistry sampling was carried out on this line. Three CTD stations on the EC line were worked until deteriorating weather conditions resulted in work being suspended at 0130 on 3 October. By 0700 the weather had worsened considerably, and, given the shortage of time, *Scotia* made passage for Aberdeen at half speed where she docked at 0030 on 4 October.

Results

The salinity and chemistry samples from the cruise await analysis. A recurrence of a communications problem with the NBIS "smart" CTD meant that use of this instrument had to be discontinued and sampling was continued with the AML STD-12 instrument. Because of the change of instrument, and the need for careful cross-calibration of both CTDs, no results can be reported at present.

E W Henderson
14 November 1991

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