



Gas hydrates beneath the Tuaheni Landslide Complex, New Zealand. First results from IODP Expedition 372

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The Tuaheni Landslide Complex (TLC) on the Hikurangi Margin was drilled during IODP Expedition 372 with logging-while-drilling (LWD) and coring at Site U1517. The TLC is slowly deforming (“creeping”) and, based on seismic images, known to be underlain by gas hydrates. The overarching goal at U1517 was to establish if and how hydrates are linked to creeping. We logged 205 m beneath the seafloor (mbsf) with LWD and achieved almost full core recovery down to 190 mbsf, below the base of the gas hydrate stability zone. We constrained gas hydrate saturation from LWD data, mainly based on resistivity and sonic velocities. Gas hydrate saturation was also determined from Cl⁻ anomalies in samples that were selected immediately after coring using infrared images. We here present first results from this expedition.