

Figure F1. Avaatech core scanner at Gulf Coast Core Repository. A. Massive core being measured in scanner. B. Typical section of massive continuous core in scanner, ready for measurement. C. USGS rock standards in standard mount.

Figure F2. A–D. Reference values vs. calculated (tube-line corrected; small solid dots) and slope (half-filled circles) values for representative elements on each scanner at 10 kV. Red arrows = direction and approximate magnitude of correction from calculated values to slope-corrected values. Note that slope corrections tend to be larger on lightest elements (MgO , SiO_2) and smaller on heavier elements. Dashed line = 1:1 correspondence with reference values.

Figure F3. A–D. Reference values vs. calculated (tube-line corrected; small solid dots) and slope (half-filled circles) values for representative elements on each scanner at 30 kV. Red arrows = direction and approximate magnitude of correction from calculated values to slope-corrected values. Note that K_2O and TiO_2 slope corrections tend to be higher at 30 kV than at 10 kV. Dashed line = 1:1 correspondence with reference values.

Figure F4. A–C. Reference values vs. calculated (tube-line corrected; small solid dots) and slope (half-filled circles) values for representative elements on each scanner at 50 kV. Red arrows = direction and approximate magnitude of correction from calculated values to slope-corrected values. Note that analyzing Sr and

Zr at 50 kV offers no significant improvement compared to results at 30 kV. Dashed line = 1:1 correspondence with reference values.

Figure F5. Comparison of slope-corrected concentrations to shore-based WDS XRF concentrations relative to depth (meters below seafloor), Hole U1575A Flow Unit 2.

Figure F6. Comparison of slope-corrected concentrations to shore-based WDS XRF concentrations relative to depth (meters below seafloor), Hole U1577A Flow Unit 1.

Figure F7. Comparison of slope-corrected concentrations to shore-based WDS XRF concentrations relative to depth (meters below seafloor), Hole U1578A Flow Unit 3.

Figure F8. Comparison of slope-corrected concentrations to shore-based WDS XRF concentrations relative to depth (meters below seafloor), Hole U1578A Flow Unit 6.

Figure F9. Comparison of slope-corrected concentrations to shore-based WDS XRF and shipboard ICP-AES concentrations relative to depth (meters below seafloor), Hole U1585A Flow Unit 3.