Figure F1. IODP convention for naming sites, holes, cores, sections, and samples. Ship positioning while coring was primarily accomplished with only GPS data; seafloor beacons were only prepared and ready for deployment if needed.

Figure F2. Coring systems used during Expedition 383 (see Graber et al., 2002). A. APC system. ID = inside diameter, OD = outside diameter. (Continued on next two pages.)

Figure F3. Overall flow of cores, sections, analyses, and sampling, Expedition 396. WRMSL = whole-round multisensor logger, NGR = natural gamma radiation, ICP-AES = inductively coupled plasma–atomic emission spectroscopy, IC = ion chromatography, SP = spectrophotometry, TC = total carbon, TOC = total organic carbon, TN = total nitrogen, TS = total sulfur, $CaCO_3$ = calcium carbonate, XRD = X-ray diffraction.

Figure F4. Core description workflow, Expedition 396.

Figure F5. Example of hole summary VCD, Hole U1566A. cps = counts per second.

Figure F6. Graphic lithology and symbols used for VCDs and hole summaries, Expedition 396. (Continued on next page.)

Figure F7. Graphic lithology used for finalized lithostratigraphic columns, Expedition 396.

Figure F8. Sedimentary (siliciclastic and biogenic) and volcaniclastic lithology naming conventions based on relative abundances of grain and clast types, Expedition 396. Principal lithologic names are required for all intervals. Prefixes and suffixes are optional and can be combined with any principal name. First-order division is based on amount of carbonate, chemical, and biogenic components present. If >50% of the sediment is carbonate, chemical, or biogenic, the corresponding principal names are used (blue boxes). For sediments with <50% carbonate, chemical, or biogenic components (yellow boxes), a second-order division is applied based on abundance of volcanic-derived grains and clasts. For volcanic sediments with >50% volcanic clasts and grains, the principal name "ash" is used, or they are described as extrusive (see Figure F10). When nonvolcanic siliciclastic sediment dominates, Wentworth (1922) grain size classification is used to determine the principal name. For siliciclastic sediments, the prefix "volcaniclastic" refers to sediments with 25%–50% volcanic clasts and grains, and the suffixes "with lapilli," "with ash," and "with volcanic clasts" may be applied to siliciclastic sediments with 10%–25% volcanic clasts and grains.

Figure F9. Udden-Wentworth grain size classification of terrigenous sediment. Modified from Wentworth (1922).

Figure F10. Igneous lithology naming conventions, Expedition 396. Principal lithologic names are required and based on the IUGS system (Le Maitre, 1989). Prefixes and lithologic unit types are optional.

Figure F11. Comparison chart for describing vesicle sphericity and roundness in volcanic rocks, Expedition 396. After Sun et al. (2018); modified from Wentworth (1922).

Figure F12. Vein description scheme, Expedition 396. Modified from Sun et al. (2018).

Figure F13. (A, B) pXRF and shielded sample analysis assembly, Expedition 396.

Figure F14. Example of the structural geology observation sheet used during Expedition 396.

Figure F15. Goniometer and plastic protractor template used to measure dip and dip direction of structures, Expedition 396.

Figure F16. Core reference frame and coordinates used in orientation data calculation, Expedition 396.

Figure F17. 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). v_n = unit vector normal to corresponding plane. A. $\beta_n < 0°$. B. $\beta_n > 0°$.

Figure F18. Azimuth correction based on paleomagnetic data, Expedition 396. α_p = paleomagnetic declination, α_d = dip direction of a plane, α_s = right-hand rule strike of a plane. A. $\beta_p > 0°$. B. $\beta_p < 0°$.

Figure F19. A. Coordinate systems for IODP paleomagnetic samples. B. Natsuhara-Giken sampling box (7 cm^3) with cube coordinate system. Red hatched arrow is parallel to up arrow on sample cube and points in $-z$-direction. C. Coordinate system used for the SRM on *JOIDES Resolution*. D. Measurement positions in AGICO JR-6A spinner magnetometer. E. Example of sawn discrete cube sample and discrete sample in plastic Natsuhara-Giken sampling box.

Figure F20. Calibration curves for elements analyzed using pXRF, Expedition 396.

Figure F21. BHVO-2 composition over time, Expedition 396. Plotted concentrations are corrected values using the calibration curves.

Figure F22. Workflows for soft and hard rocks and examples of different samples used for analyses, Expedition 396.

Figure F23. WRMSL. The water standard measured at the end of each core is for QA/QC purposes.

Figure F24. NGRL.

Figure F25. Shipboard station for measuring thermal conductivity on whole rounds and section halves. Samples are measured in the insulated box with the lid closed to promote stable thermal equilibration prior to measurement.

Figure F26. XMSL.

Figure F27. SHMG for measuring *P*-wave velocity. Gantry X-caliper = PWC.

Figure F28. MAD analyses equipment. A. Desiccator and dual balance system. Drying oven is located below the desiccator. B. Pycnometer used for volume measurements of dry samples.

Figure F29. Downhole logging tool string schematics, Expedition 396. The VSI was only deployed at Site U1566. EDTC = Enhanced Digital Telemetry Cartridge, HNGS = Hostile Environment Natural Gamma Ray Sonde, HLDS = Hostile Environment Litho-Density Sonde, HRLA = High-Resolution Laterolog Array, MSS = Magnetic Susceptibility Sonde, FMS = Formation MicroScanner, DSI = Dipole Sonic Imager, GPIT = General Purpose Inclinometry Tool.