Figure F1. Site U1532 on northwestern segment of Seismic Line AWI-20100130, which crosses Resolution Drift. Seismic horizons at the bases of the Pleistocene and Pliocene were preliminarily identified from core records. Estimated age of the horizon at the base of Unit ASR-II is from Uenzelmann-Neben and Gohl (2014). CDP = common depth point.

Figure F2. Distribution of Holes U1532A–U1532G. See Figure F1 in the Expedition 379 summary chapter (Gohl et al., 2020b) for regional location map.

Figure F3. Free-fall reentry system deployed in Hole U1532G. Two reentries of this system documented that it settled substantially into the seafloor. Although the second reentry was successful, the cone was not visible. Numerous attempts were made before we were able to get the bit into the hole.

Figure F4. Composite lithostratigraphic summary, Holes U1532A–U1532D and U1532G. Major lithologies are divided into Subunits IA–IC based on changes in facies assemblages. MS = magnetic susceptibility.

Figure F5. Facies F1–F6 and Subfacies F1.1, F2.1, and F2.2 in Holes U1532A, U1532C, and U1532G. A. Color-banded silty clay to clay (Facies F1; 379-U1532A-4H-6A, 81–92 cm). B. Color-banded silty clay to clay with very thin bedded sandy silt (Subfacies F1.1; 379-U1532A-3H-5A, 84–95 cm). C. Thinly laminated silty clay to clay (Facies F2; 379-U1532C-2F-1A, 48–59 cm). D. Silty clay to clay with laminated to very thinly bedded sandy silt (Subfacies F2.1; 379-U1532C-16F-2A, 94–105 cm). E. Thinly laminated silty clay to clay with normal grading (Subfacies F2.2; 379-U1532G-25R-2A, 54–65 cm). F. Silty clay to clay with fanning laminations (Subfacies F2.2; 379-U1532G-16R-1A, 38–49 cm). G. Massive to bioturbated silty clay to clay with coarse sand and granules (Facies F3; 379-U1532C-2F-2A, 80–91 cm). H. Sandy mud with dispersed clasts to clast-poor muddy diamict (Facies F4; 379-U1532C-6F-1A, 39–50 cm). I. Biosilica-rich clay (Facies F5; 379-U1532A-2H-2A, 56–67 cm). J. Foraminifer-rich mud (Facies F6; 379-U1532A-1H-2A, 16–27 cm).

Figure F6. X-radiograph and core images of drilling disturbance examples, Hole U1532C. A. Bowed laminae (16F-1A, 118–132 cm). B. Fall-in at the top of the core (26X-1A, 0–13 cm). C. Suck-in or flow-in (9F-2A, 120–134 cm). D. Biscuited intervals (24X-1A, 109–124 cm).

Figure F7. Thin section examples, Holes U1532C, U1532D, and U1532G. A. Thin clay laminations identified by higher birefringence in cross-polarized light (Facies F3; 379-U1532D-2R-4, 135–138 cm). B. Normally graded silt to clay (Subfacies F2.2; 379-U1532G-14R-7, 25–28 cm). C. Carbonate-cemented sandstone clast with discrete grains and diatom fragment (379-U1532C-11F-1, 2–5 cm). D. Soft-sediment clast composed of clay- to sand-sized material (Facies F2; 379-U1532G-18R-2, 73–75 cm).

Figure F8. X-radiograph and core images of representative facies associations in Subunits IA–IC, Holes U1532A, U1532C, and U1532G. A. Color-banded silty clay to clay in Subunit IA with silt laminae to thin beds that gradually transition into massive silt to clay (Subfacies F1.1 and Facies F3; 379-U1532A-4H-5A, 6–40 cm). B. Massive sandy silt to silty clay in Subunit IB with an upward increase in clast abundance abruptly overlain by thinly laminated silty clay to clay (Facies F3, F4, and F2; 379-U1532C-6F-1A, 25–60 cm). C. Silty clay to clay in Subunit IC with thin planar horizontal laminations and intervals of silty clay interlaminated with coarser silt (Facies F2 and Subfacies F2.2; 379-U1532G-6R-3, 25–63 cm). Darker layers in the X-radiograph correspond to coarser silt laminations cemented with carbonate. Patchy discolorations in the X-radiograph reflect core disturbance along the core liner, rather than structural features.

Figure F9. Facies associations in (A) Subunit IA (379-U1532A-2H), (B) Subunit IB (379-U1532B-8H), and (C) Subunit IC (379-U1532G-44R). Downcore facies changes often correspond with changes in MS. Note that A, B, and C are each at a different length scale. (This figure is also available in an **oversized format**.)

Figure F10. Clasts ranging in size from 0.7 to 4.5 cm, Holes U1532C, U1532D, and U1532G. A. K-feldspar granite and diorite (379-U1532C-18F-1A, 30–32 cm). B. Gray biotite granite and diorite (379-U1532C-25X-1A, 0–8 cm). C. Sandstone (379-U1532C-33X-2A, 38–40 cm). D. K-feldspar granite (379-U1532D-2R-4A, 135–136 cm). E. Diatomite (379-U1532G-9R-4A, 126–127 cm). F. Felsic porphyry (379-U1532G-45R-1A, 48–51 cm). G. Diorite and felsic porphyry (379-U1532G-45R-1A, 48–51 cm).

Figure F11. Adapted QKF ternary diagram summarizing the rock (mineral) type abundances determined from selected Facies F3 and F4 intervals containing abundant granules and clasts (379-U1532B-8H-4A and 379-U1532C-6F-1A and 7F-4A) and coarse fraction extracted from core catcher material (379-U1532G-30R-CC). For each interval, 250 grains of 0.5 to 1.5 mm (long axis) were identified by type and counted. Also plotted is the result from a granule and pebble fraction extracted from Ghost Core 379-U1532G-38G collected while reaming back to the bottom of the hole. Q = milky, gray, and transparent quartz, K′ = granite grains and K-feldspar fragments, F = Fe-Mg silicate minerals and Fe oxide/ferrohydroxide grains.

Figure F12. Physical properties, clay mineral percentages, and illite chemistry (Esquevin index; Esquevin, 1969), Site U1532.

Figure F13. X-radiograph and core images of a possible lag deposit caused by winnowing at the Facies F3/F2 boundary (379-U1532B-5H-2, 52–80 cm) inferred from an upward increase in coarser material toward this boundary.

Figure F14. Relative abundance of microfossils, Holes U1532A–U1532D and U1532G. Definitions of abundance codes for each fossil group are provided in Biostratigraphy in the Expedition 379 methods chapter (Gohl et al., 2020a).

Figure F15. Foraminifers and ostracods, Hole U1532A. A–C. *Neogloboquadrina pachyderma* (3H-6W, 95–97 cm). D. *Cibicides grossepunctatus* (1H-2W, 38–40 cm). E. *Melonis sphaeroides* (3H-6W, 95–97 cm). F. *Textularia antarctica* (1H-CC). G. *Henryhowella caligo* (1H-2W, 38–40 cm). H. *Stainforthia concave* (1H-2W, 38–40 cm). I. *Lagena* sp. (1H-CC).

Figure F16. Paleomagnetic data, Holes U1532A–U1532D and U1532G. Inclination: gray dots = NRM values, red line = values after 20 mT AF demagnetization and "cleaning" for disturbed sediment intervals, green circles = values obtained from discrete sample analysis. Polarity: black = normal, white = reversed, gray = unidentified. For reasons of clarity, not all correlation lines between the magnetic polarity zones of Site U1532 and the GTS2012 (Gradstein et al., 2012) are shown here. They are listed in Table T16.

Figure F17. Inclination values of NRM and after 20 mT AF demagnetization from pass-through paleomagnetic measurements of sediments, Holes U1532A–U1532D and U1532G. Vertical dashed lines = inclination according to a GAD at Site U1532.

Figure F18. Vector endpoint demagnetization diagrams (Zijderveld, 1967) and equal area projection of NRM directions and AF demagnetization behavior for two representative discrete samples, Holes U1532B and U1532C. Blue lines = components fitted by PCA (Kirschvink, 1980) to the selected data points (red squares). Data are presented by using PuffinPlot software (Lurcock and Wilson, 2012).

Figure F19. Summary of AMS data for discrete samples, Holes U1532A–U1532D and U1532G. Mean directions: square = $\kappa_{max}$, triangle = $\kappa_{int}$, circle = $\kappa_{min}$. Plots show the degree of anisotropy ($\kappa_{max}/\kappa_{min}$) versus mean (bulk) magnetic susceptibility ($K_m$) and the corresponding lineation ($\kappa_{max}/\kappa_{int}$) versus foliation ($\kappa_{int}/\kappa_{min}$) data from each hole. (Continued on next page.)

Figure F19 (continued).

Figure F20. Normalized IRM versus applied DC field for six representative samples, Holes U1532A–U1532C. Saturation of IRM is reached in fields of 0.2–0.4 T.

Figure F21. Distribution of core mean declinations and corrected mean declinations of APC cores, Holes U1532A and U1532B. The expected corrected declination is 0°; however, a moderate bias to westerly directions is still visible after correction by the Icefield MI-5 core orientation tool data.

Figure F22. Age-depth model for Site U1532 based on integrated biomagnetostratigraphy. Paleomagnetic inclination values were obtained from cryogenic magnetometer analysis of archive halves after 20 mT AF demagnetization and cleaning for disturbed sediment intervals. Orange circles = inclination values from discrete sample analysis. Polarity: black = normal, white = reversed, and gray = indeterminate (because of lack of recovery, major sediment disturbance, or other limitations). Blue arrows = tie points for diatom biostratigraphic datums, maroon arrows = radiolarian biostratigraphic datums, red crosses = magnetostratigraphic datums. Open arrows = "younger than" or "older than" biostratigraphic age constraints, solid arrows = true first appearance datum or last appearance datum. Linear sedimentation rates (green line) are calculated between tie points. Gray numbers = sedimentation rates between each tie point. See Table T10 for biostratigraphic datums (blue and maroon ID codes) and Table T16 for polarity reversal events (red ID codes). (This figure is also available in an **oversized format**.)

Figure F23. Interstitial water salinity, Cl, and Na, Holes U1532A–U1532C and U1532G.

Figure F24. Interstitial water sulfate, alkalinity, ammonium, and phosphate, Holes U1532A–U1532C and U1532G.

Figure F25. Interstitial water Ca, Mg, and K, Holes U1532A–U1532C and U1532G.

Figure F26. Interstitial water Sr, Li, Mn, Fe, B, Ba, and silica, Holes U1532A–U1532C and U1532G.

Figure F27. Light hydrocarbons and methane/ethane ratios in sediments, Holes U1532A–U1532C and U1532G.

Figure F28. Carbon, nitrogen, sulfur, and TOC/TN, Holes U1532A–U1532D and U1532G.

Figure F29. PMCH concentrations, Holes U1532A, U1532C, and U1532G. Yellow = core exterior samples, blue = interior samples. No samples from APC cores between 30 and 260 m were collected. DF = drilling fluid.

Figure F30. Whole-round physical property measurements, Holes U1532A–U1532D and U1532G.

Figure F31. Comparison of WRMSL (black solid line) and point SHMSL (colored dots) MS, Holes U1532A–U1532D and U1532G.

Figure F32. MS, GRA bulk density, and NGR values in greenish gray intervals (green shading), Holes U1532B and U1532G.

Figure F33. Mass-normalization of WRMSL MS data using GRA bulk density, Holes U1532A–U1532D and U1532G.

Figure F34. Mass-normalization of whole-round NGR data using GRA bulk density, Holes U1532A–U1532D and U1532G.

Figure F35. Comparison of WRMSL GRA bulk density (colored lines) to discrete sample MAD, Holes U1532A–U1532D and U1532G.

Figure F36. MAD data, Holes U1532A–U1532D and U1532G.

Figure F37. *P*-wave velocity, Holes U1532A–U1532D and U1532G. Dots = WRMSL PWL.

Figure F38. Thermal conductivity, Holes U1532A–U1532D and U1532G. Horizontal bars represent ±1σ. When bars are not visible, this indicates that the uncertainty is about the same as the length of the point.

Figure F39. SHMSL color reflectance, Holes U1532A–U1532D and U1532G.

Figure F40. A. Formation temperature data from the APCT-3, Holes U1532A and U1532B. Measured temperature data for time intervals indicated by open circles ($t_i$ to $t_f$) were used to calculate asymptotic equilibrium temperatures at depth (solid circles). B. Calculated equilibrium temperatures shown with linear regression representing a geothermal gradient ($dT/dz$) of 54°C/m and geothermal heat flux ($G$) of 60.2 $mW/m^2$.

Figure F41. Correlation of WRMSL MS, Holes U1532A and U1532B.

Figure F42. Correlation of WRMSL MS, Holes U1532B and U1532C.

Figure F43. Correlation of WRMSL MS, Holes U1532C, U1532D, and U1532G.