

Supplementary Material

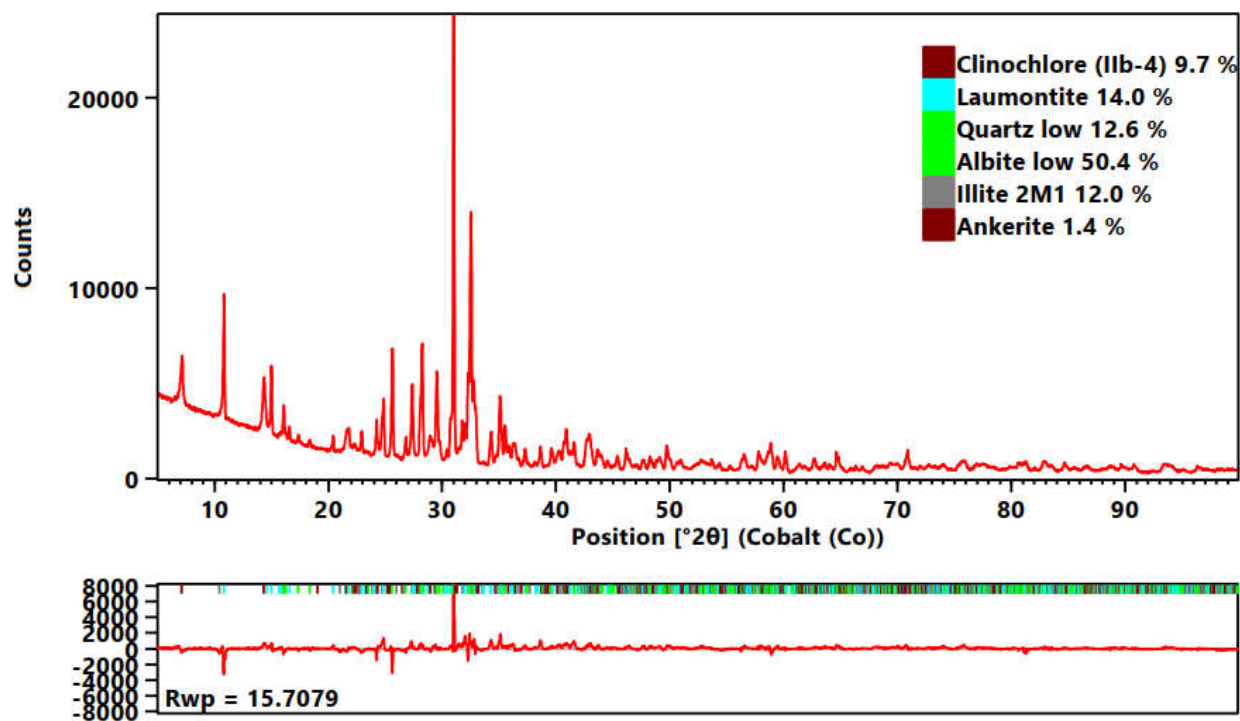


Figure S1. XRD from powder samples of the basaltic andesite sample and the difference plot from the Rietveld refinement with the associated mineral identification.

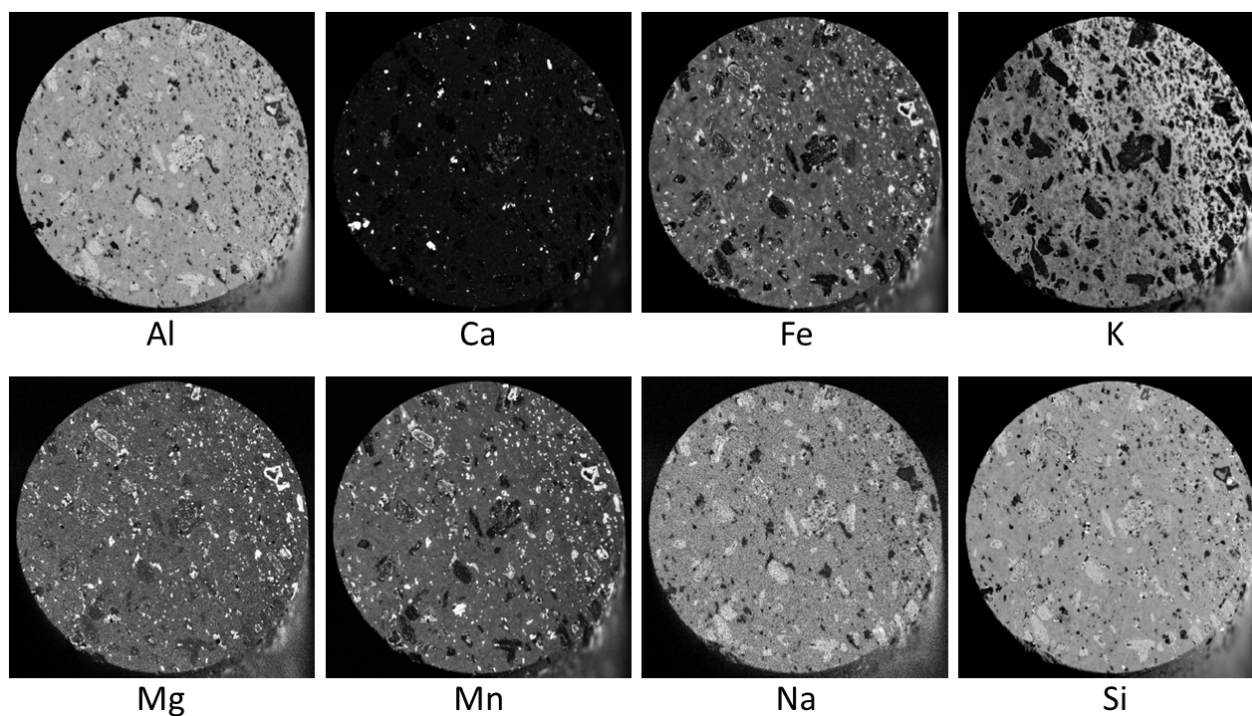


Figure S2. μ XRF maps from the top surface of the training data shown with greyscale intensities.

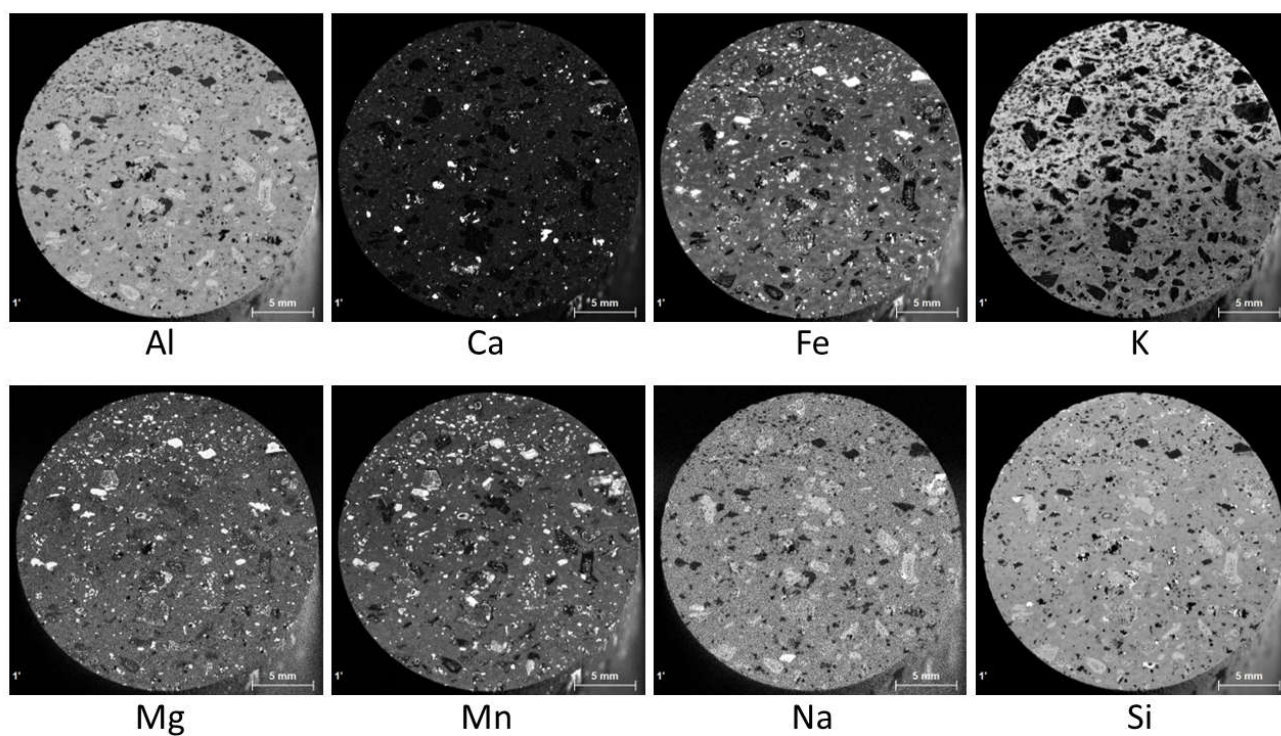


Figure S3. μ XRF maps from the bottom surface of the validation data shown with greyscale intensities.

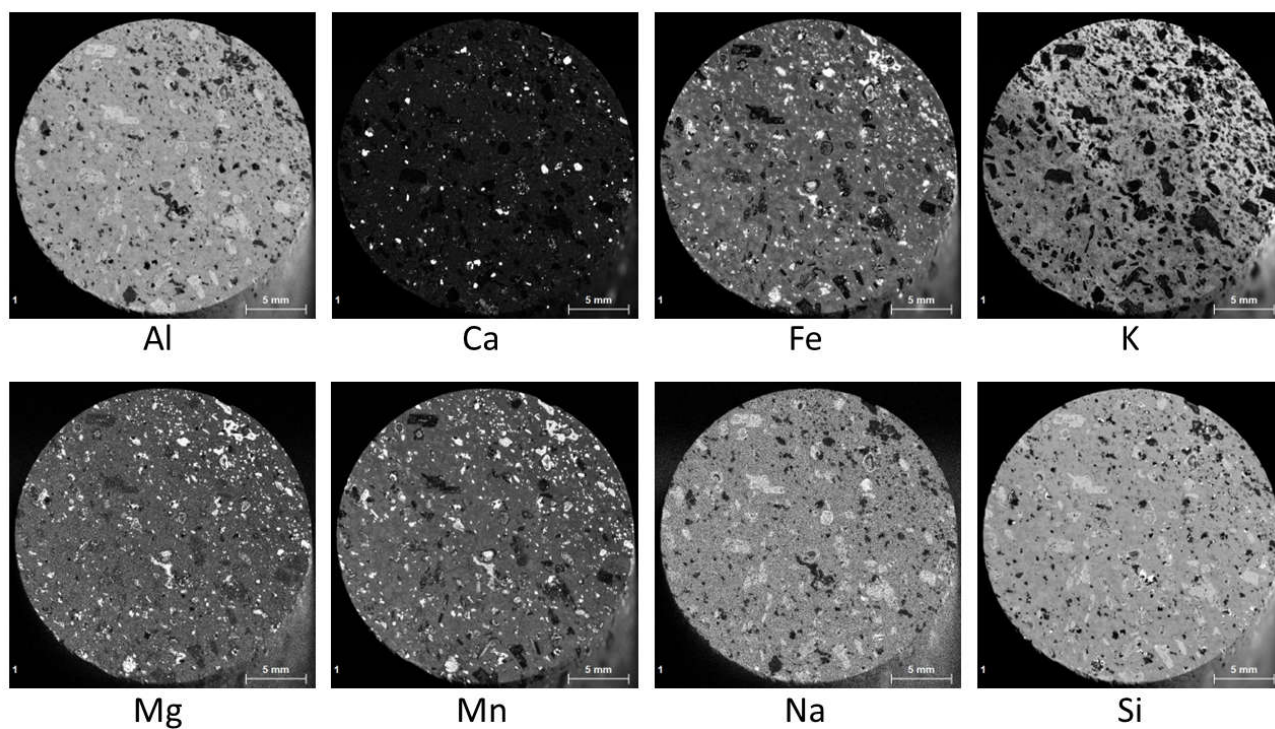


Figure S4. μ XRF maps from the top surface of the validation data shown with greyscale intensities.

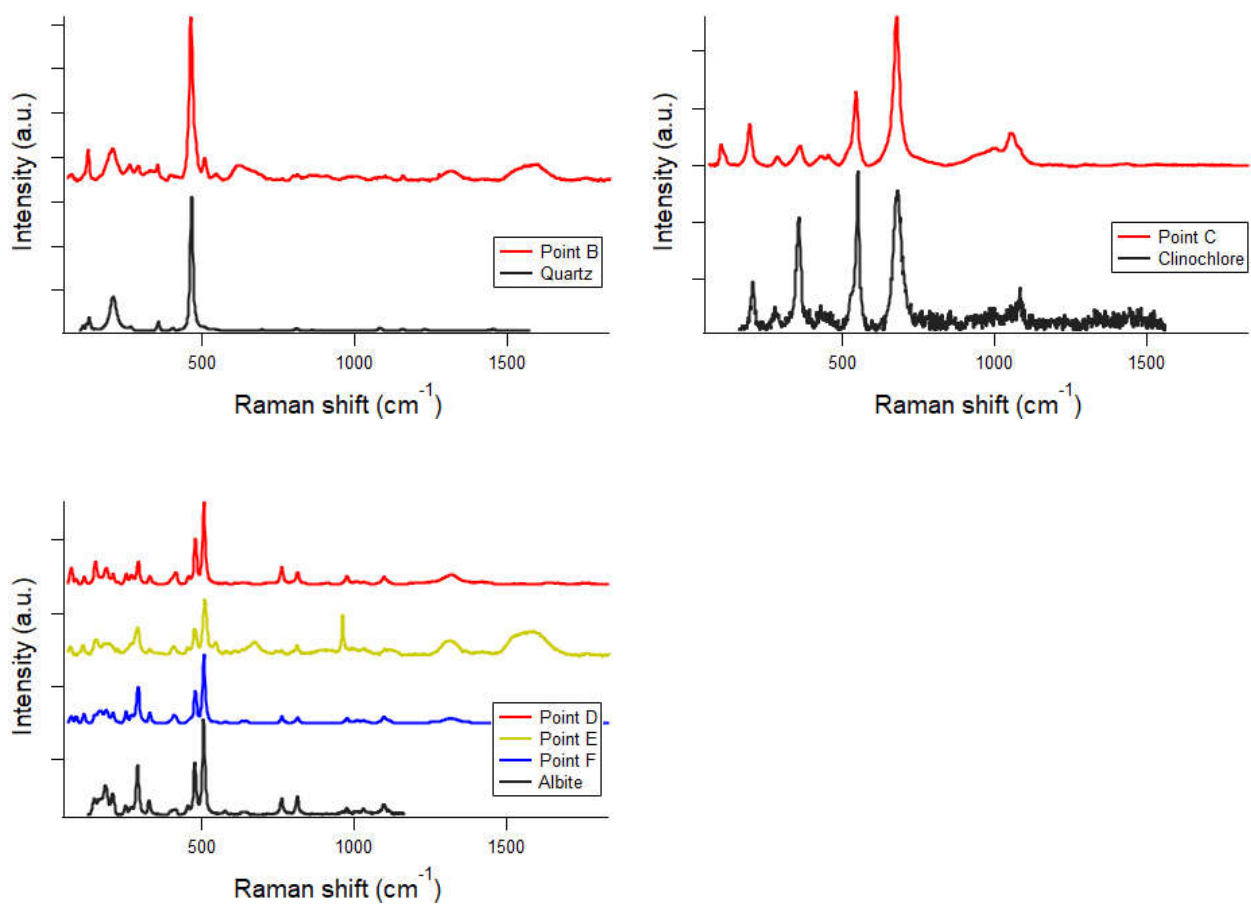


Figure S5. Raman spectra for quartz, clinocllore and albite shown in black plots with the spectra from their respective spots originating in Figure 2. Note that Point A is not included as there was no mineral match with the spectra.