

Preliminary result of the physical properties and downhole measurements during IODP Exp. 360 Indian Ridge Lower Crust and Moho

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IODP Expedition 360 Phase I of the Nature of the Lower Crust and Moho at Slower Spreading Ridges (SloMo) project of a Multi-Leg Drilling Project was conducted drilling into the lower crustal gabbroic rocks at Atlantis Bank, and penetrated from the top of ocean floor to 798.7 mbsf. The cored interval is 742.7m and total recovered core length 469.65 m (63.2% recovery). Olivine gabbro is the dominant lithology of the recovered core samples, followed in gabbro, oxide gabbro, and oxide-bearing gabbro. Lithological variation is small in the core samples. In order to understand the petrophysics of the site, we measured physical properties on the whole round and splitted half sections and, discrete samples and also took three runs of wire-line logging; Triple-combo, FMS and UBI.

Phase II of the SloMo has proposed to drill 6 km through MOHO by the CHIKYU. In the meeting, we would like to present the preliminary results, especially of the petrophysical measurements, of IODP Expedition 360 and the future perspective leading to Phase II of the SloMo, a mantle drilling into ultraslow-spreading ridges.

Keywords: IODP, Moho, SW Indian Ridge, Slow spreading ridge