Daily Drilling and Scientific Report for IODP Expedition 357 Atlantis Massif Serpentinization and Life, 2015



8th Nov 00:00 - 24:00 Local Time (-2 GMT)

1. Location

30[°] 8.553' N 42[°] 8.188' W IODP-MSP M0070A Prospectus borehole AM-07A Water Depth: 1140m

2. Science Report

RD2 coring at Hole M0069A (proposal site AM-06A) resulted in ten cores arriving on deck at 08:00. The four uppermost cores consisted of unlithified, fine pelagic carbonate sand with varying degrees of recovery, while cores 5-9 consisted of gabbros and metagabbros with high recovery percentages. Core 10 was trotolitic in composition. Samples for microbiology, geochemistry, contamination testing and OSP thin section billets were collected from cores 4R, 5R, 7R, 9R, and 10R, with the rest of the material archived for OSP sampling. Due to loss of the bottom hole assembly in the hole resulting from loss of drill flushing water, no logging or borehole plugging was attempted at this site. A sensor package on the rock drill collected records of methane, pH, redox, and temperature from the drill fluids; Niskin bottles on the rock drill failed to close but still retained water and were sampled. Bottom water above the drill site was collected with a ship's CTD cast prior to leaving the site.

3. Core Recovery Details

| Hole | M0069A |
|-------------------------------|--------|
| Cores recovered | 10 |
| Drilled length (Coring, m) | 16.44m |
| Drilled length (Open hole, m) | 0 |
| Recovered length (m) | 12.33m |
| Recovery (%) | 75 |

4. Weather

Generally sunny with good visibility and patchy cloud. Sea swell 1 - 2m. Maximum temperature of 26° C. Winds variable, 3 – 5 knots.

Next 24 hours: Fair with maximum sea swell of 2 - 3 m.

5. Planned Activity for the next 24 hours

Continue coring operations at M0070A (AM-07A).

6. Photo of the day



Marum MeBo seabed drill. CarolCotterill@ECORD_IODP