


OKEANOS EXPLORER ROV DIVE FORM

Site Name	Mississippi Canyon 388					
ROV Lead/Expedition Coordinator	Dave Lovalvo/Jeremy Potter					
General Area Descriptor	~300nm northwest of Tampa, Florida (vicinity of Deepwater Horizon)					
UTC Date & Time	Deployment	4/02/2012 12:29 PM				
	Recovery	4/02/2012 20:31 PM				
Bottom Time [HH:MM]	5:20:56 (max depth 1899.2 m)					
Landing Time & Location	UTC Time	13:51		Depth [m]	1849	
	Latitude	28	°	38.023	'	N
	Longitude	88	°	10.186	'	w
Off Bottom Time & Location	UTC Time	19:28		Depth [m]	1895	
	Latitude	28	°	37.761	'	N
	Longitude	88	°	10.431	'	w
ROV Dive Name	Cruise Season	EX1202		Leg	LEG02	
				Dive Number	ROV13	
Equipment Deployed	ROV:	Little Hercules				
	Camera Platform:	Seirios Camera Platform				
ROV Measurements	<input checked="" type="checkbox"/> CTD	<input checked="" type="checkbox"/> Depth		<input checked="" type="checkbox"/> Altitude		
	<input checked="" type="checkbox"/> Scanning Sonar	<input checked="" type="checkbox"/> USBL Position		<input checked="" type="checkbox"/> Heading		
	<input checked="" type="checkbox"/> Pitch	<input checked="" type="checkbox"/> Roll		<input checked="" type="checkbox"/> HD Camera		
	<input checked="" type="checkbox"/> Low Res Cam 1	<input checked="" type="checkbox"/> Low Res Cam 2				
Equipment Malfunctions	None					
Special Notes	Click here to enter text.					
Scientists Involved <i>(please provide name / location / affiliation / email)</i>	<p>Tim Shank (on-board Science Lead), EX, WHOI, tshank@whoi.edu Pen-Yuan Hsing, PSU, penyuan.hsing@psu.edu Santiago Herrera, WHOI, sherrera@mit.edu Taylor Heyl, WHOI, theyl@whoi.edu Eleanor Bors, WHOI, ekbors@gmail.com Catriona Munro, WHOI, cmunro@whoi.edu Bob Carney, LSU, rcarne1@lsu.edu Erik Cordes, Temple, ecordes@temple.edu Andrea Quattrini, Temple, andrea.quattrini@temple.edu Peter Etnoyer, NOAA, Peter.Etnoyer@noaa.gov Mike Vecchione, Smithsonian, VecchioneM@si.edu</p>					

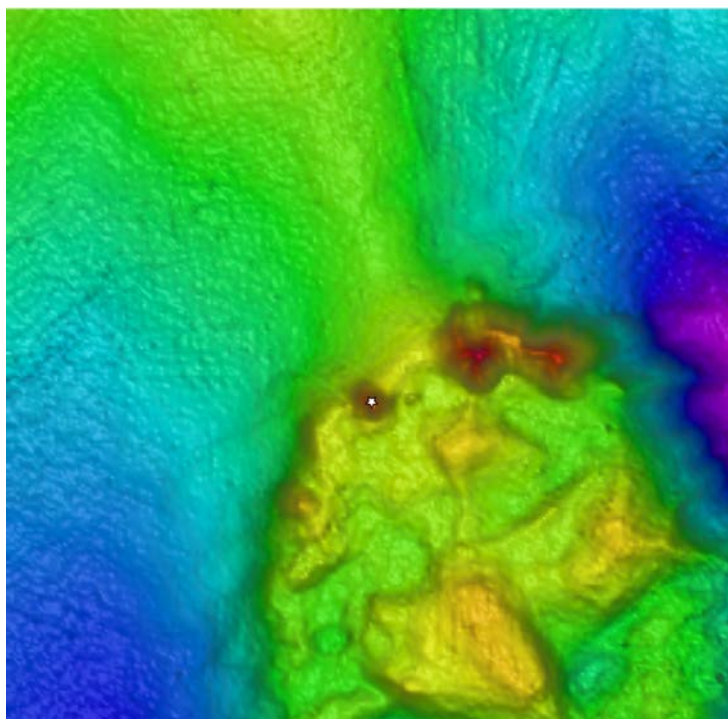
Purpose of the Dive: To launch the vehicles on a study location in Mississippi Canyon lease block 388. This site was discovered during a towed camera and AUV Sentry surveys, and then visited with Alvin in December 2011. It has both seep communities and coral communities distributed over a fairly large area. Multibeam data and 3D seismic data for the area suggests that coral will be much more widespread at this site. The purpose of revisiting this location is to explore and characterize these coral ecosystems, and explore for additional seep and coral communities.

Description of the Dive:

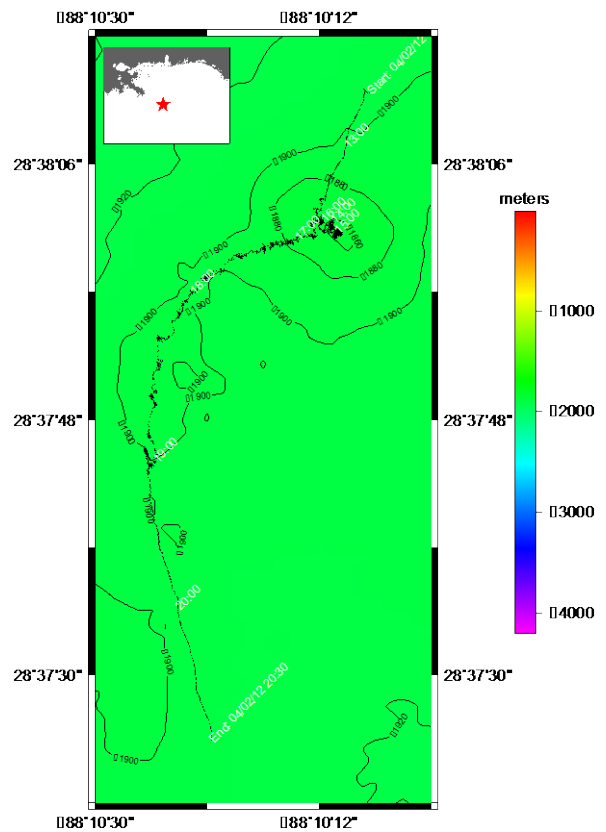
At 1351, LH approached bottom, 28.63370, -88.16979, depth 1849m, on brown/gray mottled sediment with holothurians and seep tubeworms, setting up at marker 9 after passing MM2. Starting at 1424, 28.63368, -88.16961, depth 1424m, we started close up imaging of each coral in the vicinity of Marker 9. For each coral, imaging started with a full frame view where the coral filled the entire image, followed by closeups of all associate fauna on the coral. They may include ophiuroids, amphipods, shrimps, or squat lobsters. When imaging associates, we focused on obtaining clear views of features that enable us to identify them down to the lowest possible taxonomic level. In addition, the presence and absence of hydroids on branches were noted for all corals. For each coral, we also noted the ROV heading and other pertinent information that would allow future visits to image them from the same perspective. When deemed useful for providing spatial context information, we also made overview video clips of groups of corals.

At 1513, we encountered a new coral with what appeared to be curves branching at the top (and named it 9-9), adjacent to live seep tubeworms and clam shells present on soft sediment at the base of the corals. At 1628, we imaged an overview of marker 5 corals and observed white sediment stain with gray and brown dusting and burrow contrasts before preparing for a move to the SW along the ridge on margin of the dome. Black staining was present all the way down slope in this area and we encountered mussels and tubeworms within the staining. The remainder of the dive was spent exploring the area 70m away from Marker 8 site downslope to the west where holothurians, mottled sediment with pteropod shells, burrows, hole rings, fecal traces and sargassum were common. From 1808 to 1809, we imaged an ophiuroid swimming and then parachuting to the seafloor before all internet from the OKEX was temporarily disconnected and this signaled the end of the dive.

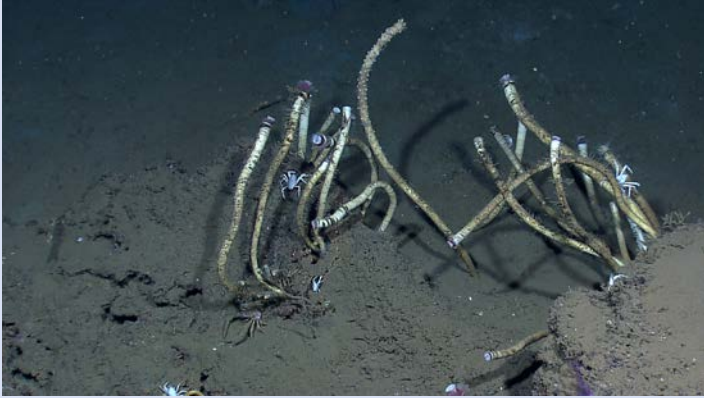
Overall Map of ROV Dive Area



Close-up Map of Main Dive Site



Representative Photos of the Dive



EX1202L2_IMG_20120402T140649Z_ROVHD_SQA_TUB_CORO
Live seep tubeworms found on soft sediment at the base of
Marker 9 corals at Mississippi Canyon lease block 388.

EX1202L2_IMG_20120402T142442Z_ROVHD_M9_3_COR_OPH
Close up image of an ophiuroid associate found on a
paramuricea coral (M9-3) with polyps extended.

Please direct inquiries to:

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