

Figure F1. Bathymetric map of the CSKVF with locations of Sites U1591 and U1599. Inset: location map. Created with GeoMapApp (Ryan et al., 2009).

Figure F2. Shipboard spectral NGR and shore-based XRF core scans, Site U1591. Lithostratigraphic units: II = mostly nonvolcanic sediments intercalated with volcanics and tuffaceous deposits, III = evaporites (Druitt et al., 2024c). cps = counts per second.

Figure F3. Shipboard spectral NGR and shore-based XRF core scans along the splice, Site U1599. Lithostratigraphic units: I = volcanic/tuffaceous with intercalated nonvolcanic oozes, II = nonvolcanic ooze dominated, III = dolomitic marl,

IV = micrite and calcareous sandstone (Druitt et al., 2024d). Dashed box = interval shown in Figure F6. cps = counts per second.

Figure F4. Core photo compared to XRF sulfur counts, Section 398-U1591-59R-1. Dashed lines separate intervals of sulfur-rich evaporites from micrite, as identified in the visual core description, and are in good agreement with the XRF data.

Figure F5. Crossplots of raw XRF counts for selected elements, Site U1599.

Figure F6. A–D. Crossplots of XRF counts for interval at 417–534.59 m CCSF, Site U1599. Interval is indicated in Figure F3.