Figure F1. Coring systems used during Expedition 378. APC = advanced piston corer, HLAPC = half-length APC, XCB = extended core barrel, RCB = rotary core barrel.

Figure F2. Depth scales used during Expedition 378. DRF = drilling depth below rig floor, DSF = drilling depth below seafloor, CSF-A = core depth below seafloor (Method A), CCSF = core composite depth below seafloor, WRF = wireline log depth below rig floor, WSF = wireline log depth below seafloor, WSSF = wireline log speed-corrected depth below seafloor, WMSF = wireline log matched depth below seafloor.

Figure F3. Example visual core description summarizing data from core imaging, macroscopic and microscopic description, and physical property measurements, Expedition 378. GRA = gamma ray attenuation, cps = counts per second.

Figure F4. Symbols used for visual core descriptions, Expedition 378.

Figure F5. Classification for siliciclastic sediments/rocks without gravel, Expedition 378. A. Pelagic biogenic-siliciclastic diagram modified from the Expedition 318 classification scheme (Expedition 318 Scientists, 2011). B. Ternary diagram for terrigenous clastic sediments composed of >50% siliciclastic material (after Shepard, 1954; Jaeger et al., 2014).

Figure F6. Procedure for staining thin sections to reveal carbonate composition using potassium ferricyanide and Alizarin Red S (Dickson, 1965). A. Laboratory setup for staining. B. Stained thin section billet. Pink areas indicate calcite. C. Example carbonate-rich sandstone that contains calcite. TS = thin section. D. Example limestone that contains ferroan calcite, dolomite, and ferroan dolomite/ankerite.

Figure F7. Global and New Zealand chronostratigraphy and datums used during Expedition 378. Calcareous nannofossil, planktonic foraminifer, and radiolarian zonation schemes for 0–66 My interval are shown. T = top, B = base, Bc = base common, Tc = top common, X = evolutionary transition. (Continued on next page.)

Figure F8. A. IODP coordinates for paleomagnetic samples (after Richter et al., 2007). B. Natsuhara-Giken sampling cubes (7 cm^3 volume) with sample coordinate system; hatched red arrow is parallel to the up arrow on the sample cube and points in the *Z*-direction. C. Measurement positions in the JR-6A spinner magnetometer. D. Coordinate system used for the superconducting rock magnetometer on board *JOIDES Resolution*.

Figure F9. Whole-Round Multisensor Logger. The Special Task Multisensor Logger is almost identical and only excludes the *P*-wave logger. The water standard is measured at the end of each core for QA/QC purposes.

Figure F10. Natural Gamma Radiation Logger for whole-round cores. It conducts 8 measurements at a time in 2 positions, resulting in 16 measurements per core when measuring at both positions.

Figure F11. Main components of the Natural Gamma Radiation Logger (after Vasiliev et al., 2011).

Figure F12. Thermal conductivity TK04 (Teka Bolin) system showing the insulated case in which the thermal conductivity measurements were obtained.

Figure F13. Section Half Multisensor Logger used for high-resolution color reflectance measurements and discrete magnetic susceptibility measurements along archive halves. Ocean Optics USB4000 spectrophotometer and magnetic susceptibility point sensor.

Figure F14. A. Section Half Measurement Gantry showing the *x*-axis caliper and *y*- and *z*-axis bayonets used to measure *P*-wave velocity on working halves of soft-sediment cores or discrete samples of indurated sediment. B. *x*-axis caliper tool in closed position. C. Different axes in working halves.

Figure F15. A. Drying oven and balances. B. Pycnometer used to measure volume of dry samples in small vials for discrete soft-sediment samples.