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**Purpose of the Dive**

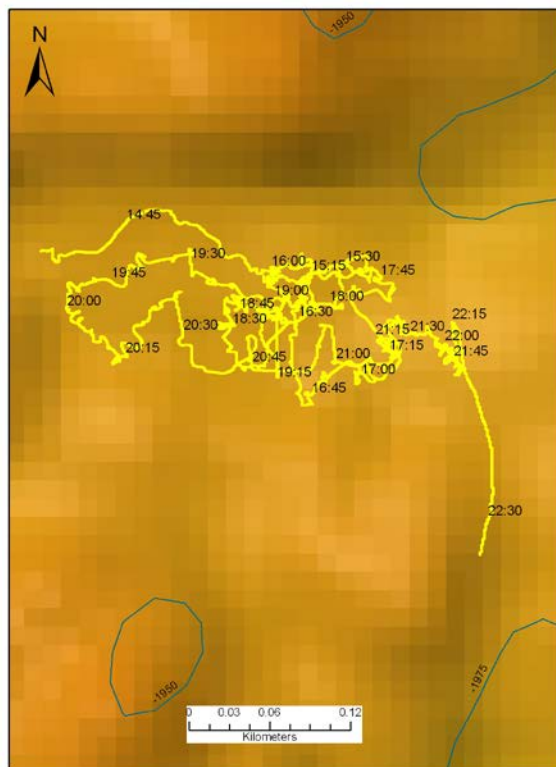
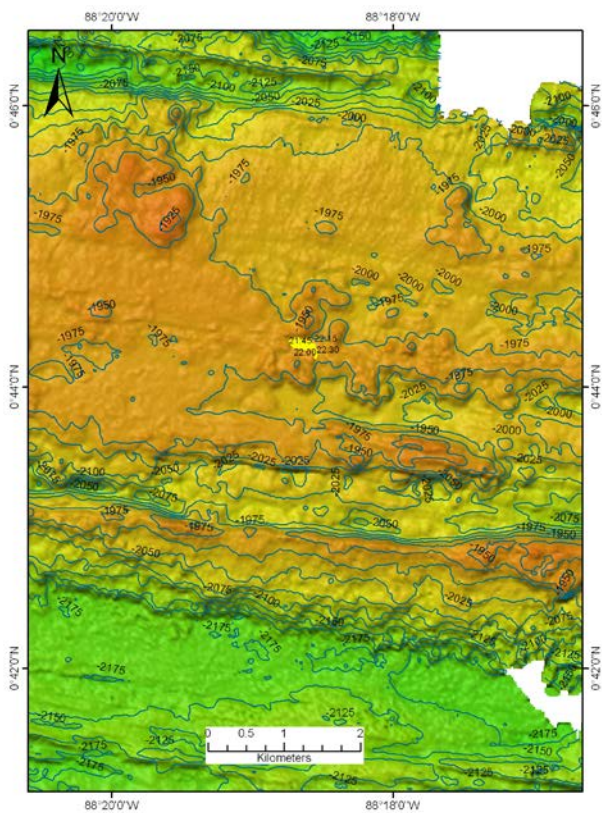
Site 2a has light-scattering properties dozens of meters off the seafloor and a strong hydrothermal plume signal was located here during the first leg of this expedition. The goal of this dive was to explore an area near 1970 meters where fresh lava flows were observed at the end of Dive 02 and to continue exploration for active hydrothermal venting.

**Description of the Dive:**

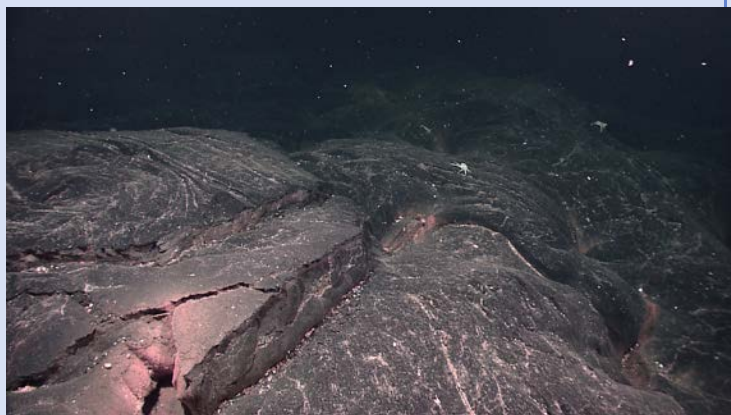
During our third ROV dive on the Galápagos Rift, we continued searching for active hydrothermal vents. We came across recent lobate flow with hydrothermal staining and continued to move SW on this flow toward a ridge. Hydrothermal alteration of pillow lavas appeared more extensive in this region. Once on top of the ridge, there was speculation that this feature was a north-facing broken talus mound or wall and that there would be more hydrothermal activity to the west of our current location. As we moved west, low volume warm venting could be seen and particles in the water that were likely to be bacterial sulfur flocculent. Traversing over younger lava flow on our way north toward "Little Hercules smoke target", we passed a recent lava contact and the water remained murky with no sessile fauna and a decrease in hydrothermal staining. We came upon a 1 m wide fissure, floored with talus and pillow lava on either side and continued to follow the fissure with an increase in sediment, before turning to follow the fissure to the east. Towering hydrothermal sulfide spires appeared, lined west-to-east within the graben; remnants of past black smoker chimneys with scars in the rock where colonies of tubeworms once lived.

**Overall Map of ROV Dive Area**

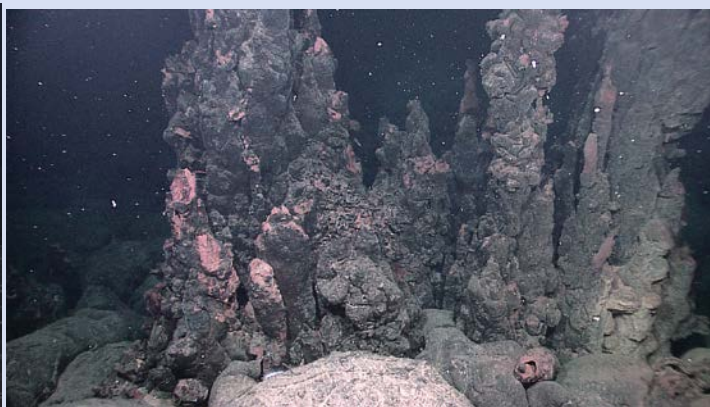
**Close-up Map of Main Dive Site**



**Representative Photos of the Dive**



Lobate flow with hydrothermal staining. Particles in the water that were likely to be bacterial sulfur flocculent



Towering hydrothermal sulfide spires, lined west-to-east within the graben; remnants of past black smoker chimneys with scars in the rock where colonies of tubeworms once lived.

**Please direct inquiries to:**

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