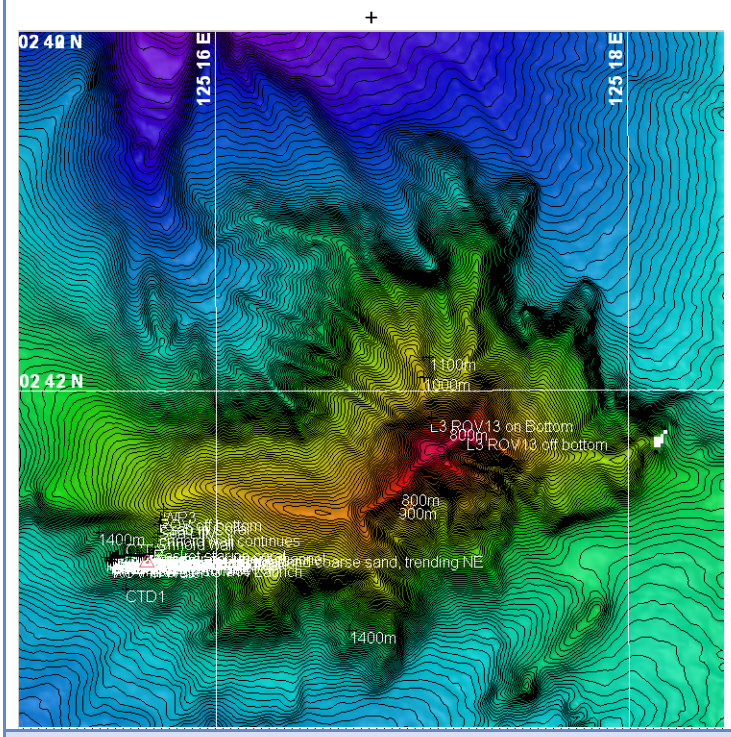
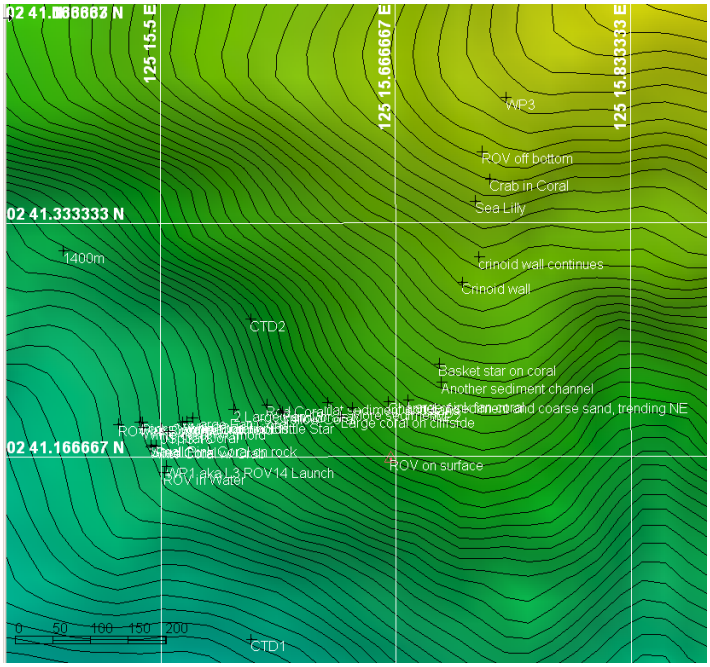
OKEANOS EXPLORER ROV DIVE FORM

Site Name	Gelembung II							
ROV Lead	Dave Lovalvo							
General Area Descriptor	139 km N of Bitung, Indonesia							
UTC Date & Time	Deployment	8/6/2010 12:13 AM						
	Recovery	8/6/2010 7:57 AM						
Bottom Time [HH:MM]	05:25							
Landing Time & Location	UTC Time	01:23			Depth [m]	1451		
	Latitude	2	º	41.189975	′	N		
	Longitude	125	º	15.470076	′	E		
Off Bottom Time & Location	UTC Time	06:48			Depth [m]	1116		
	Latitude	2	º	41.384012	′	N		
	Longitude	125	º	15.728146	′	E		
ROV Dive Name	Cruise Season	Leg	Dive Number					
	EX1004	LEG03	ROV14 (27)					
Equipment Deployed	ROV:	Little Hercules						
	Camera Platfom:	Phoenix Camera Platform						
ROV Measurements	☒ CTD	☒ Depth	☒ Altitude					
	☒ Scanning Sonar	☒ USBL Position	☒ Heading					
	☒ Pitch	☒ Roll	☒ HD Camera					
	☒ Low Res Cam 1	☒ Low Res Cam 2						
Equipment Malfunctions	None							
Special Notes	Click here to enter text.							
Scientists Involved *(please provide name / location / affiliation / email)*	Santiago Herrera (on-board Science Lead), EX, WHOI, sherrera@whoi.edu **Tim Shank (on-shore Science Lead), ECC Jakarta, WHOI, tshank@whoi.edu** Rainer Troa, EX, renertroa@gmail.com Eleanor Bors, ECC Seattle, WHOI, ekbors@gmail.com Catriona Munro, WHOI, WHOI, c.munro@ucl.ac.uk Elizabeth Sibert , WHOI, WHOI, esibert@ucsd.edu Jonathan Rose, U. Victoria, U. Victoria, jonmrose@uvic.ca .							

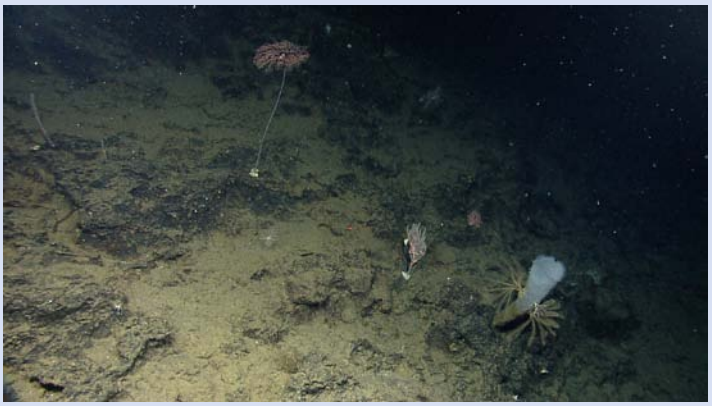
Purpose of the Dive: The goal is to explore a southwestern limb of the seamount ("Gelembung") for evidence of hydrothermal, volcanic, and biological activity, investigating the detected presence of potential seepage putatively discovered by the BJ IV trawling operations; as well as investigate how the fauna on this seamount varies with depth. The dive plan is to start deep (~1380m) on a limb and line, and traverse upslope following this limb to waypoints 2 and continue upslope to the seamount summit.

Description of the Dive:

This dive started by climb up the western leg of the westernmost bifurcating limb, and then headed north to the top of the ridge of this feature. The seafloor was mostly exposed basalt and layering rock with a fine layer of sediment in some regions. Despite the fact that this dive was deeper than the previous dive at this site (EX1004_LEG3_ROV13), the amount of sediment observed here was much lower. A very high abundance and diversity of sessile fauna and its associates was observed in this site. Very high numbers of large sized and healthy organisms of paramuricid, primnoid, isidid, chrysogorgiid, paragorgiid, coralliid and antipatharian corals, and large stalked crinoids were observed throughout the dive. The amount of dead corals was much lower than observed on the previous dive, especially in the case of the isidid whips which were mostly alive and the dead skeletons were not seen covered by the elongated hydroids (see ROV13 dive). Currents were highly variable depending of the position of the ROV in relation to the feature. Very steep walls were commonly encountered. The very high coral dominance presented a shift at the shallower depths where crinoids appeared more abundant. Nonetheless the abundance of corals remained high. No coral rubble or signs of coral damage was observed. Abundance of fish fauna was very low. We found various isidid fan-shaped colonies of remarkably large size (>3x3m). A noteworthy observation was the finding of a very large (2x3m) fan-shaped colony of the scleractinian cf Enallopsamia. The morphology of the branches and polyps of this live coral were very similar to the ones observed in the coral rubble during the past dive. According to Kimball et al. 2008 the vertical extension rate for Enallopsamia is calculated to be 0.15-0.8 mm/yr as measured in samples from Hawaii, 1100m deep. According to these rates the observed colony could then be between 2,500 and 13,300 years old.

Overall Map of ROV Dive Area	Close-up Map of Main Dive Site
	

Representative Photos of the Dive

	
20100806_03h45m48s00_ROVHD_TRERAIN_TRANSITIO The seafloor was mostly exposed basalt and layering rock with a fine layer of sediment in some regions. A very high abundance and diversity of sessile fauna and its associates was observed in this site.	20100806_05h44m45s28_ROVHD_ROCK_LEDGE Very steep walls were commonly encountered. The very high coral dominance presented a shift at the shallower depths where crinoids appeared more abundant. Nonetheless the abundance of corals remained high.

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