UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NOAA Marine and Aviation Operations
Marine Operations Center
439 W. York Street
Norfolk, VA 23510-1114

MEMORANDUM FOR: Commander Robert Kamphaus, NOAA
Commanding Officer, NOAA Ship *Okeanos Explorer*

FROM: for/ Captain David A. Score, NOAA
Commanding Officer, NOAA Marine Operations Center-Atlantic

SUBJECT: Project Instruction for EX-12-03
Florida Escarpment & Straits Exploration

Attached is the final Project Instruction for EX-12-03, Florida Escarpment and Straits Exploration, which is scheduled aboard NOAA Ship *Okeanos Explorer* during the period of 5 May - 23 May 2012. Acknowledge receipt of these instructions via e-mail to OpsMgr.MOA@noaa.gov at Marine Operations Center-Atlantic.

Attachment

cc:
MOA1

NOAA OFFICE OF OCEAN EXPLORATION AND RESEARCH

Final Project Instructions

Date Submitted:	April 2, 2012
Platform:	NOAA Ship *Okeanos Explorer*
Cruise Number:	EX-12-03
Project Title:	Florida Escarpment & Straits Exploration
Cruise Dates:	May 5 – 23, 3012

Prepared by: Mashkoor Malik, Physical Scientist
Office of Ocean Exploration & Research

Approved by: _____ Dated: 4/2/2012
Craig W. Russell, NOAA
Program Manager
Office of Ocean Exploration & Research

Approved by: _____ Dated: 4/11/2012
for
CAPT David Score, NOAA
Commanding Officer
Marine Operations Center – Atlantic

I. OVERVIEW

A. Cruise Period

This document contains Project Instructions for EX-12-03 of NOAA Ship *Okeanos Explorer's* (EX) exploration of the Gulf of Mexico and southwest Atlantic Ocean. EX-12-03 operations will commence on May 5, 2012 from Galveston, TX and conclude on May 23, 2012 in Norfolk, VA.

B. Operating Area

The operating area is the northern and eastern Gulf of Mexico along the Florida Escarpment, in the Florida Strait, and the southwestern Atlantic Ocean as far north as Norfolk, VA. 24-hour mapping operations will be conducted during transit in addition to focused mapping exploration survey areas. Mapping operations will generally be concentrated in water depths greater than 500 m. All operations including transit will be conducted entirely within the 200nm exclusive economic zone (EEZ) maritime boundary of the United States of America. See Figure 1.

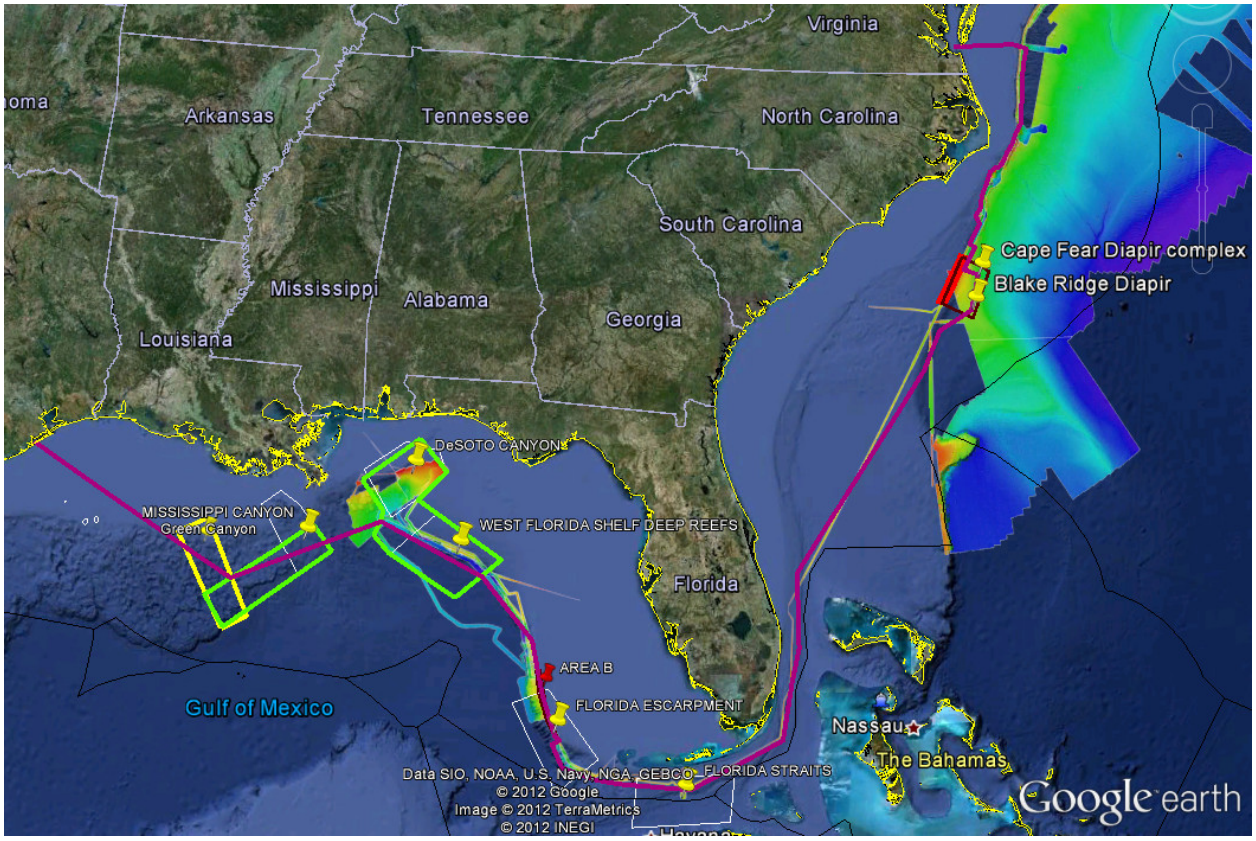

Figure 1: Google Earth map showing overall EX-12-03 cruise track in purple. Yellow and green boxes are general priority areas for 2012 Gulf of Mexico operations. White boxes in Gulf of Mexico are targets of interest resulting from the 2011 OER Atlantic Basin Workshop. International maritime boundaries are shown as black lines. US Law of Sea project multibeam data shown on east coast for reference.

Operations in the Gulf of Mexico will largely focus on expanding previous mapping coverage established during cruises EX-11-05, EX-11-06 and EX-12-02 Legs 1, 2, and 3. Holidays from previous *Okeanos Explorer* surveys will also be filled as necessary. Actual mapping areas will be determined based on coverage obtained during previous cruises. These cruises include the development of baseline mapping data over Green Canyon, Mississippi Canyon, Desoto Canyon, and the West Florida Shelf Deep Reefs (Figure 2).

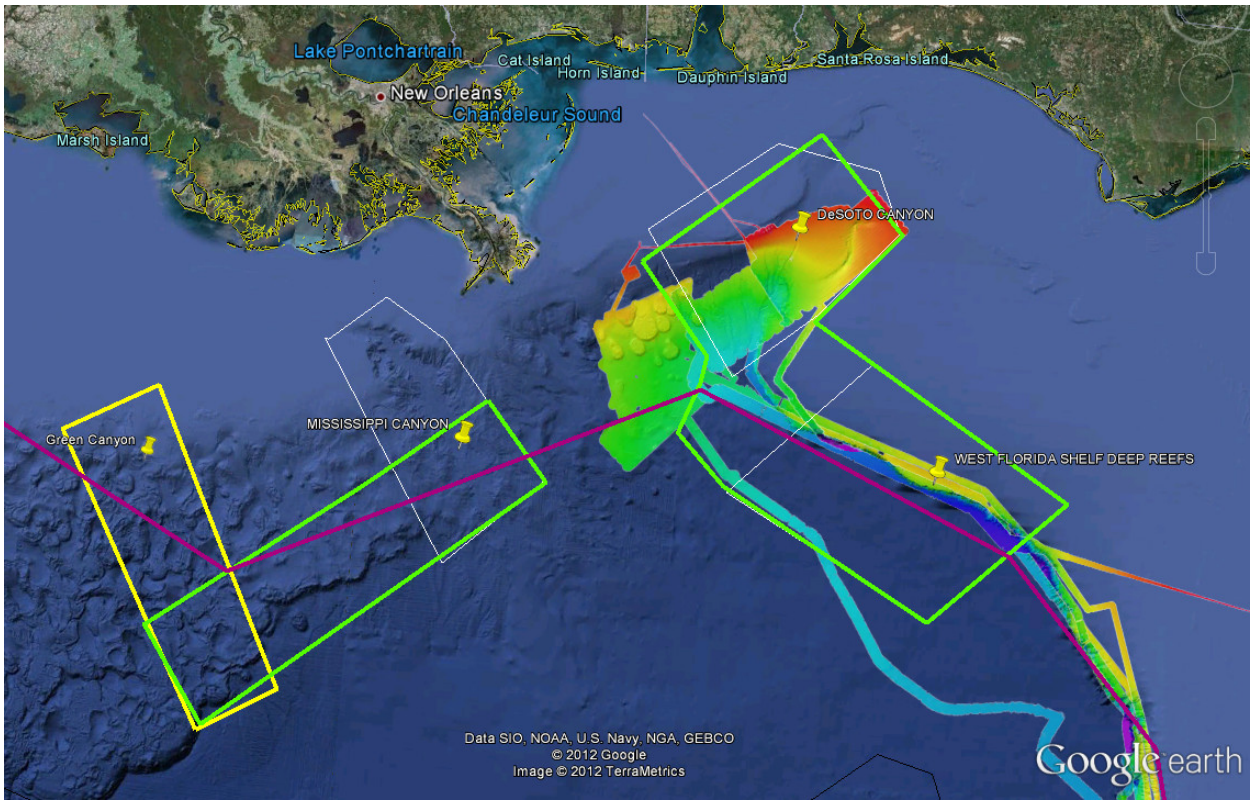

Figure 2. Google Earth map showing priority areas in Northern Gulf of Mexico. Okeanos Explorer EM 302 multibeam coverage obtained during EX-11-05, EX-11-06, and EX-12-02 Leg 1 shown for reference. Additional coverage forthcoming from EX-12-02 Legs 2 and 3. Actual mapping exploration areas will be determined based on data obtained during EX-12-02 cruises.

Focused mapping operations will occur in "Area B" (Figure 3) along the Florida Escarpment. Additional transit mapping will occur in the OEAWG boxes on the Florida Escarpment (Figure 3). EX-12-03 data will complement existing data collected in these areas during EX-11-05, EX-11-06, and EX-12-02.

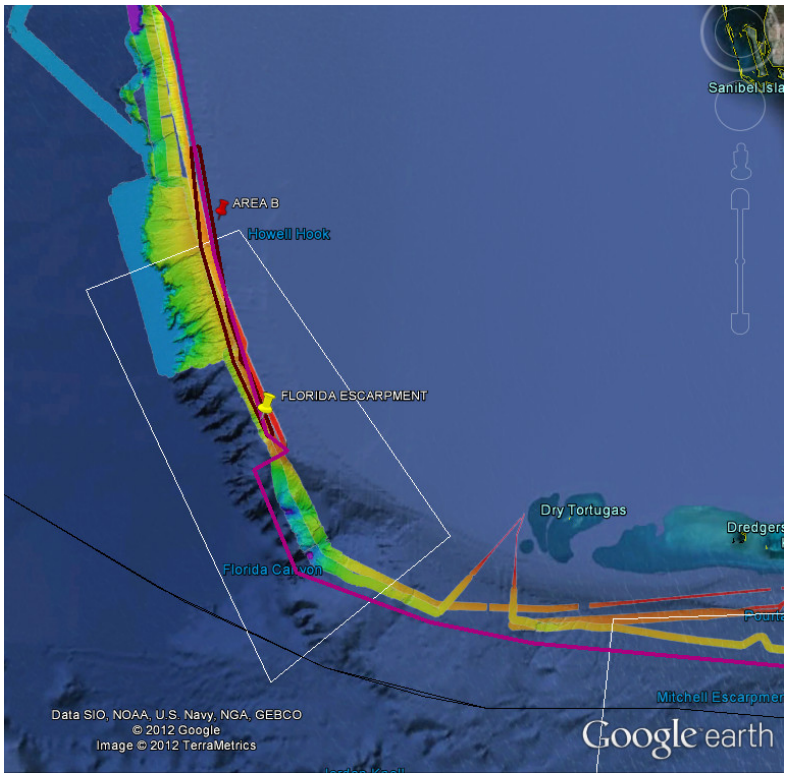

Figure 3: Google Earth map showing focused mapping exploration "Area B" in maroon. Okeanos Explorer EM 302 multibeam data collected during EX-1-105, EX-11-06, and EX-12-02 Leg 1 is shown, minimal areas of "Area B" remain to be mapped during EX-12-03. International maritime boundaries are shown as black lines. General cruise track shown in purple.

Operations along the U.S. Atlantic Continental Shelf Break will largely focus on expanding previous mapping coverage established during cruises EX-11-06 and EX-12-01. These data will also benefit management work conducted by Bureau of Ocean Energy and Management (BOEM) and the NOAA Office of National Marine Sanctuaries (NMS).

Focused water column mapping exploration will occur in the vicinity of the Blake Ridge Diapir and Cape Fear Diapir Complex. Bathymetry mapping will focus on delineating the 1000 meter isobaths. This data collection will support preliminary planning efforts for EX-12-05 Leg 1 (Figure 4).

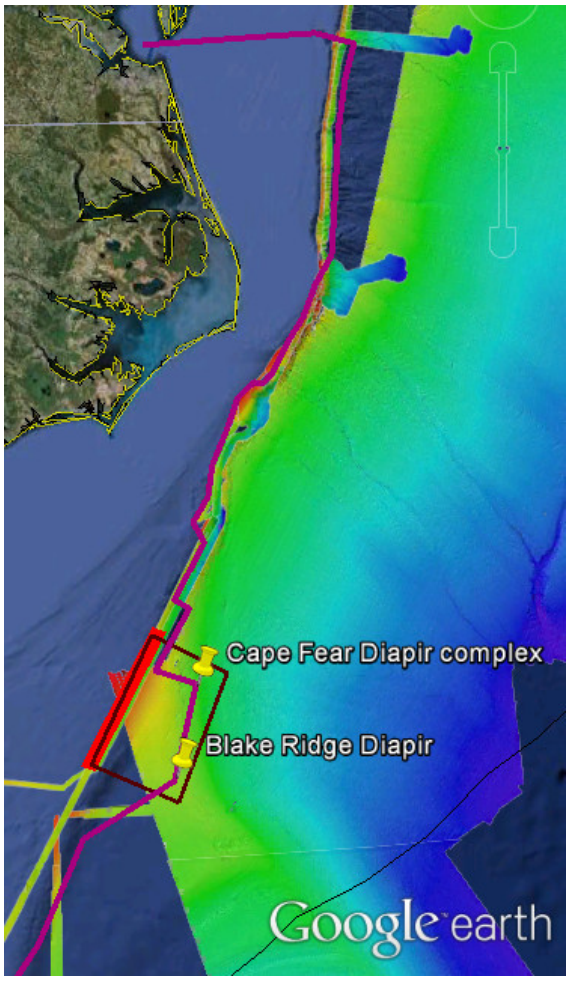

Figure 4: Google Earth map showing focused water column mapping exploration area (maroon rectangle) near Blake Ridge Diapir. The thick red line indicates approximate location of 1000 meter isobath to be delineated. US Law of Sea project multibeam data and EX-11-06 and EX-12-01 multibeam shown on east coast for reference. General cruise track shown in purple.

Key Locations Along Transit Line and Exploration Areas			
Notes	**Longitude**	**Latitude**	**Remarks**
Transit out of Galveston, TX along EX-12-02 L3 coverage to Florida escarpment.			Will be available at the end of EX-12-02 Leg 3 ~ 042212
Florida Escarpment mapping (Area B, Figure 3)	84º 40.0' W	26º 00.0' N	
Transit through Florida Strait			
Blake Ridge Diapir (BRD) and Cape Fear Diapir Complex (CFDC) water column exploration area	76° 11.467'W 75° 54.961'W	32° 29.623'N 32° 58.542'N	
Norfolk, VA sea buoy			

Table 1: Exploration transit and focused mapping coordinates.

C. Summary of Objectives

The overall objective is data collection during a safe transit from Galveston, TX to Norfolk, VA. Continuous data collection (24 hours per day) will occur for the following data types: EM 302 multibeam bathymetry, bottom backscatter, and water column backscatter, and EK 60 water column. Knudsen sub-bottom profiler data collection is planned to occur from 0800-2000 daily.

A relatively direct route from Galveston, TX to Norfolk, VA is approximately 1836 NM (3400 km), a time of approximately 9 days at normal transit speeds. The remaining ~10 days of the cruise will be dedicated to focused mapping exploration operations. These operations will include:

- The filling of any holidays in mapping coverage from EX-11-05, EX-11-06, and EX-12-02 Legs 1, 2, and 3; potentially focusing on areas that were highlighted as areas of interest from the 2011 Atlantic Basin Workshop but were not feasible to map during ROV cruises due to timing challenges
- Continue mapping coverage along Florida Escarpment
    - Transit
    - Mapping Area B along Florida Escarpment (24 hrs)
- Additional focused mapping operations in Florida escarpment and Florida Strait priority areas
- Water column and sub-bottom exploration mapping operations in the vicinity of Blake Ridge Diapir in preparation for EX-12-05 Leg 1;
- Augmenting EX-11-06 and EX-12-01 mapping data coverage along the Canyons Transit Line

1. Science

A. Continue to identify and explore the diversity of benthic habitats in the region (e.g. seeps, deep corals, canyons) by building on mapping coverage obtained during EX-11-05, EX-11-06, and EX-12-02 Legs 1, 2, and 3;
B. Possibly locate and characterize submerged cultural resources (SCR), e.g. shipwrecks (data will be used to assess their eligibility for the National Register of Historic Places) within EX-12-03 operating area;
C. Utilize sub-bottom sonar to explore diapirs in the vicinity of Blake Ridge;
D. Conduct preliminary water column mapping (24-48 hrs) of Blake Ridge diapir system to test the hypothesis that there may be seepage and chemosynthetic communities along the 1000 m isobaths at the boundary of the methane hydrate stability zone using mapping and photo ground- truthing of selected targets.

2. Telepresence (VSAT 5 mb/sec ship to shore; T1 shore to ship)
   A. Test and refine ship-to-shore communications and operations procedures
   B. Test and refine operating procedures and products; and
   C. Engage a broad spectrum of the scientific community and public in telepresence-based exploration, including during the cruise planning process; and
   D. Expand use of the 'Doctors-on-Call' model

3. ECCs
   A. Train engaged scientists on how to use online collaboration tools and daily mapping products and refine SOPSs
   B. Ongoing system familiarization and training

4. Mapping Operations
   A. Acquire water-column data with EK 60 and EM 302
   B. Acquire sub-bottom data as necessary and supported by staffing/operational paradigm
   C. Conduct mapping operations during transit
   D. Conduct follow up mapping exploration of EX-12-02 targets
   E. Conduct preliminary mapping exploration of EX-12-05 Leg 1 targets
   F. Conduct training of new mapping interns and watch standers
   G. Continue testing of Geotiff export alignment
   H. Test water column and sub-bottom data processing SOPs

5. CTD operations
   A. Conduct CTD/rosette casts
   B. Collection of water samples is being considered pending appropriate staff availability.

6. XBT operations
   A. During mapping operations, XBT casts will be collected at regular intervals of 2-4 hours or less/more often as data quality requires.

7. Data Management

A. Provide a foundation of publicly accessible data and information products to spur further exploration, research, and management activities, as detailed in the 2012 post-cruise product list.
B. Provide daily cumulative multibeam products to shore for operational decision making purposes, as detailed in the 2012 field products list.
C. Test data pipeline for daily transfer of raw sonar data to shore.
D. Test data pipeline of operationally required sub-bottom and EK 60 products to shore.

8. Outreach / Media
   A. Tentative port events in Galveston, TX and Norfolk, VA are being planned. Events in Norfolk, VA may include ship's tours by several local NOAA personnel. Specific details of these port events will be provided to the ship by May 3, 2012.

D. Participating Institutions

National Oceanic and Atmospheric Administration (NOAA) - Office of Ocean Exploration and Research (OER) - 1315 East-West Hwy, Silver Spring, MD 20910 USA

University of New Hampshire (UNH) - Center for Coastal and Ocean Mapping (CCOM) – Jere A. Chase Ocean Engineering Lab, 24 Colovos Road, Durham, NH 03824 USA

University of Rhode Island, Graduate School of Oceanography, Inner Space Center, Narragansett, Rhode Island, 02882

University Corporation for Atmospheric Research (UCAR), Joint Office for Science Support (JOSS) PO Box 3000 Boulder, CO 80307

Bureau of Ocean Energy Management (BOEM) – 1849 C Street, NW, Washington, DC 20240

Duke University Marine Laboratory, Division of Marine Science and Conservation, Nicholas School of the Environment, 135 Marine Lab Road, Beaufort NC 28516

US Geological Survey, National Energy Technology Laboratory / National Research Council, Coastal and Marine Science Center, Woods Hole, MA 02543

University of North Carolina at Wilmington, Center for Marine Science, 601 S. College Road, Wilmington, NC 28403-5928

E. Personnel (Science Party)

	NAME	AFFILIATION	ROLE	M/F	NATIONALITY
1	Mashkoor Malik	OER	Expedition Coordinator Mapping Team Lead	M	US Citizen
2	Ashton Flinders	UCAR	Mapping Watch Lead	M	US Citizen
3	TBD		Mapping Watch Lead		US Citizen
4	Daniel Whitesell	UCAR	Mapping Watchstander	M	US Citizen
5	Adrienne George	UCAR	Mapping Watchstander	F	US Citizen
6	Erin Hunter	UCAR	Mapping Watchstander	M	US Citizen
7	Charles Bendig	UCAR	Mapping Watchstander	M	US Citizen

Table 2: Full list of the science party and their affiliation

Shore-side Participants (Location and duration of participation will vary):

NAME	INSTITUTION	ROLE	REGION OF INTEREST	LEVEL PARTICIPATION
Cindy VanDover	Duke University	Observer	Blake Ridge / South Atlantic Canyons	Limited
Laura Brothers	US Geological Survey / National Energy Technology Laboratory	Observer	Blake Ridge / South Atlantic Canyons	Limited
Steve Ross	University of North Carolina - Wilmington	Observer	West Florida Slope (Area B)	Limited
Bill Shed	BOEM	Observer	Gulf of Mexico	Limited

Table 3 List of expected shore-side science participants working at individual work sites collaborating via ftp data sharing and teleconferences.

F. Administrative

Key Points of Contact:

Ship Operations

Marine Operations Center, Atlantic (MOA)
439 West York Street
Norfolk, VA 23510-1145
Telephone: (757) 441-6776
Fax: (757) 441-6495

Chief, Operations Division, Atlantic (MOA)
LCDR Jennifer Pralgo
Telephone: (757) 441-6716
E-mail: ChiefOps.MOA@noaa.gov

Marine Operations Center, Pacific (MOP)
2002 SE Marine Science Drive
Newport, OR 97365-5229
Telephone: (541) 867-8700
Fax: (541) 867-8854

Chief, Operations Division, Pacific (MOP)
CDR Brian Parks
Telephone: (541) 867-8703
Email: ChiefOps.MOP@noaa.gov

Mission Operations

Mashkoor Malik
Expedition Manager, Mapping Team Lead
NOAA Office of Ocean Exploration (ERT, Inc.)
Phone : (301) -734-1025
E-mail : Jeremy.Potter@noaa.gov

CDR Robert Kamphaus, NOAA
Commanding Officer
NOAA Ship *Okeanos Explorer*
Phone: (401) 378-8284
Email: CO.Explorer@noaa.gov

LT Megan Nadeau, NOAA
Operations Officer
NOAA Ship *Okeanos Explorer*
Phone: (207) 240-0957 (c)
E-mail: Ops.Explorer@noaa.gov

Other Mission Contacts

Craig Russell, EX Program Manager
NOAA Ocean Exploration & Research
Phone: 206-526-4803 / 206-518-1068
E-mail: Craig.Russell@noaa.gov

Catalina Martinez, Regional Manager
NOAA Office of Ocean Exploration & Research
Phone: (401) 874-6250 (o) / (401) 330-9662 (c)
Email: Catalina.Martinez@noaa.gov

Meme Lobecker, Mapping Lead
NOAA Ocean Exploration & Research (ERT, Inc.)
Phone: 603-862-1475/ 401-662-9297
E-mail: elizabeth.lobecker@noaa.gov

Adam Skarke, Mapping Lead
NOAA Ocean Exploration & Research (ERT, Inc.)
Phone: 603-862-0369/ 302-981-9908
E-mail: Adam.Skarke@noaa.gov

John McDonough, Deputy Director
NOAA Ocean Exploration & Research
Phone: 301-734-1023 / 240-676-5206
E-mail: John.McDonough@noaa.gov

LCDR Nicola VerPlanck, Deputy EX Program Manager
NOAA Ocean Exploration & Research
Phone: 206-526-4801
E-mail: Nicola.Verplanck@noaa.gov

Webb Pinner, Telepresence Lead (20/20 Inc.)
NOAA Office of Ocean Exploration & Research
Phone: (401) 874-6250 (o) / (401) 330-9662 (c)
Email: Webb.Pinner@noaa.gov

Shipments

Be sure to send an email to *Okeanos Explorer* Operations Officer, LT Megan Nadeau at OPS.Explorer@noaa.gov indicating the size and number of items being shipped and the name of the person it is being shipped to.

Shipping information Galveston, TX:

NOAA Ship Okeanos Explorer
c/o National Marine Fisheries Service
4700 Ave U
Galveston, TX 77551

Shipping Address for Norfolk, VA:

NOAA Ship Okeanos Explorer
Marine Operations Center, Atlantic (MOA)
439 West York Street
Norfolk, VA 23510-1145

G. Diplomatic Clearances

NOT APPLICABLE TO THIS CRUISE

H. Licenses and Permits

See Appendix C for categorical exclusion documentation

II. OPERATIONS

A. Cruise Plan Itinerary *(All times and dates are subject to prevailing conditions and the discretion of the commanding officer)*

Date	Operations	Remarks
05/04	Mission party arrives to the ship	
05/05	Ship transits from Galveston, TX to northern Gulf of Mexico. Conduct focused mapping exploration working grounds	Acquire data during transit
05/06-05/09	Map data holidays and extend coverage of previous EX cruises (EX-11-05-EX-12-02)	Exact locations will be available towards end of EX-12-02 Leg 3.
05/10-05/12	Transit to Florida escarpment and map the UNCW priority	

	area B	
05/13-05/17	Transit to Blake Ridge.	
05/18-05/21	1-3 days water column exploration, Blake Ridge Diapir / Cape Fear Diapir	
05/21-05/23	Transit to Norfolk, VA	
05/23	Arrive in Norfolk, VA	

Table 4: Approximate schedule of EX-12-03 operations.

B. Telepresence Events

As of 3/15/12, no telepresence events have been planned or requested.

C. In-Port Events

An in-port event is possibly being planning for EX-12-02 Leg 3 in Galveston, TX on April 30, 2012.

An in-port event in Norfolk is being planned in conjunction with EX-12-04 work partnering with VA Sea Grant, MARCO, and Northeast Fisheries Science Center.

Details of these port events are being finalized and will be provided to the ship before April 20, 2012.

NOT APPLICABLE TO THIS CRUISE

D. Sonar Operations

Mapping Operations

EM 302, EK 60, and Knudsen sub-bottom data acquisition are planned for this cruise. The mapping team will ensure that all the standard protocols are accomplished as laid out by the Commanding Officer. Mapping lead directives will be followed for efficient and safe mapping operations around the clock. The Knudsen sub-bottom profiler is anticipated to be operated during the day time (0800-2000) at minimum power level settings. (Power level at 1) and lowest possible pulse length setting (1-4 ms). XBTs will be conducted every 2-4 hours, or less/more often as necessary to maintain multibeam data quality.

E. Dive Plan

NOT APPLICABLE TO THIS CRUISE

F. Applicable Restrictions

NOT APPLICABLE TO THIS CRUISE

III. EQUIPMENT

A. Equipment and capabilities provided by the ship

- Kongsberg Simrad EM 302 Multibeam Echosounder (MBES)
- Kongsberg Simrad EK 60 Singlebeam Echosounder
- Knudsen Chirp 3260 Sub-bottom profiler (SBP)
- LHM Sippican XBT (various probes)
- Seabird SBE 911Plus CTD
- Light Scattering Sensor (LSS)
- Oxidation – Reduction Potential (ORP)
- Dissolved Oxygen (DO) sensor
- Altimeter Sensor and battery pack
- Seabird SBE 32 Carousel and 24 2.5 L Niskin Bottles
- CNAV GPS
- POS/MV
- Seabird SBE-45 (Micro TSG)
- Kongsberg Dynamic Positioning-1 System
- NetApps mapping storage system
- CARIS HIPS Software
- IVS Fledermaus Software
- SIS Software
- Hypack Software
- Scientific Computing System (SCS)
- ECDIS
- Met/Wx Sensor Package
- Cruise Information Management System (CIMS)
- VSAT High-Speed link (5 mbps ship-to-shore; T1 shore-to-ship)

B. Equipment and capabilities provided by the scientists

None.

IV. HAZARDOUS MATERIALS

A. Policy and Compliance

The Expedition Coordinator is responsible for complying with MOCDOC 15, Fleet Environmental Compliance #07, Hazardous Material and Hazardous Waste Management Requirements for Visiting Scientists, released July 2002. Documentation regarding those requirements will be provided by the Chief of Operations, Marine Operations Center, upon

request.

By Federal regulations and NOAA Marine and Aviation Operations policy, the ship may not sail without a complete inventory of all hazardous materials by name and the anticipated quantity brought aboard, MSDS and appropriate neutralizing agents, buffers, and/or absorbents in amounts adequate to address spills of a size equal to the amount of chemical brought aboard. The amount of hazardous material arriving and leaving the vessel shall be accounted for by the Expedition Coordinator.

B. Radioactive Isotopes

NOT APPLICABLE TO THIS CRUISE

C. Inventory

NOT APPLICABLE TO THIS CRUISE

V. ADDITIONAL PROJECTS

A. Supplementary Projects

NOT APPLICABLE TO THIS CRUISE

B. NOAA Fleet Ancillary Projects

NOT APPLICABLE TO THIS CRUISE

VI. DISPOSITION OF DATA AND REPORTS

A. Data Responsibilities

All data acquired on *Okeanos Explorer* will be provided to the public archives without proprietary rights. All data management activities shall be executed in accordance with NAO 212-15, Management of Environmental and Geospatial Data and Information [http://www.corporateservices.noaa.gov/ames/NAOs/Chap_212/naos_212_15.html].

Ship Responsibilities

The Commanding Officer is responsible for all data collected for missions until those data have been transferred to mission party designees. Data transfers will be documented on NOAA Form 61-29. Reporting and sending copies of project data to NESDIS (ROSCOP form) is the responsibility of OER.

NOAA OER Responsibilities

The Expedition Coordinator will work with the *Okeanos Explorer* Operations Officer to

ensure data pipeline protocols are followed for final archive of all data acquired on the EX without proprietary rights.

Deliverables

a. At sea
   - Daily plans of the Day (POD)
   - Daily situation reports (SITREPS)
   - Daily summary bathymetry data files
   - On an extremely limited, as appropriate/required for operational decision making purposes: daily draped bottom backscatter products, EK 60 and EM 302 water column data products, sub-bottom vertical curtains.

b. Post cruise
   - Refined SOPs for all pertinent operational activities
   - Assessments of all activities

c. Science
   - Multibeam and XBT raw and processed data (see Appendix B for the formal cruise data management plan)
   - Raw CTD data (if collected)
   - Mapping Data Report

Archive

- The OER program and EX will work together to ensure documentation and stewardship of acquired data sets in accordance with NAO 212-15. The Cruise Information Management System is the primary tool used to accomplish this activity.

B. Pre and Post Cruise Meeting

Pre-Cruise Meeting

Prior to departure, the Operation's Officer will conduct a meeting of the scientific party to inform them of cruise objectives and vessel protocols, e.g., meals, watches, etiquette, etc.

Post-Cruise Meeting

Upon completion of the cruise, a meeting will be held by the Operation's Officer and attended by the ship's Survey Technicians, the Expedition Coordinator and members of the scientific party to review the cruise. Concerns regarding safety, efficiency, and suggestions for improvements for future cruises should be discussed.

Shipboard Meetings

Daily Operations Briefing meetings will be held at 1500 in the forward lounge to review the current day, and define operations, associated requirements and staffing needs for the following

day. A Plan of the Day (POD) will be posted each evening for the next day in specified locations throughout the ship. A safety brief and overview of POD will occur on the Bridge each morning at 0800. Daily Situation Reports (SITREPS) will be posted as well and shared daily through e-mail and/or the EX PLONE site http://tethys.gso.uri.edu/OkeanosExplorerPortal

C. Ship Operation Evaluation Report

Within seven days of the completion of the cruise, a Ship Operation Evaluation form is to be completed by the Expedition Coordinator and lead scientist. The preferred method of transmittal of this form is via email to OMAO.Customer.Satisfaction@noaa.gov. If email is not an option, a hard copy may be forwarded to:

Director, NOAA Marine and Aviation Operations
NOAA Office of Marine and Aviation Operations
8403 Colesville Road, Suite 500
Silver Spring, MD 20910

VII. MISCELLANEOUS

A. Meals and Berthing

Meals and berthing are required for up to 19 scientists. Meals will be served 3 times daily beginning one hour before scheduled departure, extending throughout the cruise, and ending two hours after the termination of the cruise. Since the watch schedule is split between day and night, the night watch may often miss daytime meals and will require adequate food and beverages (for example a variety of sandwich items, cheeses, fruit, milk, juices) during what are not typically meal hours. Special dietary requirements for scientific participants will be made available to the ship's command at least twenty-one days prior to the survey (e.g., Expedition Coordinator is allergic to fin fish). Berthing requirements, including number and gender of the scientific party, will be provided to the ship by the Expedition Coordinator. The Expedition Coordinator and Operations Officer will work together on a detailed berthing plan to accommodate the gender mix of the scientific party taking into consideration the current make-up of the ship's complement. The Expedition Coordinator is responsible for ensuring the scientific berthing spaces are left in the condition in which they were received; for stripping bedding and linen return; and for the return of any room keys which were issued. The Expedition Coordinator is also responsible for the cleanliness of the laboratory spaces and the storage areas utilized by the scientific party, both during the cruise and at its conclusion prior to departing the ship.

All NOAA scientists will have proper travel orders when assigned to any NOAA ship. The Expedition Coordinator will ensure that all non NOAA or non Federal scientists aboard also have proper orders. It is the responsibility of the Expedition Coordinator to ensure that the entire scientific party has a mechanism in place to provide lodging and food and to be reimbursed for these costs in the event that the ship becomes uninhabitable and/or the galley is closed during any part of the scheduled project.

All persons boarding NOAA vessels give implied consent to comply with all safety and security policies and regulations which are administered by the Commanding Officer. All spaces and equipment on the vessel are subject to inspection or search at any time. All personnel must comply with OMAO's Drug and Alcohol Policy dated May 7, 1999 which forbids the possession and/or use of illegal drugs and alcohol aboard NOAA Vessels.

B. Medical Forms and Emergency Contacts

The NOAA Health Services Questionnaire (NHSQ, Revised: 08/08) must be completed in advance by each participating scientist. The NHSQ can be obtained from the Expedition Coordinator or the NOAA website at NOAA HEALTH SERVICES QUESTIONNAIRE found at http://www.omao.noaa.gov/medical/NHSQ_Final_wi_Instructions_fill.pdf. The completed form should be sent to the Regional Director of Health Services at Marine Operations Center. The participant can mail, fax, or scan the form into an email using the contact information below. The NHSQ should reach the Health Services Office no later than 4 weeks prior to the cruise to allow time for the participant to obtain and submit additional information that health services might require before clearance to sail can be granted. Please contact MOC Health Services with any questions regarding eligibility or completion of the NHSQ. Be sure to include proof of tuberculosis (TB) testing, sign and date the form, and indicate the ship or ships the participant will be sailing on. Clearances are valid for 2 years for personnel under age 50 and 1 year for age 50 and over. All PPD's expire after one year from the date of administration. The participant will receive an email notice when medically cleared to sail if a legible email address is provided on the NHSQ.

Contact information:

Regional Director of Health Services
Marine Operations Center – Atlantic
439 W. York Street
Norfolk, VA 23510
Telephone 757.441.6320
Fax 757.441.3760
E-mail: MOA.Health.Services@noaa.gov

Please make sure the medical.explorer@noaa.gov email address is cc'd on all medical correspondence.

Prior to departure, the Expedition Coordinator must provide a listing of emergency contacts to the Operations Officer for all members of the scientific party, with the following information: name, address, relationship to member, and telephone number.

Emergency contact form is included as Appendix A.

C. Shipboard Safety

Wearing open-toed footwear or shoes that do not completely enclose the foot (such as sandals or clogs) outside of private berthing areas is not permitted. Steel-toed shoes are required to participate in any work dealing with suspended loads, including CTD deployments and recovery. The ship does not provide steel-toed boots. Hard hats are also required when working with suspended loads. Work vests are required when working near open railings and during small boat launch and recovery operations. Hard hats and work vests will be provided by the ship when required.

Operational Risk Management: For every operation to be conducted aboard the ship (NOAA-wide initiative), risk management procedures will be followed. For each operation, risks will be identified and assessed for probability and severity. Risk mitigation strategies / measures will be investigated and implemented where possible. After mitigation, the residual risk will have to be assessed to make Go-No Go decisions for the operations. Particularly with new operations, risk assessment will be ongoing and updated as necessary. This does not only apply to over-the-side operations, but to everyday tasks aboard the vessel that pose risk to personnel and property.

- CTD and other pertinent ORM documents will be followed by all personnel working on board the *Okeanos Explorer*.
- All personnel on board are in the position of calling a halt to operations/activities in the event of a safety concern.

D. Communications

A daily situation report (SITREP) on operations prepared by the Expedition Coordinator will be relayed to the program office. Sometimes it is necessary for the Expedition Coordinator to communicate with another vessel, aircraft, or shore facility. Through various modes of communication, the ship is able to maintain contact with the Marine Operations Center on an as needed basis. These methods will be made available to the Expedition Coordinator upon request, in order to conduct official business. The ship's primary means of communication with the Marine Operations Center is via e-mail and the Very Small Aperture Terminal (VSAT) link. Standard VSAT bandwidth at 128kbs is shared by all vessels staff and the science team at no charge. Increased bandwidth in 30 day increments is available on the VSAT systems at increased cost to the scientific party. If increased bandwidth is being considered, program accounting is required it must be arranged at least 30 days in advance.

Specific information on how to contact the NOAA Ship *Okeanos Explorer* and all other fleet vessels can be found at: http://www.moc.noaa.gov/phone.htm

Important Telephone and Facsimile Numbers and E-mail Addresses

Ocean Exploration and Research (OER):

OER Program Administration:
Phone: (301) 734-1010
Fax: (301) 713-4252

E-mail: Firstname.Lastname@noaa.gov

University of New Hampshire, Center for Coastal and Ocean Mapping

Phone: (603) 862-3438
Fax: (603) 862-0839

NOAA Ship *Okeanos Explorer* - Telephone methods listed in order of increasing expense:

EX Cellular: (401) 378-7947
EX Iridium: (808) 659-9179
OER Mission Iridium (dry lab): (808) 851-3827

EX INMARSAT B
Line 1: 011-872-764-852-328
Line 2: 011-872-764-852-329

Voice Over IP (VoIP) Phone:
301-713-7772 (expect a delay once picked up by directory)

E-Mail: Ops.Explorer@noaa.gov - (mention the person's name in SUBJECT field)

expeditioncoordinator.explorer@noaa.gov - For dissemination of all hands emails by Expedition Coordinator while on board. See ET for password.

E. IT Security

Any computer that will be hooked into the ship's network must comply with the NMAO Fleet IT Security Policy prior to establishing a direct connection to the NOAA WAN. Requirements include, but are not limited to:

1. Installation of the latest virus definition (.DAT) file on all systems and performance of a virus scan on each system.
2. Installation of the latest critical operating system security patches.
3. No external public Internet Service Provider (ISP) connections.

Completion of these requirements prior to boarding the ship is required.

Non-NOAA personnel using the ship's computers or connecting their own computers to the ship's network must complete NOAA's IT Security Awareness Course within 3 days of embarking.

F. Foreign National Guests Access to OMAO Facilities and Platforms

No FNG participation anticipated as of 23 March, 2012.

All foreign national access to the vessel shall be in accordance with NAO 207-12 and RADM De Bow's March 16, 2006 memo.

The following are basic requirements. Full compliance with NAO 207-12 is required.

Responsibilities of the Expedition Coordinator:

1. Provide the Commanding Officer with the e-mail generated by the FRNS granting approval for the foreign national guest's visit. This e-mail will identify the guest's DSN and will serve as evidence that the requirements of NAO 207-12 have been complied with.
2. Escorts – The Expedition Coordinator is responsible to provide escorts to comply with NAO 207-12 Section 5.10, or as required by the vessel's DOC/OSY Regional Security Officer. Ensure all non-foreign national members of the scientific party receive the briefing on Espionage Indicators (NAO 207-12) at least annually or as required by the servicing Regional Security Officer.
3. Export Control - The NEFSC currently neither possesses nor utilizes technologies that are subject to Export Administration Regulations (EAR).

The Commanding Officer and the Expedition Coordinator will work together to implement any access controls necessary to ensure no unlicensed export occurs of any controlled technology onboard regardless of ownership.

Responsibilities of the Commanding Officer:

1. Ensure only those foreign nationals with DOC/OSY clearance are granted access.
2. Deny access to OMAO platforms and facilities by foreign nationals from countries controlled for anti-terrorism (AT) reasons and individuals from Cuba or Iran without written NMAO approval and compliance with export and sanction regulations.
3. Ensure foreign national access is permitted only if unlicensed deemed export is not likely to occur.
4. Ensure receipt from the Expedition Coordinator or the DSN of the FRNS e-mail granting approval for the foreign national guest's visit.
5. Ensure Foreign Port Officials, e.g., Pilots, immigration officials, receive escorted access in accordance with maritime custom to facilitate the vessel's visit to foreign ports.
6. Export Control - 8 weeks in advance of the cruise, provide the Expedition Coordinator with a current inventory of OMAO controlled technology onboard the vessel and a copy of the vessel Technology Access Control Plan (TACP). Also notify the Expedition Coordinator of any OMAO-sponsored foreign nationals that will be onboard while program equipment is aboard so that the Expedition Coordinator can take steps to prevent unlicensed export of Program controlled technology. The Commanding Officer and the Expedition Coordinator will work together to implement any access controls necessary to

ensure no unlicensed export occurs of any controlled technology onboard regardless of ownership.

7. Ensure all OMAO personnel onboard receive the briefing on Espionage Indicators (NAO 207-12) at least annually or as required by the servicing Regional Security Officer.

Responsibilities of the Foreign National Sponsor:

1. Export Control - The foreign national's sponsor is responsible for obtaining any required export licenses and complying with any conditions of those licenses prior to the foreign national being provided access to the controlled technology onboard regardless of the technology's ownership.
2. The DSN of the foreign national shall assign an on-board Program individual, who will be responsible for the foreign national while on board. The identified individual must be a U.S. citizen, NOAA (or DOC) employee. According to DOC/OSY, this requirement cannot be altered.
3. Ensure completion and submission of the Certification of Conditions and Responsibilities for a Foreign National Guest as required by NAO 207-12 Section 5.03.h.

Appendix A

EMERGENCY DATA SHEET
NOAA OKEANOS EXPLORER

PRINT CLEARLY

NAME: _____
(Last, First, Middle)

Mailing Address _____

_____

_____
(Other than the ship address)

Phone (Home) _____

(Cell) _____

Date of Birth _____

Email Address:_____

Emergency Contact: _____
(Name and Relationship)

E.C.Address: _____

_____

_____

E.C.Phone (Home) _____

(Work) _____

(Cell) _____

E.C.Email: _____

Signature _____ Date _____

Appendix B: EX-12-03 Data Management Plan

All data collected during this expedition is expected to be archived at the National Geophysical Data Center (NGDC) in accordance with the NOAA / OER data management protocols. Detailed data management plan for the project will be submitted to the ship before the start of the cruise.

Appendix C: Categorical Exclusion

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
OCEANIC AND ATMOSPHERIC RESEARCH
Office of Ocean Exploration and Research
Silver Spring, MD 20910

March 28, 2012

MEMORANDUM FOR: The Record

FROM: John McDonough
Deputy Director NOAA Office of Ocean Exploration and Research (OER)

SUBJECT: Categorical Exclusion for NOAA Ship *Okeanos Explorer* cruise EX1203

NAO 216-6, Environmental Review Procedures, requires all proposed projects to be reviewed with respect to environmental consequences on the human environment. This memorandum addresses the NOAA Ship *Okeanos Explorer's* scientific sensors possible affect on the human environment.

Description of Project
This project is part of the NOAA Office of Ocean Exploration and Research's "Science Program" and entails multi-disciplinary ocean mapping and exploration activities designed to increase knowledge of the marine environment. This project is entitled "EX1203 Florida Escarpment exploration" and will be lead by Mashkoor Malik, a physical scientist for the *Okeanos Explorer* program within OER. The ship will depart Galveston, TX on May 5, 2012, and arrive in Norfolk, VA on May 23, 2012, and conduct sonar mapping operations at all times during the transit. Focused mapping and sonar testing operations will occur at offshore areas along Florida Escarpment and Blake Ridge. Acoustic instruments that will be operational during the project are a 30 kHz multibeam echosounder (Kongsburg EM 302), an 18 kHz singlebeam echosounder (Kongsberg EK 60), and a 3.5 kHz sub-bottom profiler (Knudsen Chirp 3260). Additionally, expendable bathythermographs (XBTs) will be deployed regular intervals in association with multibeam data collection.

Effect of Projects
As expected for ocean research with limited duration or presence in the marine environment, this project will not have the potential for significant impacts. Knowledgeable experts who are aware of the sensitivities of the marine environment will conduct the at-sea portions of this project.

Categorical Exclusion
This project would not result in any changes to the human environment. As defined in Sections 5.05 and 6.03.c.3 (a) of NAO 216-6, this is a research project of limited size or magnitude or with only short-term effects on the environment and for which any cumulative effects are negligible. As such, this project is categorically excluded from the need to prepare an environmental assessment.

Signed: _____ Date: 3/28/2012
John McDonough, Deputy Director

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