

Figure F1. Location of Expedition 400 drill sites. A BSR is an indicator of gas hydrate on seismic data.

Figure F2. Downhole logs, Hole U1603D, and core data, Site U1603. Gray interval = steel drill pipe stabilizing the borehole; log data are not valid in this interval. Track 1: gamma ray and caliper logs. Track 2: bulk density (red) and corrected bulk density (blue) and MAD bulk density from core (black). Track 3: laterolog resistivity measurements for several depths of penetration into the formation. RLA 1 is the shallowest, and RLA 5 is the deepest. Track 4: RLA 5 (purple); this is the main resistivity log for hydrate assessment. Background resistivity is calculated using Archie's equation (black). Track 5: *P*-wave velocity. Tracks 6 and 7: methane concentration from gas chromatography (orange) and pore water salinity (black).

Figure F3. Downhole logs, Hole U1604B, and core data, Site U1604. Gray interval = steel drill pipe stabilizing the borehole; log data are not valid in this interval. Track 1: gamma ray and caliper logs. Track 2: bulk density (red) and corrected bulk density (blue) and MAD bulk density from core (black). Track 3: laterolog resistivity measurements for several depths of penetration into the formation. RLA 1 is the shallowest, and RLA 5 is the deepest. Track 4: RLA 5 (purple); this is the main resistivity log for hydrate assessment. Background resistivity is calculated using Archie's equation (black). Track 5: *P*-wave velocity. Tracks 6 and 7: methane concentration from gas chromatography (orange) and pore water salinity (black).

Figure F4. Downhole logs, Hole U1607A, and core data, Site U1607. The BHSZ corresponding to the geothermal gradient of 40 °C/km is at 271 mbsf and for 59 °C/km is at 166 mbsf. Gray interval = steel drill pipe stabilizing the borehole; log

data are not valid in this interval. Track 1: gamma ray and caliper logs. Track 2: bulk density (red) and corrected bulk density (blue) and MAD bulk density from core (black). Track 3: laterolog resistivity measurements for several depths of penetration into the formation. RLA 1 is the shallowest, and RLA 5 is the deepest. Track 4: RLA 5 (purple); this is the main resistivity log in the hydrate assessment. Background resistivity is calculated using Archie's equation (black). Track 5: *P*-wave velocity. Tracks 6 and 7: methane concentration from gas chromatography (orange) and pore water salinity (black).

Figure F5. Downhole logs, Hole U1608A, and core data, Site U1608. The BHSZ corresponding to the geothermal gradient of 40 °C/km is at 223 mbsf and for 59 °C/km is at 133 mbsf. Gray interval = steel drill pipe stabilizing the borehole; log data are not valid in this interval. Track 1: gamma ray and caliper logs. Track 2: bulk density (red) and MAD bulk density from core (black). Track 3: laterolog resistivity measurements for several depths of penetration into the formation. RLA 1 is the shallowest, and RLA 5 is the deepest. Track 4: RLA 5 (purple); this is the main resistivity log for hydrate assessment. Background resistivity is calculated using Archie's equation (black). Track 5: *P*-wave velocity. Tracks 6 and 7: methane concentration from gas chromatography (orange) and pore water salinity (black).

Figure F6. Core data, Site U1606. No downhole logging data were acquired at this site. The BHSZ corresponding to the geothermal gradients of 40 °C/km at 237 mbsf and 59 °C/km at 142 mbsf. Track 1: natural gamma radiation core data. cps = counts per second. Track 2: gamma ray attenuation (GRA) bulk density (red) and MAD density (black). Track 3: methane concentration from gas chromatography. Track 4: pore water salinity.