Figure F1. New sedimentary and volcaniclastic lithology naming conventions based on relative abundances of grain and clast types. Principal lithology names are compulsory for all intervals. Prefixes are optional except for tuffaceous lithologies. Suffixes are optional and can be combined with any combination of prefix/principal name. First-order division is based on abundance of volcanic-derived grains and clasts: >25% volcanic grains is of either "volcanic" (>75% volcanic grains; named from grain size classification of Fisher and Schmincke, 1984 [orange]) or "tuffaceous" (25%–75% volcanic grains). Tuffaceous lithologies: if dominant nonvolcanic grain component is siliciclastic, the grain size classification of Wentworth (1922; green) was used; if not siliciclastic, it is named by the dominant type of carbonate, chemical, or biogenic grain (blue). Lithologies with 0%–25% volcanic grains are classified as "nonvolcanic" and treated similarly to tuffaceous lithologies: when nonvolcanic siliciclastic sediment dominates, the grain size classification of Wentworth (1922; green) is used; when the combined carbonate, other chemical, and biogeneic sediment dominate, the principal lithology is taken from the dominant component type (blue). Closely intercalated intervals can be grouped as domains to avoid repetitive entry at the small-scale level.

Figure F2. Visual interpretation of core disturbances in semilithified and lithified rocks in 350-U1437B-43X-1A, 50–128 cm (left), and 350-U1437D-12R-6A, 34–112 cm (right).

Figure F3. Ternary diagram of volcaniclastic grain size terms and their associated sediment and rock types (modified from Fisher and Schmincke, 1984).

Figure F4. Visual representations of sorting and rounding classifications.

Figure F5. A. Tuff composed of glass shards and crystals described as sediment in DESClogik (350-U1437D-38R-2; TS20). B. Lapilli-tuff containing pumice clasts in a glass and crystal matrix (29R; TS10). The matrix and clasts are described as sediment, and the vitric and lithic clasts (>2 mm) are additionally described as extrusive or intrusive as appropriate. Individual clasts or a population of clasts can be described together.

Figure F6. Classification of plutonic rocks following Le Maitre et al. (2002). A. Q-A-P diagram for leucocratic rocks. B. Plagioclase-clinopyroxene-orthopyroxene triangular plots and olivine-pyroxenes-plagioclase triangle for melanocratic rocks.

Figure F7. Classification of vesicle sphericity and roundness (adapted from the Wentworth [1922] classification scheme for sediment grains).

Figure F8. Example of a standard graphic summary showing lithostratigraphic information.

Figure F9. Lithology patterns and definitions for standard graphic summaries.

Figure F10. Symbols used on standard graphic summaries.

Figure F11. Working curve for shipboard pXRF analysis of Y. Standards include JB-2, JB-3, BHVO-2, BCR-2, AGV-1, JA-2, JR-1, JR-2, and JG-2 with Y abundances between 18.3 and 86.5 ppm. Intensities of Y Kα were peak-stripped for Rb Kβ using the approach of Gásquez et al. (1997). All characteristic peak intensities were normalized to the Ag Compton intensity. Counting errors are reported as 1σ.

Figure F12. Reproducibility of shipboard pXRF analysis of JB-2 powder over an ~7 week period in 2014. Errors are reported as 1σ equivalent to the observed standard deviation.

Figure F13. Accuracy of shipboard pXRF analyses relative to international geochemical rock standards (solid circles; Govindaraju, 1994) and shipboard ICP-AES analyses of samples collected and analyzed during Expedition 350.

Figure F14. A. Paleomagnetic sample coordinate systems. B. SRM coordinate system on the *JOIDES Resolution* (after Harris et al., 2013).

Figure F15. Scheme adopted to calculate the mean depth for foraminifer and nannofossil bioevents.

Figure F16. Expedition 350 timescale based on calcareous nannofossil and planktonic foraminifer zones and datums. B = bottom, T = top, Bc = bottom common, Tc = top common, Bd = bottom dominance, Td = top dominance, Ba = bottom acme, Ta = top acme, X = crossover in nannofossils. A. Quaternary to Pliocene (0–5.3 Ma). (Continued on next three pages.)

Figure F16 (continued). B. Late to Middle Miocene (5.3–14 Ma). (Continued on next page).

Figure F16 (continued). C. Middle to Early Miocene (14–23 Ma). (Continued on next page).

Figure F16 (continued). D. Paleogene (23–40 Ma).

Figure F17. Wireline tool strings, Expedition 350. See Table **T15** for tool acronyms. Height from the bottom is in meters. VSI = Versatile Seismic Imager.