

R1/12

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FRV "Scotia"

Cruise 1/89, Part 2

1SRpt289

REPORT

17-25 January 1989

Personnel

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Objectives

1. To recover 3 current meter moorings deployed in the North Sea in September 1988 (the EC line).
2. To creep for one mooring along the EC line whose surface marker has been removed.
3. To carry out a hydrographic survey in the area of the Fair Isle and Dooley currents in the North Sea and in the area west of Orkney and Shetland.
4. To work hydrographic stations along the JONSIS line, and to collect benthic samples along this line.

Narrative

The change of scientific staff took place at 1330 on Tuesday 17 January in Greenock, "Scotia" sailed at 1830 on the same day and steamed to current meter mooring EC2 in the North Sea, arriving there on Thursday 19th. This mooring was recovered by 1100 and "Scotia" proceeded to the next mooring position at EC3. This was similarly successfully recovered by 1430. Hydrographic stations along the line of moorings (the EC line) were then performed using the Neil Brown SMART CTD. At 2100 the southerly end of this line was completed and "Scotia" sailed to mooring EC5. At 0800 on Friday 20th it was decided to postpone the recovery of this mooring due to the large seas running at the time; "Scotia" then proceeded to the position where a fishing boat had reported discarding mooring EC4. Creeping for this mooring commenced at 1130 and it was located at 1930, close to the reported position. The mooring was recovered on board; the bottom instrument had been cut free and so is lost.

Hydrographic sampling then proceeded until 2300 on Saturday 21 January when it was decided that a break in the weather might permit recovery of EC5. "Scotia" steamed to this mooring and it was recovered by 1000 on Sunday 22nd. Hydrographic work then resumed for the rest of the cruise. Work was suspended between 2100 22 January and 0800 23 January owing to adverse weather. "Scotia" sheltered in North Sound during this period. The final hydrographic section was completed to the south of Aberdeen at 2030 on Tuesday 24th although chemical analysis continued on through the night. Owing to the possibility of deteriorating weather, "Scotia" entered Aberdeen at 2300 on 24 January.

Results

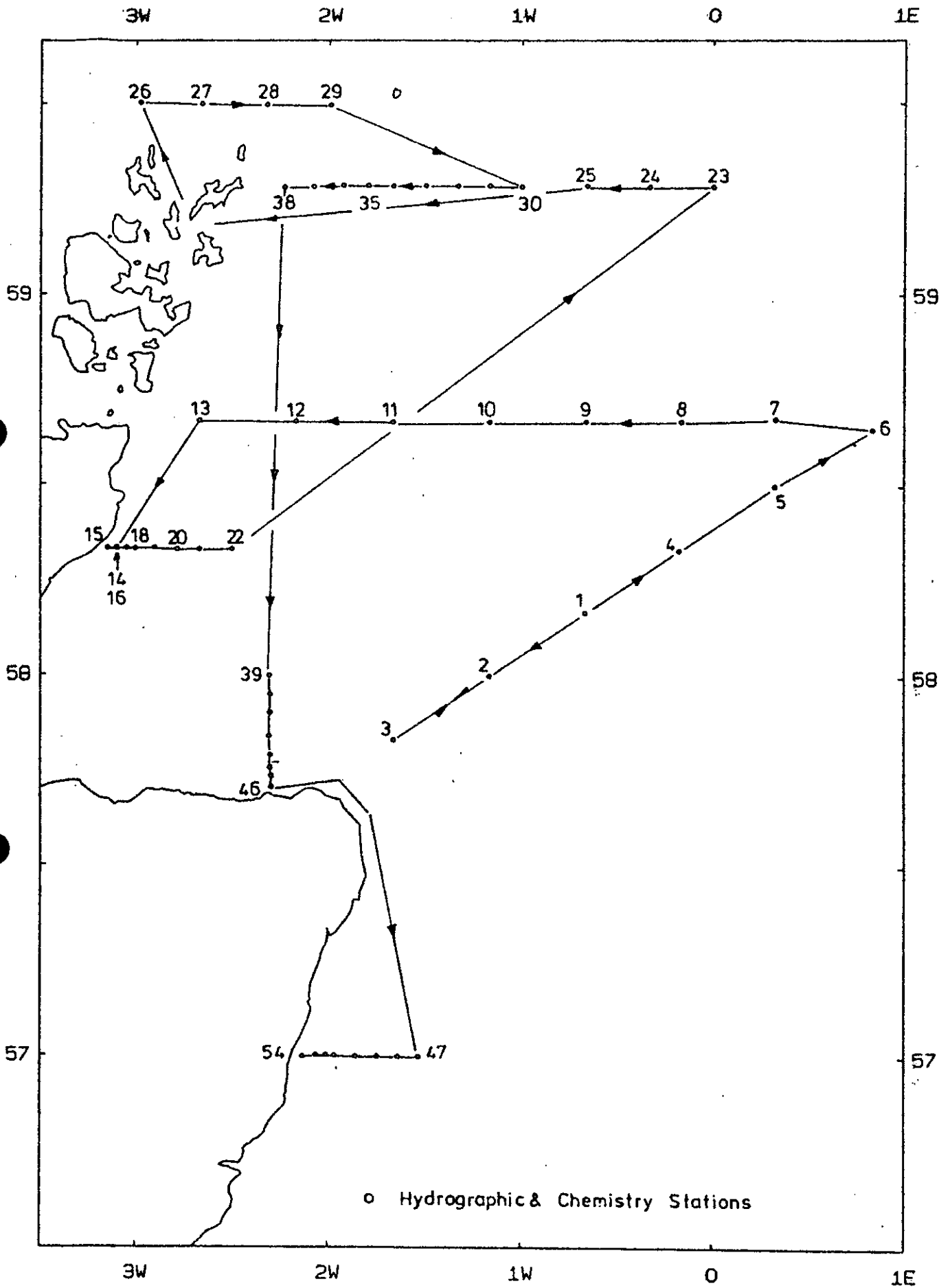
Six current meter records have been recovered, along with a water-level instrument record. These await processing in the Laboratory. Four hydrographic sections across the Fair Isle current were performed. These include the JONSIS line and the EC line. Preliminary results show vertically homogeneous water of $S = 34.9$ at EC2, 35 at EC3 and 35.1 at EC4. Temperatures were 8°C at EC2, rising to 8.5°C at EC3. Surface nitrates were obtained at all stations where full chemistry was not performed. The low salinity water (<35) had values of $7\ \mu\text{g}/\text{l}$. In addition to these sections, 3 sections ending close to the east coast were worked and await interpretation. All chemical analysis was completed on board.

W R Turrell

4 April 1989

Seen in draft: N E McInnes

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