Figure F1. IODP convention for naming sites, holes, cores, and samples, Expedition 405.

Figure F2. Core processing and measurement flow, Expedition 405. PAL = micropaleontology, WR = whole round, PWV = *P*-wave velocity, DPWV = discrete *P*-wave velocity, IMP = impedance analyzer, Alk = alkalinity, DA = discrete analyzer, IC = ion chromatograph, CA = carbonate analyzer, EA = elemental analyzer, RMS = routine microbiological sample.

Figure F3. LWD BHA, Expedition 405. APWD = annular pressure while drilling, PDC = polycrystalline diamond compact, D+I = deviation and inclination.

Figure F4. Electrical configurations for the various electrical resistivity measurements of the MicroScope tool. DOI = depth of investigation.

Figure F5. Lithologic symbols used in J-CORES for visual core description, Expedition 405.

Figure F6. Visual chart used to estimate optical mineral abundances, Expedition 405.

Figure F7. Ternary diagrams of sediment composition and grain size, Expedition 405. Modified from Folk (1954) and Expedition 308 Scientists (2006).

Figure F8. Core reference frame for visual core description and XCT and *xyz* coordinates used in calculation of orientation data, Expedition 405. Orientations of planar features identified in CT scans can be calculated from trend and plunge (α and β) of lineation formed by intersection of plane with slice and coronal CT images. α_1 = angle between 000° and intersection of plane with slice CT image (plane perpendicular to core axis), β_1 = 0°, β_2 = plunge of intersection of planar feature with coronal CT image and α_2 = 90° or 270°.

Figure F9. Log sheet used to record structural data and observations from working halves, Expedition 405.

Figure F10. Modified protractor used to measure apparent dips, trends, plunges, and rakes on planar and linear features, Expedition 405.

Figure F11. Spreadsheet used for recording and calculating orientation data, Expedition 405.

Figure F12. Calculation of orientation of plane (shaded) from two apparent dips, Expedition 405. Intersections of split core surface and section perpendicular to split core surface and parallel to core direction with plane of interest are shown. (α_1, β_1) and (α_2, β_2) = azimuths and apparent dips of traces of plane on two sections, v_1 and v_2 = unit vectors parallel to traces of plane on two sections, v_n = unit vector normal to plane.

Figure F13. Dip direction (α_d), right-hand rule strike (α_s), and dip (β) of a plane deduced from its normal azimuth (α_n) and dip (β_n), Expedition 405. A. $\beta_n < 0°$. B. $\beta_n \geq 0°$. v_n = unit vector normal to plane.

Figure F14. Apparent rake (ϕ_a) measurement of slickenlines on a fault surface from 270° direction of split core surface trace, Expedition 405. v_n = unit vector normal to fault plane, v_c = unit vector normal to split core surface, v_i = unit vector parallel to intersection line between fault plane and split core surface.

Figure F15. Rake of slickenlines (ϕ) deduced from rake of intersection line between fault plane and split core surface (ϕ_i) and apparent rake measured (ϕ_a), Expedition 405. A. ϕ_a from top or 090° direction when fault plane dips toward 270°. B. ϕ_a from bottom or 090° direction when fault plane dips toward 90°. C. ϕ_a from top or 270° direction when fault plane dips toward 90°. D. ϕ_a from bottom or 270° direction when fault plane dips toward 270°. α_s = right-hand rule strike of fault plane, v_n = unit vector normal to fault plane, v_c = unit vector normal to split core surface, v_i = unit vector parallel to intersection line between fault plane and split core surface.

Figure F16. Azimuth correction based on paleomagnetic data, Expedition 405. A. Paleomagnetic inclination $\beta_p \geq 0°$. B. $\beta_p < 0°$. α_p = paleomagnetic declination, α_d and α_s = dip direction and right-hand rule strike of a plane.

Figure F17. Correlation of Neogene chronostratigraphy, diatom and radiolarian biostratigraphy, and magnetostratigraphy, Expedition 405. Correlation of magnetic polarity record and epoch boundaries follows that of Gradstein et al. (2020). Diatom zonal scheme follows Yanagisawa and Akiba (1998). Radiolarian zonal scheme and biochronology follow basically those of Kamikuri (2017) and Motoyama et al. (2004) and partly those of Kamikuri et al. (2004, 2007) and Shilov (1995). LO = last occurrence, FO = first occurrence, LCO = last common occurrence, FCO = first common occurrence, RI = rapid increase, RD = rapid decrease.

Figure F18. Paleomagnetic sample coordinate systems (modified after Richter et al., 2007) used for IODP samples and sections, Expedition 405.

Figure F19. GPTS, Expedition 405. Age estimates from Speijer (2020).

Figure F20. Core reference frame used for physical property sampling, Expedition 405.

Figure F21. Repeat electrical resistivity measurements of the standard rock cube (inset) in the *x*-, *y*- and *z*-directions, Expedition 405. Values vary within 15%–20% of the average. Higher variability in late October led to the identification of a wiring issue that was subsequently addressed.

Figure F22. Equipment for ASR measurement, Expedition 405. A. 18 strain gauges on a core sample. B. Double-bagged core sample. C. Instruments for ASR measurement.

Figure F23. APCT-3 formation temperature sensor deployment during HPCS operations, Expedition 405. (From Wallace et al., 2019.)

Figure F24. MTL hanger, Expedition 405.

Figure F25. 12 mm Vectran line, Expedition 405. A. Spliced end-loop along line. B. Attachment eye seized along line.

Figure F26. Weak links, Expedition 405. A. Large weak link. B. Small weak link. Different sizes allow for a wide range of tensile strength possibilities to be achieved by adjusting the number of loops threading pieces together. C. Two hard link carabiners and cotter pins used along with Lock-Tite on the threads to prevent reopening.

Figure F27. Temperature-sensing data loggers, Expedition 405. A. Temperature sensor instruments ready for attachment. B. An open RBR Solo^3 T instrument, revealing its internal components, including battery, silica desiccant, and USB-C port for programming and data retrieval.

Figure F28. Sinker bar, Expedition 405. A. Two sections joined together to form a 400 kg sinker bar. B. Short sinker bar.

Figure F29. Process of attaching sensors, Expedition 405. A. Identify appropriate sensor for a designated depth. B. Secure sensor to seizing on Vectran line with a double fisherman's knot attachment loop. C. Adjust loop size to ensure the bottom of the sensor is positioned at specified depth upon installation. D. Prepare 3 mm thick nitrile rubber sheeting to cover the sensor. E. Secure rubber sheeting with zip ties. F. Reinforce rubber sheeting with Gorilla All Weather Outdoor Waterproof Duct Tape. G. Wrap attachment loop to Vectran line using white 3M Super 33+ Electrical Tape to create a smooth snag-free profile. H. Cover the entire rubber sheeting with black 3M Super 33+ Electrical Tape to create a smooth profile. I. Add red 3M Super 33+ Electrical Tape to center of rubber sheeting for identification and labeling.