

**Application for Consent to Conduct Marine Scientific Research  
in Areas Under National Jurisdiction of**

Oman

**Date: 12/05/2008**

**1. General Information**

1.1 Cruise name and/or #:	<b>CLIVAR I7N; KNOX Leg</b>
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1.2 Sponsoring institution:	
Name:	<b>Scripps Institution of Oceanography</b>
Address:	<b>University of California, San Diego La Jolla, CA 92093-0210</b>
Name of Director:	<b>Dr. Tony Haymet</b>

1.3 Scientist in charge of the project (include CV and passport photo):	
Name:	<b>James Swift (see attached CV: JHS CV for I5 I7N AUG2008.pdf)</b>
Address:	<b>Scripps Institution of Oceanography 9500 Gilman Drive La Jolla CA 92093-0214 USA</b>
Telephone:	<b>858-534-3387</b>
Fax:	<b>858-534-7383</b>
Email:	<a href="mailto:jswift@ucsd.edu">jswift@ucsd.edu</a>

1.4 Scientist(s) from coastal state involved in the planning of the project:	
Name(s):	
Address:	

1.5 Submitting officer:	
Name and address:	<b>Rose M. Dufour/Elizabeth Brenner Scripps Institution of Oceanography University of California, San Diego La Jolla, California 92093-0210</b>
Nationality:	<b>USA</b>
Telephone:	<b>(858) 534-2841</b>
Fax:	<b>(858) 822-5811</b>
Email:	<b>Shipsked@ucsd.edu</b>

**2. Description of Project (Attach additional pages as necessary)**

2.1 Nature and objectives of the project:	<b>See attachment ((I5 I7N overview.doc) most of the work will take place in international waters.</b>
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2.2 Relevant previous or future research cruises:	<b>See attachment</b>
<b>Also see:</b>	<b><a href="http://cchdo.ucsd.edu/data_access?ExpoCode=316N145_10">http://cchdo.ucsd.edu/data_access?ExpoCode=316N145_10</a></b>

2.3 Previously published research data relating to the project:	<b>See attachment</b>
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### 3. Methods and Means to be Used

3.1 Particulars of vessel:	
Name:	<i>R/V Roger Revelle</i>
Nationality (Flag state):	<b>USA Flag</b>
Owner:	<b>U.S. Navy</b>
Operator:	<b>University of California, San Diego, Scripps Oceanography</b>
Overall length (meters):	<b>84 m. [275']</b>
Maximum draught (meters):	<b>17'</b>
Displacement/Gross tonnage:	<b>3,180 long tons</b>
Propulsion:	<b>Tow 3000 hp Propulsion General Electric Bow Thruster: 1180 hp Azimuthing jet Tyupe Elliot Gill Model 50T 35 Propulsors: Two 3000 hp Z-Drives Lips Type FS 2500-450/1510BO</b>
Cruising & Maximum speed:	<b>12 knots</b>
Call sign:	<b>KAOU</b>
Method and capability of communication (including emergency frequencies):	<b>Email, master@rv-revelle.ucsd.edu Inmarsat-B, Telephone, Indian, 011-873-336780030 Alternate, 011-873-336780020 Fax, Primary, 011-873-336780031 Alternate, 011-873-336780021 Telex, Primary, 336780033 (AnsBk=KAOU) Alternate, 336780022 (AnsBk=KAOU) Inmarsat-C, 436780010 Radio, Vessels guard standard GMDSS frequencies for calling, distress and dissemination of marine safety information. MMSI #, 367800100 SELCAL #, 71410 Telex, Primary, 336780033 (AnsBk=KAOU) Alternate, 336780022 (AnsBk=KAOU) Inmarsat-C, 436780010 Radio, Vessels guard standard GMDSS frequencies for calling, distress and dissemination of marine safety information. MMSI #, 367800100 SELCAL #, 71410</b>
Name of master:	<b>Thomas Desjardins</b>
Number of crew:	<b>22</b>
Number of scientists on board:	<b>No more than 37</b>

3.2 Aircraft or other craft to be used in the project:
<b>None</b>

3.3 Particulars of methods and scientific instruments		
Types of samples and data	Methods to be used	Instruments to be used
<b>Data available within ca. 2-12 months of cruise end: Temperature, salinity, dissolved</b>	<b>Underway measurements from continuously pumped surface seawater and on-board sensors;</b>	<b>Thermosalinograph, acoustic doppler sonars ADCP RDI Narrowband and RDI</b>

<p>oxygen, dissolved nutrients, currents, dissolved CFCs, dissolved inorganic carbon, alkalinity, pH, dissolved trace metals, partial pressure of CO<sub>2</sub>, meteorological measurements if available.  <b>Data available within ca. 1-2 years:</b>  dissolved organic matter, total dissolved nitrogen.  <b>Data available within 3-5 years:</b>  dissolved helium, dissolved tritium, dissolved radiocarbon.</p>	<p>vertical profiles at station stops with CTD and rosette</p>	<p>Broadband 150 kHz, CTD rosette with 24-36 10-liter Niskin-type bottles and SeaBird 911+ CTD</p>
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3.4 Indicate whether harmful substances will be used:  
**None**

3.5 Indicate whether drilling will be carried out:  
**None**

3.6 Indicate whether explosives will be used:  
**None**

4. Installations and Equipment

Details of installations and equipment (dates of laying, servicing, recovery; exact locations and depth):  
**None**

## 5. Geographical Areas

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

**(See attached list of station for the complete cruise track). Please note the work is planned outside the 12nm Territorial Sea of Oman.**

**The following stations are in Oman's EEZ**

**19.42 N 58.33 E**

**19.25 N 58.56 E**

**19.09 N 58.79 E**

**18.93 N 59.02 E**

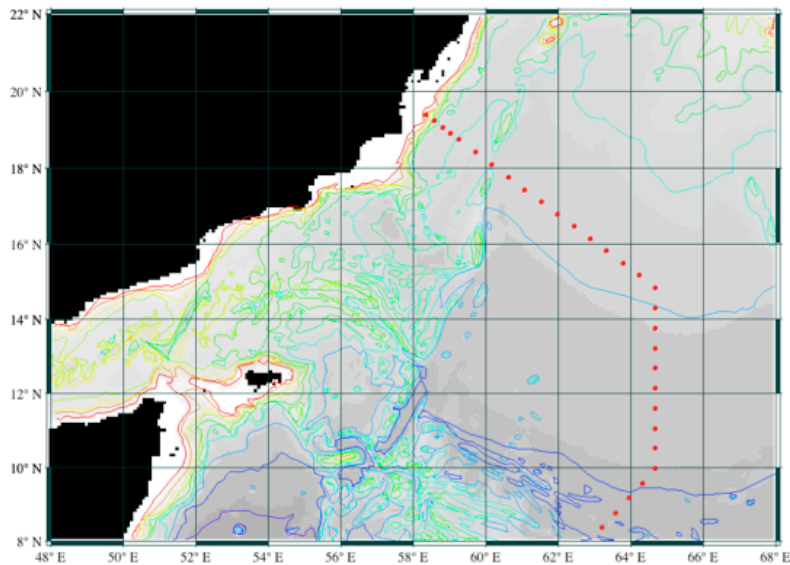
**18.76 N 59.24 E**

**18.44 N 59.70 E**

**18.11 N 60.15 E**

**17.78 N 60.61 E**

5.2 Attach chart(s) at an appropriate scale (1 page, high-resolution) 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.



**R/V Roger Revelle 2009 "17N" CO2/CLIVAR Cruise**

**Detail of planned stations near north end of 17N**

(stations in EEZs will be along track shown; exact positions may vary slightly from those shown)

## 6. Dates

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

**01 September 2009 Mutrah ((Port Sultan Qaboos)- arrive on first Omani station late on 02 September; departure approximately 08 September 2009**

6.2 Indicated if multiple entry is expected:

**Multiple entry not expected.**

7. Port Calls

7.1 Dates and names of intended ports of call:

**Mutrah ((Port Sultan Qaboos) 28 August – September 01 2009**

7.2 Any special logistical requirements at ports of call:

**Normal; fueling, stores, and personnel exchange of science party and crew.**

7.3 Name/Address/Telephone of shipping agent (if available):

**GULF AGENCY COMPANY (OMAN) L.L.C.**

**[http://www.gacworld.com/templates/gac\\_ContactInfoOffice.aspx?id=40013&officeid=40908](http://www.gacworld.com/templates/gac_ContactInfoOffice.aspx?id=40013&officeid=40908)**

8. Participation:

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

8.2 Proposed dates and ports for embarkation/disembarkation:

**R/V *Revelle* will be in Mutrah ((Port Sultan Qaboos) 28 August – September 01 2009.**

9. Access to data, samples and research results

9.1 Expected dates of submission to coastal state of preliminary reports, which should include the expected dates of submission of the final results:

No more than 30 days from the end date of the cruise (currently 28 October 2009).

9.2 Proposed means for access by coastal state to data and samples:

**Preliminary data will be made available by CD and/or DVD to SIO Ship Scheduling within 1-5 months of the cruise completion.**

9.3 Proposed means to provide coastal state with assessment of data, samples and research results or provide assistance in their assessment or interpretation:

**See 9.2**

9.4 Proposed means of making results internationally available:

**See 9.2**

(Revised June 5, 2002)