

P17/15

Not to be cited without prior reference to Marine Scotland, Marine Laboratory, Aberdeen.

FRV *Scotia*

Cruise 0709S

## **PROGRAMME**

15 May – 2 June 2009

**Loading:** Aberdeen  
**Unloading:** Aberdeen  
**Port Call:** Lerwick

### **Personnel**

G Slesser (SIC)  
M Geldart  
D Lichtman  
B Berx  
M Rose  
D Watson  
J Dunn (15-25 May)  
J Hunter (25 May – 2 June)  
K Cook (25 May – 2 June)  
D Pearce CEFAS (15-16 May)

**Out-turn days per project:** 19 AE11R0

### **Gear**

Sea-Bird CTDs, ADCP and Current Meter instrumentation, Mooring Equipment, Recovery Trawl, Ocean Sampler

### **Objectives**

1. Replace the Waverider Buoy for the WaveNet network in the Moray Firth.
2. Recover two current meter moorings in the Fair Isle Channel.
3. Service two ADCP moorings in the Faroe Shetland Channel.
4. Deploy two additional ADCP moorings for the THOR project in the Faroe Shetland Channel.
5. Perform hydrographic surveys along the standard Faroe Shetland Channel sections.
6. To take samples for long term storage at Fair Isle – Munken stations FIM-01 and FIM-06.
7. Perform CTD surveys along the Shelf Edge as time allows.

8. Deploy two current meter moorings East of Shetland.
9. Perform a CTD survey East of Shetland.
10. Perform hydrographic surveys along the JONSIS standard section in the northern North Sea.
11. Perform biological sampling along the JONSIS standard section using the Ocean Sampler with additional positions to be sampled in the immediate area.

## **Procedure**

On sailing from Aberdeen the *Scotia* will sail directly to the Waverider buoy position (57° 57.97'N 003° 19.96'W) where a replacement mooring shall be deployed. Thereafter, CEFAS personnel will be transferred to a suitable port for disembarking. Following this, trial CTD deployments will take place.

*Scotia* will then make passage to the Fair Isle Channel where two current meter moorings (59° 43.24'N 001° 41.48'W, 59° 28.29'N 002° 01.83'W) will be recovered.

The *Scotia* will then proceed to the Faroe-Shetland Channel area. The recovery, servicing and redeployment of two NWOCE ADCP moorings, NWSD (60° 26.93'N 004° 22.45'W) and NWSE (60° 16.66'N 004° 20.13'W) will be carried out followed by the deployment of two additional ADCP moorings for the THOR Project, NWSD\* (60° 30.50' 004° 34.00'W) and NWSF (60° 10.80'N 004° 54.60'W). This will be followed by using the CTD/rosette sampler to sample the Fair Isle - Munken standard section, a line of stations from south of the Faroe Islands to Cape Wrath and the Nolso – Flugga standard section. During this period long term storage samples will be taken at stations FIM-01 and FIM-06.

On completion of this work the *Scotia* will make passage to East of Shetland to deploy two current meter moorings (60° 18.66'N 000° 41.75'W, 60° 10.00'N 000° 10.00'W). Following these deployments the CTD survey East of Shetland will commence prior to the half landing at Lerwick. At Lerwick one Marine Scotland personnel will disembark and two Marine Scotland personnel will join the ship.

On departing Lerwick *Scotia* will continue with CTD sampling East of Shetland followed by sampling along the JONSIS standard section using the CTD/rosette and Ocean Sampler. This will be followed by sampling in the immediate area using the Ocean Sampler until departing for Aberdeen.

The thermosalinograph will be run throughout the cruise.

(NOTE: The survey will take *Scotia* into the Foinaven Development Area. This is now standard practice, and normal on-site communications will be established with the Foinaven co-ordinating officer).

Normal contacts will be maintained with the laboratory.

Submitted:  
G Slesser  
28 April 2009.

Approved:  
I Gibb  
1 May 2009.

**JONSIS Line**

	Name	Latitude	Longitude	Depth	Spacing
01	JO 1	59° 17.00' N	02° 14.00' W	75 m	
02	JO 1A	59° 17.00' N	02° 05.00' W	90 m	8.5 km
03	JO 2	59° 17.00' N	01° 56.00' W	100 m	8.5 km
04	JO 3	59° 17.00' N	01° 48.00' W	80 m	7.6 km
05	JO 4	59° 17.00' N	01° 40.00' W	90 m	7.6 km
06	JO 5	59° 17.00' N	01° 30.00' W	95 m	9.5 km
07	JO 6	59° 17.00' N	01° 20.00' W	110 m	9.5 km
08	JO 6A	59° 17.00' N	01° 10.00' W	120 m	9.5 km
09	JO 7	59° 17.00' N	01° 00.00' W	125 m	9.5 km
10	JO 8	59° 17.00' N	00° 40.00' W	120 m	18.9 km
11	JO 9	59° 17.00' N	00° 20.00' W	140 m	18.9 km
12	JO10	59° 17.00' N	00° 00.00' W	135 m	18.9 km
Totals				1180 m	126.9 km

**Fair Isle - Munken** (Ammended for presence of Foinaven oil platform)

	Name	Latitude	Longitude	Depth	Spacing
01	FIM-01	60° 10.00' N	03° 44.00' W	150 m	
02	SEFOS	60° 13.00' N	03° 51.50' W	170 m	8.9 km
03	FIM-02	60° 16.00' N	03° 59.00' W	200 m	8.9 km
04	SEFOS	60° 18.00' N	04° 04.50' W	330 m	6.3 km
05	<i>FIM-03</i>	<i>60° 20.25' N</i>	<i>04° 09.00' W</i>	<i>390 m</i>	<i>6.3 km</i>
06	FIM-04	60° 25.00' N	04° 19.00' W	655 m	12.4 km
07	FIM-05	60° 29.00' N	04° 26.00' W	995 m	9.8 km
08	FIM-06	60° 35.00' N	04° 45.00' W	1090 m	20.6 km
09	FIM-6a	60° 38.00' N	04° 54.00' W	1030 m	9.9 km
10	FIM-07	60° 43.00' N	05° 06.00' W	915 m	14.3 km
11	FIM-08	60° 47.00' N	05° 16.00' W	830 m	11.7 km
12	FIM-09	60° 51.00' N	05° 29.00' W	600 m	13.9 km
13	FIM-10	61° 02.00' N	05° 57.00' W	280 m	32.4 km
14	FIM-11	61° 12.00' N	06° 22.00' W	240 m	
Totals				7,585.0 0	155.40

## Nolso-Flugga

	Name	Latitude	Longitude	Depth	Spacing
01	NOL-01	60° 56.00' N	01° 00.00' W	110 m	
02	SEFOS	60° 58.70' N	01° 17.70' W	125 m	16.7 km
03	SEFOS	61° 01.40' N	01° 35.40' W	155 m	16.7 km
04	NOL-02	61° 04.00' N	01° 53.00' W	270 m	16.7 km
05	SEFOS	61° 06.00' N	02° 01.50' W	440 m	8.5 km
06	NOL-03	61° 08.00' N	02° 10.00' W	550 m	8.5 km
07	SEFOS	61° 09.30' N	02° 17.50' W	630 m	7.1 km
08	NOL-3a	61° 11.00' N	02° 25.00' W	730 m	7.4 km
09	NOL-04	61° 14.00' N	02° 40.00' W	1080 m	14.5 km
10	NOL-05	61° 21.00' N	03° 10.00' W	1370 m	29.6 km
11	NOL-06	61° 28.00' N	03° 42.00' W	1235 m	31.2 km
12	NOL-07	61° 35.00' N	04° 15.00' W	990 m	31.9 km
13	NOL-08	61° 42.00' N	04° 51.00' W	235 m	34.2 km
14	NOL-09	61° 49.00' N	05° 21.00' W	180 m	29.3 km
15	NOL-10	61° 54.00' N	05° 45.00' W	290 m	22.9 km
16	NOL-11	62° 00.00' N	06° 12.00' W	125 m	26.0 km
Totals				8250 m	301.20 km