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MRV *Scotia*

Survey 0513S

PROGRAMME

10-24 May 2013

Loading: Aberdeen, 08 May 2013
Unloading: Aberdeen, 24 May 2013

In setting the survey programme and specific objectives, etc the Scientist-in-Charge needs to be aware of the restrictions on working hours and the need to build in adequate rest days and rest breaks as set out in Marine Scotland's Working Time Policy (Notice 34/03). In addition, the Scientist-in-Charge must formally review the risk assessments for the survey with staff on-board before work is commenced.

In the interest of efficient data management it is now mandatory to return the survey report, to I Gibb and the Survey Summary Report (old ROSCOP form) to M Geldart, within four weeks of a survey ending. In the case of the Survey Summary Report a nil return is required, if appropriate

Personnel

G Slesser (SIC)
A Gallego
M Geldart
D Lee
R O'Hara Murray
A Taylor
J Wright

Out-turn days per project: 15 days: ST03P

Gear

Sea-Bird CTDs, ADCP and current meter instrumentation, water level recorders, temperature mini-loggers, mooring equipment, recovery trawl.

Objectives

1. Perform hydrographic surveys along the JONSIS long term monitoring section in the northern North Sea.

2. Perform hydrographic surveys along the long term monitoring Faroe-Shetland Channel sections.

3. Take samples for long term storage at Fair Isle – Munken stations FIM-01 and FIM-06.

4. Recover, download and refurbish three ADCP moorings in the Faroe-Shetland Channel.

5. Redeploy one ADCP mooring outside the eastern edge of the Foinaven development area.

6. Deploy four ADCP moorings at new locations in the Faroe-Shetland Channel.

7. Deploy two ADCP moorings and one AWAC mooring at the entrances of Loch Seaforth, East Loch Tarbert and offshore of these lochs for 24 hour deployment periods.

8. Carry out vessel mount ADCP and CTD surveys in the Loch Seaforth, East Loch Tarbert and offshore areas.

9. Deploy the AWAC mooring and three current meter moorings in the Fair Isle Channel.

Procedure

On sailing from Aberdeen *Scotia* will make passage to the start of the JONSIS long term monitoring (LTM) section to commence sampling with the CTD and carousel water sampler. On route test deployments of the CTD and carousel will take place. Following completion of the JONSIS section *Scotia* will proceed to the Faroe-Shetland Channel to commence sampling the Nolso - Flugga LTM section followed by sampling the Fair Isle - Munken LTM section using the CTD and carousel water sampler. On completion of the Fair Isle – Munken section the ADCP moorings NWSD, NWSE and NWSG will be recovered, data downloaded and refurbished. One of the ADCP moorings will then be redeployed outside of the eastern edge of the Foinaven Development Area. After deployment of this mooring *Scotia* will proceed to new ADCP mooring positions on the Cape Wrath – Faroe section where three of four ADCP moorings will be deployed. On completion passage will be made to the northern end of the Cape Wrath – Faroe section to commence carrying out a CTD survey. When this survey has been completed Scotia will make passage to the Minch where ADCP and AWAC mooring deployments will be made at the entrance to Loch Seaforth, East Loch Tarbert and at an offshore site off these lochs for a twenty-four period. During these deployments vessel mount ADCP and CTD surveys will take place. On completion of these surveys and recovery of the moorings the trawl resistant ADCP mooring will be deployed on the remaining position on the Cape Wrath – Faroe section in the Faroe-Shetland Channel. Passage will then made to the Fair Isle Channel where three single current meter moorings and the AWAC mooring will be deployed for high frequency radar surface current measurement trials.

Mooring positions

Faroe-Shetland Channel – recover

60° 26.97'N 004° 22.35'W (NWSD)
60° 16.62'N 004° 19.47'W (NWSE)
60° 30.54'N 004° 34.06'W (NWSG)

Faroe-Shetland Channel – deploy

60° 13.44'N 003° 28.44'W
60° 04.02'N 006° 10.02'W
59° 54.30'N 006° 10.02'W
59° 46.86'N 006° 10.02'W
59° 37.26'N 006° 10.02'W

Minch – deploy and recover

57° 54.53'N 006° 39.72'W
57° 51.19'N 006° 43.40'W
57° 49.12'N 006° 33.58'W

Fair Isle Channel – deploy

59° 54.54'N 003° 01.68'W
59° 45.66'N 002° 50.16'W
59° 16.98'N 001° 29.22'W
59° 16.98'N 000° 42.18'W

The thermosalinograph will be run throughout the survey.

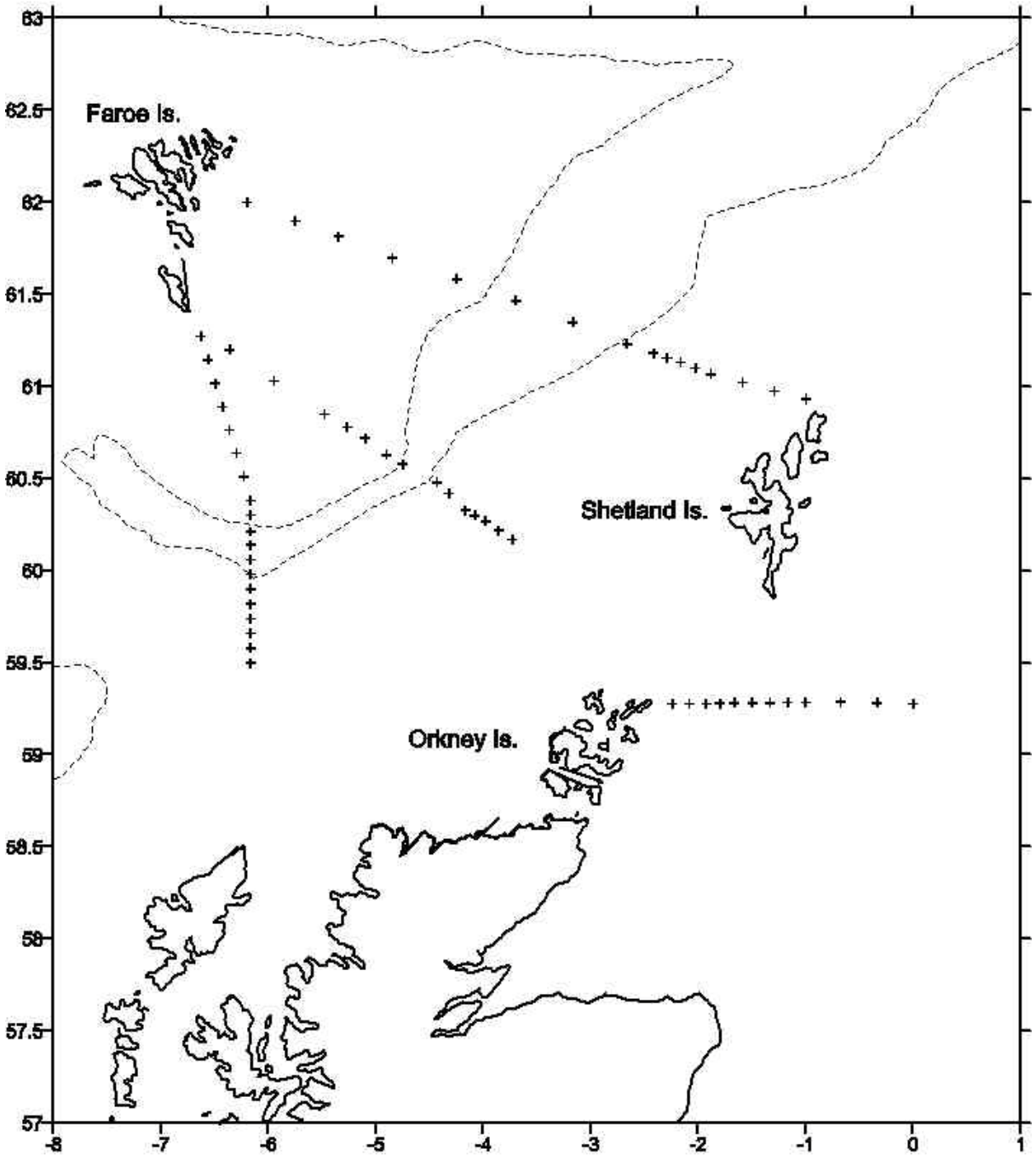
(NOTE: The survey will take *Scotia* into the Foinaven Development Area. This is now standard practice, and normal on-site communications will be established with the Foinaven co-ordinating officer).

Normal contacts will be maintained with the laboratory.

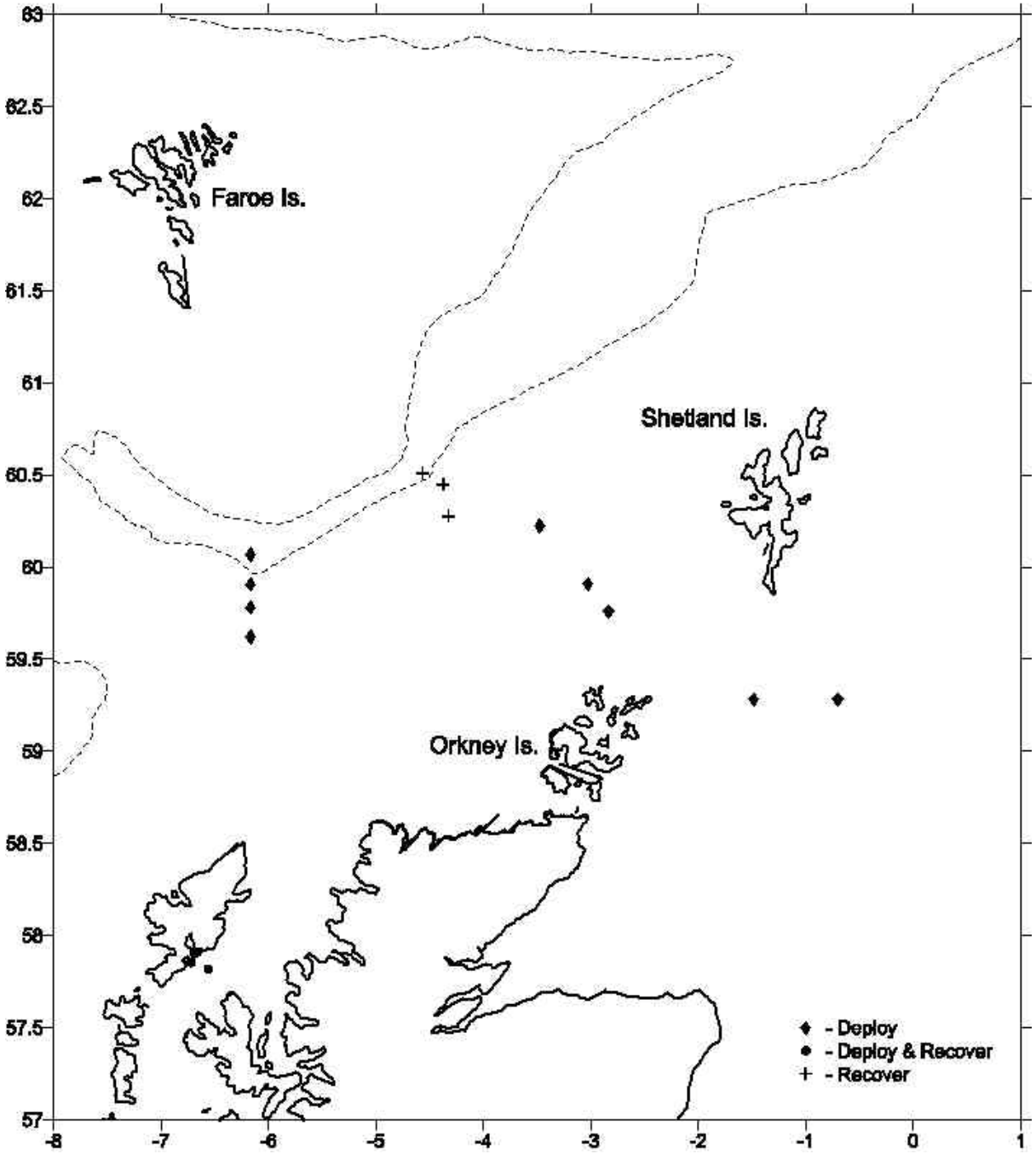
Submitted:
G Slesser
29 April 2013

Approved:
I Gibb
02 May 2013

CTD Station Positions



Mooring Deployment and Recovery Positions



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° 5.00' 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° 0.00' 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° 0.00' 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	*FIM-03*	*60° 20.25' N*	*04° 09.00' W*	*390 m*	*6.3 km*
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	7,585.00	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

Faroe – Cape Wrath

	Name	Latitude	Longitude	Depth	Spacing
01	FWZ-19	59° 30.00' N	06° 10.00' W	152 m	
02	FWZ-18	59° 34.82' N	06° 10.00' W	196 m	4.81 nm
03	FWZ-17	59° 39.64' N	06° 10.00' W	220 m	4.81 nm
04	FWZ-16	59° 44.45' N	06° 10.00' W	277 m	4.80 nm
05	FWZ-15	59° 49.27' N	06° 10.00' W	457 m	4.81nm
06	FWZ-14	59° 54.09' N	06° 10.00' W	600 m	4.81 nm
07	FWZ-13	59° 58.91' N	06° 10.00' W	970 m	4.81 nm
08	FWZ-12	60° 03.73' N	06° 10.00' W	1082 m	4.81 nm
09	FWZ-11	60° 08.54' N	06° 10.00' W	1195 m	4.80 nm
10	FWZ-10	60° 12.76' N	06° 10.00' W	1212 m	4.21 nm
11	FWZ-09	60° 18.18' N	06° 10.00' W	616 m	5.41 nm
12	FWZ-08	60° 23.00' N	06° 10.00' W	423 m	4.81 nm
13	FWZ-07	60° 30.63’N	06° 13.88’W	302 m	7.86 nm
14	FWZ-06	60° 38.26’N	06° 17.77’W	275 m	7.86 nm
15	FWZ-05	60° 45.89’N	06° 21.69’W	184 m	7.86 nm
16	FWZ-04	60° 53.52’N	06° 25.65’W	138 m	7.86 nm
17	FWZ-03	61° 01.14’N	06° 29.63’W	142 m	7.85 nm
18	FWZ-02	61° 08.76’N	06° 33.65’W	125 m	7.85 nm
19	FWZ-01	61° 16.38' N	06° 37.70' W	100 m	7.86 nm
			Totals	m	107.12 nm