

# OKEANOS EXPLORER ROV DIVE SUMMARY

<b>Site Name</b>	Rosebud		
<b>ROV Lead/ Expedition Coordinator</b>	Dave Lovalvo/ Jeremy Potter		
<b>General Area Descriptor</b>	Rosebud hydrothermal vent site, ~300nm northwest of the Galapagos Islands		
<b>ROV Dive Name</b>	Cruise Season EX1103	Leg 2	Dive Number DIVE07
<b>Equipment Deployed</b>	ROV: Camera Platform:	Little Hercules Seirios	
<b>ROV Measurements</b>	<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	
<b>Equipment Malfunctions</b>	None		
<b>ROV Dive Summary (From processed ROV data)</b>	Dive Summary: DIVE07_20110720 ^^^ In Water at: 2011-07-20T14:26:06.171000 00°, 48.427' N ; 086°, 13.749' W  Out Water at: 2011-07-20T22:40:53.324000 00°, 48.315' N ; 086°, 13.563' W  Off Bottom at: 2011-07-20T20:51:08.594000 00°, 48.376' N ; 086°, 13.641' W  On Bottom at: 2011-07-20T16:25:51.436000 00°, 48.312' N ; 086°, 13.644' W  Dive duration: 8:14:47  Bottom Time: 4:25:17  Max. depth: 2449.7 m		
<b>Special Notes</b>	Click here to enter text.		
<b>Scientists Involved (please provide name / location / affiliation / email)</b>	Timothy M. Shank/ Okeanos Explorer Lead Scientist/WHOI/tshank@whoi.edu Edward T. Baker/NOAA-PMEL, Washington/Edward.baker@noaa.gov Robert W. Embley/NOAA-PMEL, Oregon/Robert.w.embley@noaa.gov Stephen Hammond/ NOAA-PMEL, Oregon/Stephen.r.hammond@noaa.gov James F. Holden/ UMASS Amherst/jholden@microbio.umass.edu Scott White/University of South Carolina/swhite@geol.sc.edu Sharon L. Walker/ NOAA-PMEL, Washington/sharon.l.walker@noaa.gov Santiago Herrera/ WHOI Exploration Command Center/WHOI/sherrera@whoi.edu T. Jennifer Lin/UMASS Amherst/tjennlin@gmail.com Catriona Munro/ WHOI Exploration Command Center WHOI/catmunro89@gmail.com		

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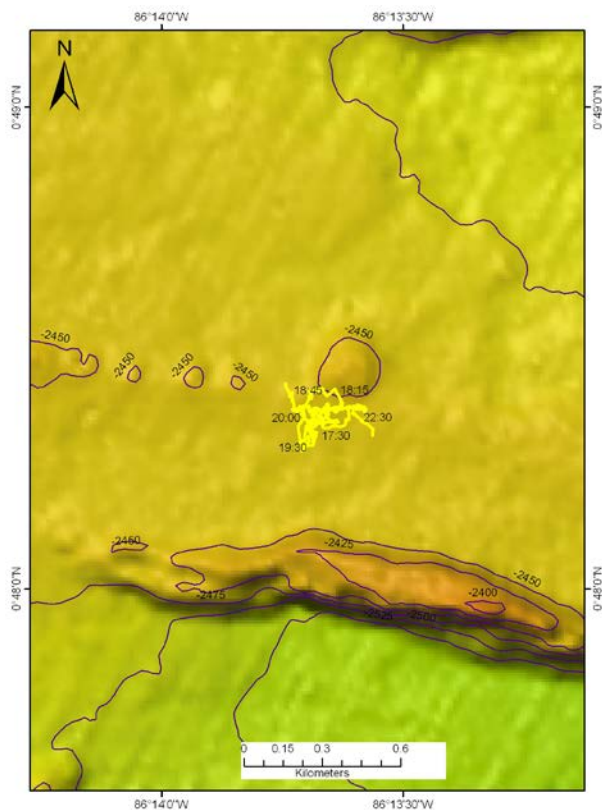
### Purpose of the Dive

To locate an area that hosts the Rosebud hydrothermal vent site at 2450m for further exploration of the Rift in this region, which will likely be along east-west trending fissures just north of the field. Rosebud has not been visited since 2005, when Riftia tubeworms and bathymodiolid mussels dominated vent openings. The field was 60m x 40m with white seafloor markers, "A" and "B" on the eastern side, "F" and "L" centrally located, and "C" on the western side.

### Description of the Dive:

On this descent, we saw an abundance of squid- down to at least 500m as well as what appear to be larvaceans/ctenophores. Once on the seafloor, we observed collapsed margins and traversed over a North-south running unsedimented lobate lava flow. Little Hercules continued to follow along collapsed features, over pillow lavas with multiple dandelion siphonophores but no sites of active hydrothermal venting were found during this dive. The lack of biota and presence of vitreous sheet flows suggests that this site may have experienced an eruption subsequent to the last previous dive at the site in 2005.

Overall Map of ROV Dive Area



Close-up Map of Main Dive Site



**Representative Photos of the Dive**



Collapsed top of an inflated lobate lava flow formed as the lava crust cooled as the lava drained out of the bubble during the eruption. Several layers of collapse crust can be seen inside of the hole. A number of these were seen during the dive.



Collapsed margins of lobate flow

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