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Long Term Borehole Measurement System installation using LWD in Exp332

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During Expedition 332, LWD (Logging While Drilling) and MWD (Measuring While Drilling) were conducted at site C0002G in the framework of NanTroSEIZE drilling program. This is the first time challenging program to confirm the location of lithological unit boundaries by use of LWD results comparing with previous drilling efforts in Expedition 314 (C0002A) and 315 (C0002B) in 2007. LWD measurements for Expedition 332 included only resistivity and natural gamma, rather than the comprehensive suite of logging already conducted at site C0002A, located 50-meters East from site C0002G. LWD data can be indicated the boundary between Units II and III, the Quaternary lower Forearc Basin sediments, and Pleistocene Forearc Basin sediments to confirm the depth of lithologic boundaries in order to ensure suitable placement of the LTBMS (Long Term Borehole Monitoring System). The tools included both MWD and LWD capabilities, to enable real-time measurement of drilling parameters as well as storing data for retrieval when tools reach the surface. Measurements are made during drilling operations. The array resistivity system has 2 receivers and 5 transmitters with 2MHz and 400 kHz frequencies. They can be provided both natural gamma ray and resistivity values in memory and real time modes in combined with MWD tool with high quality.

Keywords: Logging while drilling, CDEX, D/V Chikyu, IODP, NanTroSEIZE, LTBMS