

NATURAL ENVIRONMENT RESEARCH COUNCIL

APPLICATION FOR CONSENT TO CONDUCT MARINE SCIENTIFIC RESEARCH

Date: 5 May 2011

| SHIP NAME | CRUISE NUMBER | DATES OF CRUISE | Country applied for | PORT CALLS | DATES |
|--------------------|---------------|----------------------|---------------------|------------|-------|
| Talisker Seaglider | Mission 2 | 1 Jun - 31 July 2011 | Iceland | none | None |

| List Scientific Work by Function e.g.: Magnetometry Gravity, Diving, Seismic, Bathymetry, Seabed Sampling, Trawling, Echo Sounding, Water Sampling U/W T.V.: Moored and Towed instrument | Water Column Incl. Sediment Sampling on the Seabed | Fisheries Research within Fishing Limits | Research Concerning the Natural Resources of the Continental Shelf or its Physical Characteristics | Distance from Coast | |
|---|--|--|--|----------------------|------------------|
| | | | | Between Within 12 NM | 12 - 200 NM |
| | | | | ** UP TO COAST ** | |
| Profiling to 1000 with an autonomous glider | Temperature / salinity / dissolved oxygen / backscatter / fluorescence | none | none | outside 12 mn | up to shelf edge |

1. General information

1.1 Cruise name and/or number: Mission 2

1.2 Sponsoring institution:

Name: Scottish Association for Marine Science

Address: Scottish Marine Institute, OBAN, PA37 1QA

1.3 Scientist in charge of the project:

Name: Prof Toby Sherwin

Address: SAMS, Scottish Association for Marine Science

Telephone: 01631 559336

Telefax: 01631 559000

1.4 Scientist(s) from Iceland informed of the planning of the project

Name(s): Dr Hedinn Valdimarsson

Address: MRI, Skulagata 4, 121 Reykjavik, Iceland

Submitting officer:

Name: Mr. Robin Plumley

Telephone: 02380 596157

Telefax: 02380 635130

2. Description of project (Attach additional pages as necessary)

This is a water column survey (down to 1000 m) being undertaken by a marine glider, Talisker, which is an addition to the annual ship borne cruises undertaken by NERC to monitor the conditions of the north Atlantic between Scotland and Iceland. In situ measurements are made every 6 hours to enable the international oceanographic community assess changes in the state of the water properties over a long period of time. The glider relays data back to the receiving station at SAMS in real time. In UK waters

NATURAL ENVIRONMENT RESEARCH COUNCIL

these data are then immediately relayed on public access data bases for immediate inclusion in forecast models. Since the data have no strategic importance we would also like this to happen whilst in Icelandic waters.

Talisker will cross the Rockall Hatton Plateau and then approach Iceland from the south along 20 degrees W. Having reached the Icelandic Shelf edge she will progress eastward towards Faroese waters before entering UK waters in the Faroe-Shetland Channel. Her speed through the water is about 0.25 m/s so progress is slow and dependent on local conditions. Her progress can be followed from <http://velocity.sams.ac.uk/glider/>

2.1 Nature of objectives of the project:

To monitor the oceanographic conditions of the northern North Atlantic.

2.2 Relevant previous or future research cruises:

RRS Discovery cruise D365 taking place in May 2011 involves related work. Recent previous *Discovery* cruises are D351 (May 2010), D340 (June 2009). There have not been any previous glider missions in Icelandic waters.

2.3 Previously published research data relating to the project:

No papers are available from glider missions at this time.

3. Methods and means to be used

3.1 Particulars of vessel

Name: Talisker
Nationality: British
Owner: Scottish Association for Marine Science
Operator: Scottish Association for Marine Science
Overall Length: 2 m
Maximum draught: 40 cm
Net tonnage: **Gross tonnage:** 52 kg (dry)
Propulsion: Battery powered
Cruising Speed: 0.25 m/s **Maximum speed:** N/A
Call sign: none
Method of capability of communication (including telex, frequencies): digital Iridium
Inmarsat Voice: **Fax:** **Telex:**
Name of Master: not applicable
Number of Crew: none
Number of Scientists on board: none

3.2 Aircraft or other craft to be used in the project: none

3.3 Particulars of methods and scientific instruments

| Types of samples and data | Methods to be used | Instruments to be used |
|---------------------------|--------------------|------------------------|
| no samples are collected | | |

3.4 Indicate whether harmful substances will be used: No

3.5 Indicate whether drilling will be carried out: No

3.6 Indicate whether explosives will be used: No

4. Installations and equipment

4.1 Details of installations and equipment (dates of laying, servicing, recovery; exact locations and depth):

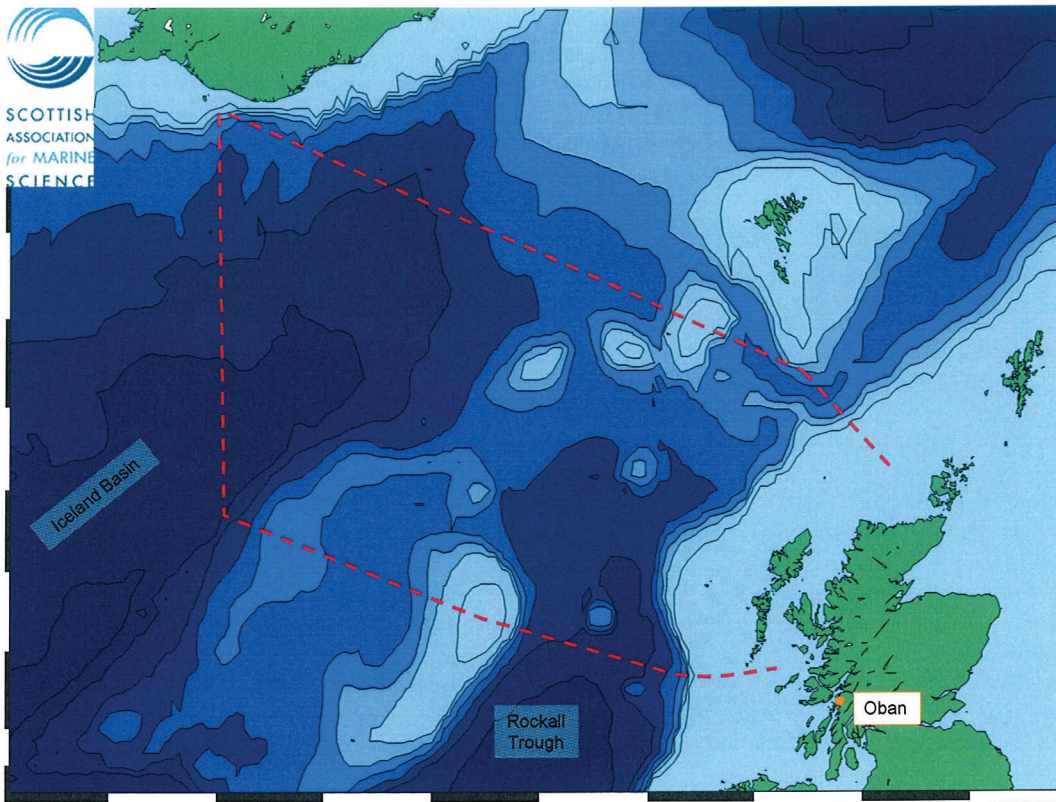
No equipment is deployed

5. Geographical areas

5.1 Indicate geographical areas in which the project is to be conducted (with reference in latitude and longitude):

56 N to 63.5N, 5 W to 20 W.

5.2 Attach chart (s) at an appropriate scale showing the geographical areas of the intended work and, as far as practicable, the positions of intended stations, the tracks of survey lines, and the locations of installations and equipment



Intended track for Talisker Mission 2.

6. Dates

6.1 Expected dates of first entry into and final departure from research area of the research vessel:

Entry: 1st June 2011
Departure: 31st July 2011

6.2 Indicate if multiple entry is expected: No

NATURAL ENVIRONMENT RESEARCH COUNCIL

7. Port calls

- 7.1 Dates and names of intended ports of call : None
- 7.2 Any special logistical requirements at ports of call: N/A
- 7.3 Name/Address/Telephone of shipping agent (if available): N/A

8. Participation

- 8.1 Extent to which each coastal state will be enabled to participate or to be represented in the research project:

All data will be made available to MRI as required, and in real time if requested.

- 8.2 Proposed dates and ports for embarkation/disembarkation:

Embarkation: Oban - 2 May 2011
Disembarkation: Orkney - 30 Nov 2011

9. Access to data, samples and research results

- 9.1 Expected dates of submission of preliminary reports which should include the expected dates of submission of the final results:

Six months after completion of Cruise

- 9.2 Proposed means for access to data and samples:

Via our website and also via FTP to the British Oceanographic Data Centre and thereon to the WMO's Global Telecommunication System for global dissemination. Data will also be sent by ftp to MRI if requested

- 9.3 Proposed means to provide MRI assessment of data, samples and research results or provide assistance in their assessment or interpretation:

We have invited Dr Valdimarsson to become a Co-PI of the project.

- 9.4 Proposed means of making research results internationally available:

The data will be reported to the ICES working group on ocean hydrography and used in future scientific papers.



On behalf of the Principal Scientist)

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