

**NOAA SHIP OKEANOS EXPLORER R-337**  
*“America’s Ship for Ocean Exploration”*

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NOAA OCEAN EXPLORATION AND RESEARCH SITUATION REPORT FOR March 31, 2012

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CRUISE: EX1202L2 Gulf Of Mexico  
Exploration

DATE/TIME FILED: 04/01/12 0900 EDT  
FILED BY: Jeremy Potter  
VESSEL: NOAA Ship *Okeanos Explorer*  
(EX)

GEOGRAPHIC AREA:  
Vicinity of Deepwater Horizon

MISSION PERSONNEL ON BOARD:

NOAA / OER:  
Dave Lovalvo (NOAA OER)  
Meme Lobecker (NOAA OER)  
Webb Pinner (NOAA OER)  
Jeremy Potter (NOAA OER)  
LTJG Brian Kennedy (NOAA OER)

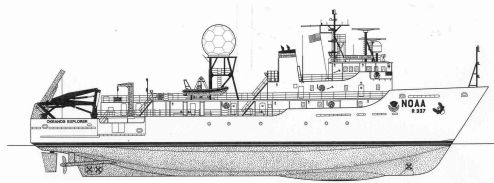
OTHERS:  
Tim Shank (WHOI/UCAR)  
Pen-Yuan Hsing (Penn State/UCAR)  
Dave Wright (OER/UCAR)  
Roland Brian (OER/UCAR)  
Art Howard (OER/UCAR)  
Ed McNichol (OER/UCAR)  
Thomas Kok (OER/UCAR)  
Gregg Diffendale (OER/UCAR)  
Bobby Mohr (OER/UCAR)  
Karl McLetchie (OER/UCAR)  
Jeff Williams (OER/UCAR)  
Tara Smithee (Stanford/UCAR)  
Christopher Pinero (OER/UCAR)

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**SUMMARY:**

The NOAA Ship *Okeanos Explorer* (EX) conducted overnight mapping operations to extend coverage west of EX mapping efforts in 2011. At approximately 0830, ship and mission crew launched *Little Herc* and *Seirios* for the eleventh dive of the 2012 field season. This was the first ROV dive in the vicinity of Deepwater Horizon. Unlike the ‘standard’ EX model, the purpose was to continue time-series imagery of a deep coral community observed to have suffered significant impact around the time of the spill. The ROV and Camera Platform were safely recovered by 1830. Mapping operations





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continued following recovery. Ability to extend mapping coverage into new areas is becoming increasingly difficult due to existing coverage and location of dive targets.

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### **SURVEY:**

Multibeam sonar EM 302 and Single Beam sonar EK 60 data were collected. Water column data was collected over known seep areas in preparation for deep dive target location during Leg 3. The data will be sent to shore for UNH scientists to analyze. Fledermaus 7 is being used to create daily bathymetry products. Cumulative geotiffs and kmz are being created despite known offsets. Fledermaus scene files created during the ROV dive planning process are being provided to shore in the multibeam folder under /OkeanosCruises/EX1202L2/Multibeam/EX1202L2\_MB\_HIRES. The scene files typically include the following layers: 1) backscatter mosaics draped over bathymetry; 2) bathymetry; and 3) start / end points of dive.

Due to extensive EX mapping coverage in the vicinity of the current operating area, ability to extend overnight survey operations into new areas is very limited. Survey is doing the best they can based on priority for ship to be at dive location in early morning. Fortunately, ability to collect time-series water column data over previously mapped seeps has significant interest for key shore-side scientists at UNH.

### **SCIENCE:**

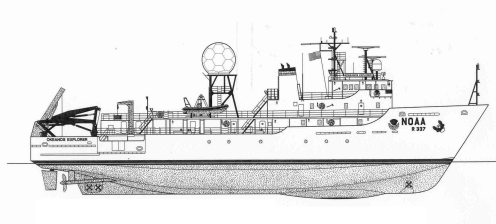
In the wake of the Deepwater Horizon oil spill, determining the types and extents of damage to the ecosystems of the Gulf of Mexico has been – and continues to be - a high priority. This has been especially difficult with regard to deep water habitats. Though the expedition is not a NRDA cruise, it does provides a good opportunity to assist with this NOAA and national priority.

Today and and tomorrow, we dove/will dive on two study locations that have been a focus of significant effort since DWH. The purpose of revisiting these critical locations is to determine change over time.

These areas have been examined on several previous cruises, including work by ALVIN and Sentry. Given the timing of the EX cruise, OER determined that it is a high priority for us to continue the periodic assessments to begin to understand the longer-term impacts to these corals.



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Today’s dive was on a location in Mississippi Canyon (MC) lease blocks 294 and 338. An Oct/Nov 2010 an OER-BOEM expedition identified a deep coral community here that showed sign of significant and recent impact.

Combined use of a telecon, I2, URI Internet 1 links, and the eventlogger continued. VOIP has been down since 3/30 due to OMOA shore-side changes. This was unexpected and impacted ship-shore communications throughout the day. CET and Mission Team attempted to correct the issue even though it originated from OMAO shoreside changes. Unfortunately they have yet to find a work around.

### **TELEPRESENCE:**

Telepresence Team continued assisting shore-side participants and trouble-shooting various systems. Practically all shore-side participants reported very high quality internet feeds. Telepresence Team will continue to monitor video quality.

The ISC continues to trouble-shoot RTS. EX Team continues to work to identify the best mechanism to enable two-way audio discussion with shore-side scientists at non-ECC locations.

Combined VOIP/RTS issues greatly impacted ship-to-shore audio capabilities.

### **VSAT:**

Changes initiated by OMAO shore-side personnel continued to impact the ROV telecon and forced the Science Team to rely on the eventlog. The CO directly contacted the MOC-A Director about the problem.

### **DATA MANAGEMENT:**

None.

### **ROV:**

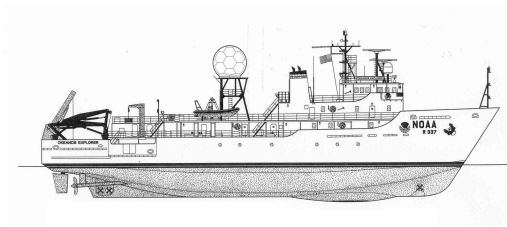
ROV personnel completed a eleventh successful dive. Regular standard operating procedures were slightly modified to best accommodate the need for time-series imagery. Impacts to the videoengineers were the most significant.

### **BOW/STERN THRUSTER:**

Ship personnel continue to monitor the bowthruster HPU temperature.

### **OTHER:**





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**- PLAN OF THE DAY -**

**Sunday April 1<sup>st</sup>, 2012**

<b>0000</b>	<b>Underway as before Mapping Operations</b>
<b>~0730</b>	<b>Arrive at Dive Location #12</b>
<b>0745</b>	<b>Safety Brief (Bridge)</b>
<b>~0800</b>	<b>Commence ROV deployment</b>
<b>1500</b>	<b>Ops Brief (Forward Lounge)</b>
<b>~1700</b>	<b>ROV on deck/ start overnight mapping</b>
<b>TBD</b>	<b>Resume Overboard Discharge</b>

- Conduct ROV dive in DP
- Continue multibeam operations
- XBTs conducted as necessary

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END OF SITUATION REPORT  
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