


# OKEANOS EXPLORER ROV DIVE FORM

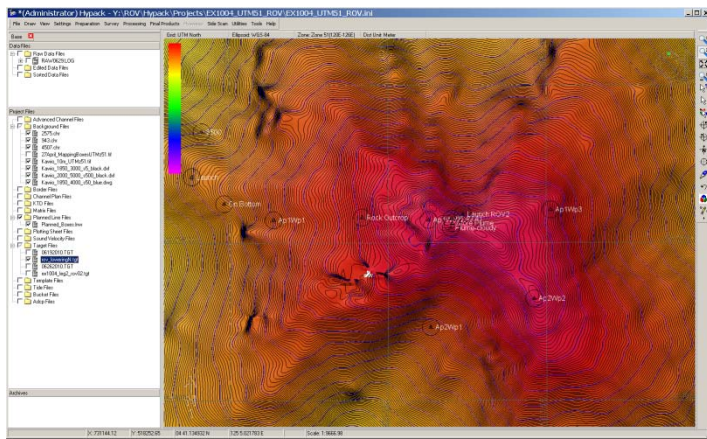
<b>Site Name</b>	Kawio Barat						
<b>ROV Lead</b>	Dave Lovalvo						
<b>General Area Descriptor</b>	365 km North of Bitung, Indonesia						
<b>UTC Date &amp; Time</b>	Deployment	6/30/2010 12:22 AM					
	Recovery	6/30/2010 8:59 AM					
<b>Bottom Time [HH:MM]</b>	[04:55]						
<b>Landing Time &amp; Location</b>	UTC Time	02:19			Depth [m]	1880	
	Latitude	4	°	40.559		N	
	Longitude	125	°	5.266		E	
<b>Off Bottom Time &amp; Location</b>	UTC Time	07:14			Depth [m]	1920	
	Latitude	4	°	40.489		N	
	Longitude	125	°	5.159		E	
<b>ROV Dive Name</b>	Cruise Season	EX1004		Leg	LEG02	Dive Number	ROV02
	<b>Equipment Deployed</b>	ROV:	Little Hercules				
	Camera Platform:	Phoenix Camera Platform					
<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>	Click here to enter text.						
<b>Special Notes</b>	Click here to enter text.						
<b>Scientists Involved</b> <i>(please provide name / location / affiliation / email)</i>	David Butterfield/Seattle ECC/PMEL Verena Tunnicliffe/Seattle ECC/UVIC Tim Shank/WHOI/WHOI Santiago Herrera(student)/WHOI/WOI Jill McDermott (student)/WHOI/WOI Catriona Munro (student)/WHOI/WOI Elizabeth Silbert (student)/WHOI/WOI Kristine Konsinski (student)/Seattle ECC/UH Ellie Bors (student)/Seattle ECC/WHOI Jim Holden/Jakarta ECC/UMASS John Sherrin (student) – EX Control Room/U of Victoria Xerandy – EX Control Room/Indonesia						

**Purpose of the Dive:** To explore [Click here to enter text.](#)

**Description of the Dive:**

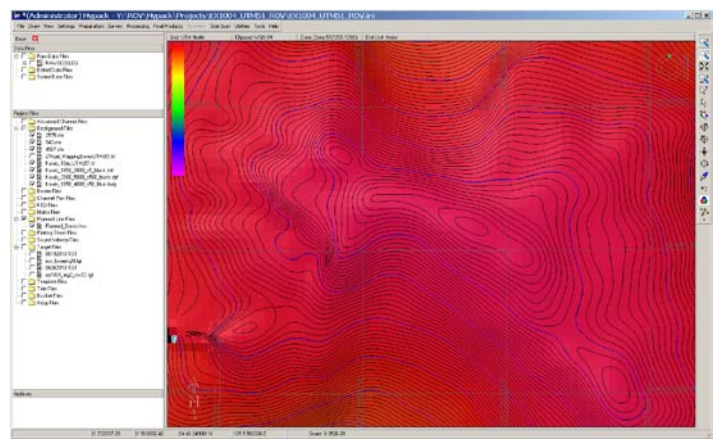
After detecting a plume at the end of EX-1004-Leg II \_ROV002 on Kawio Barat, we hoped to find its source during today's dive. Today's initial bottom target was 04° 40.590'N 125° 05.236' E. We found the source of the plume almost immediately after reaching the bottom. At a depth of about 1850m we encountered a sulfur vent with a number of point sources. Surrounding the vent was a large amount of yellow and black molten sulfur, multiple species of hot-vent shrimp, a 10cm scale worm, and a small patch of stalked barnacles. After departing from the vent, the ROV ascended the summit ridge and encountered fields of sulfide chimneys with vast aggregations of stalked barnacles at their base. The chimneys varied in terms of age and venting characteristics. Some chimneys were fairly oxidized and others covered in white sulfide. Some chimneys were venting clear fluid while others were venting black smoke. After extensive exploration of the chimney field we moved on in search of other vents but did not find any more. Though there is plenty more to discover on Kawio Barat, we are moving to other targets for subsequent dives.

**Overall Map of ROV Dive Area**



**Fledermaus view of overall dive site at KB**

**Close-up Map of Main Dive Site**

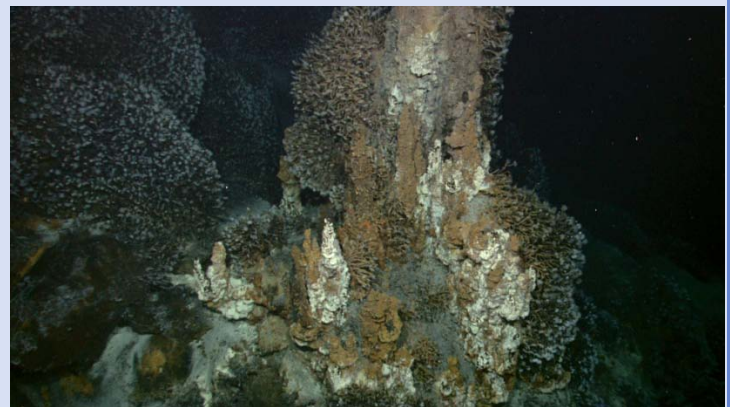


**Hypack screen grab of dive Track**

**Representative Photos of the Dive**



20100630\_02h24m02s08\_ROVHD\_SHRIMP\_ZOOM\_LAS  
A sulfur vent with a number of point sources was explored during the dive. Large amounts of frozen yellow and black molten sulfur, multiple species of hot-vent shrimp, and other critters including scale worms and crabs surrounded the vents.



20100630\_05h01m50s06\_ROVHD\_CHIMNEY\_ZOOM  
Fields of sulfide chimneys covered with dense aggregations of stalked barnacles were revealed as the ROV ascended the summit ridge. The chimneys varied in terms of age and venting characteristics.

**Please direct inquiries to:**

NOAA Office of Ocean Exploration & Research  
1315 East-West Highway (SSMC3 10<sup>th</sup> Floor)  
Silver Spring, MD 20910  
(301) 734-1014