

Supplementary Figures

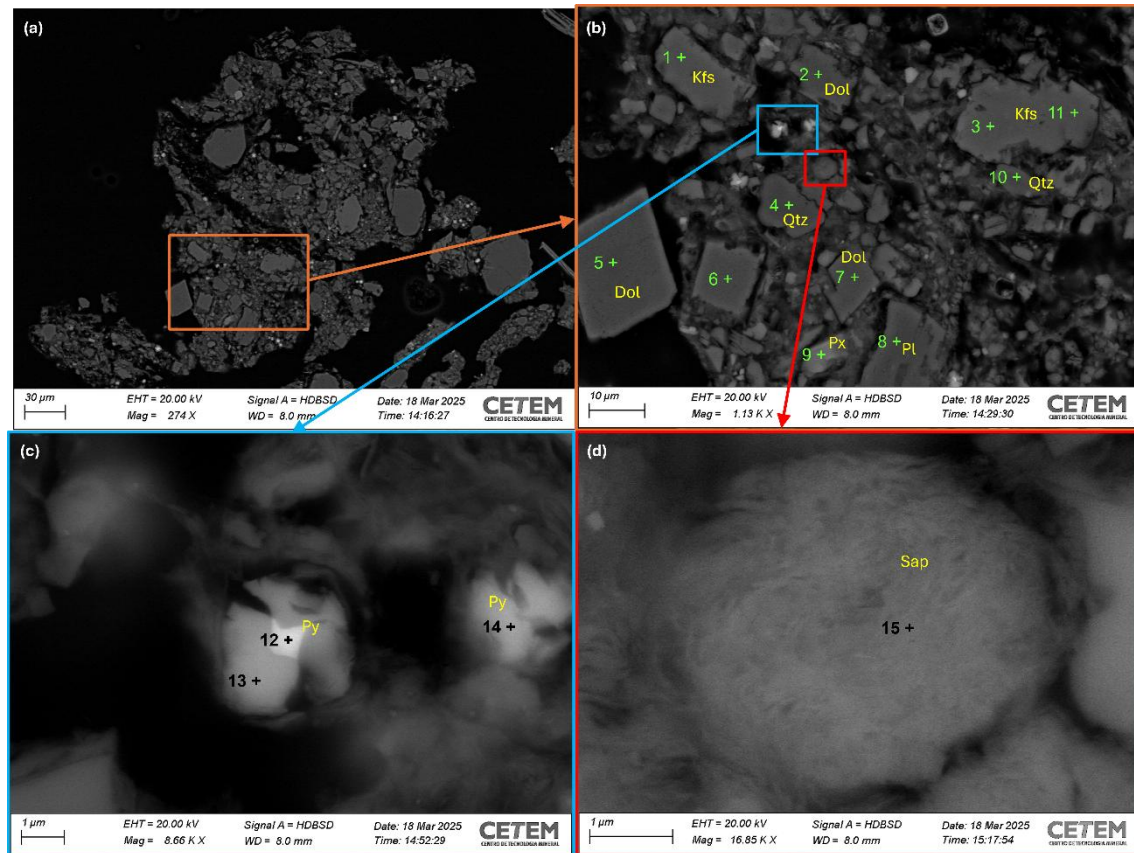


Figure 1. Sample 5496/5499m SEM images. (a) Detrital grains-rich cutting. (b) Highlight of (a). (c) Highlight of (b) showing pyrite apparently oxidated. (d) Highlight of (b) showing possible pellet of saponite. Qtz = quartz; Pl = plagioclase; Kfs = alkaline feldspar; Dol = dolomite; Py = pyrite; Sap = saponite. Numbers indicate EDS chemical analysis gathered in Supplementary Table 4.

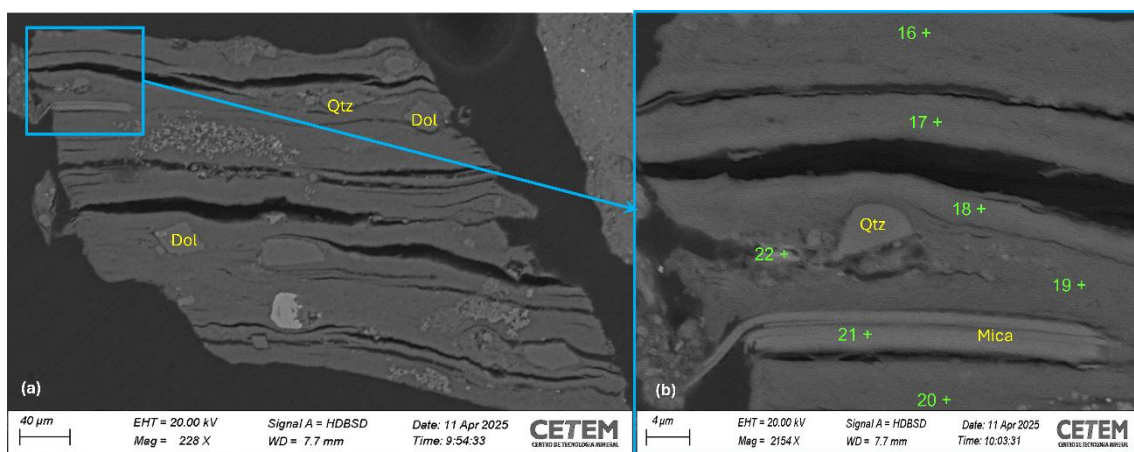


Figure 2. Sample 5496/5499m SEM images. (a) Clay-rich laminated cutting. (b) Highlight of (a). (c) Highlight of (b). Qtz = quartz; Dol = dolomite. Numbers indicate EDS chemical analysis gathered in Supplementary Table 4.

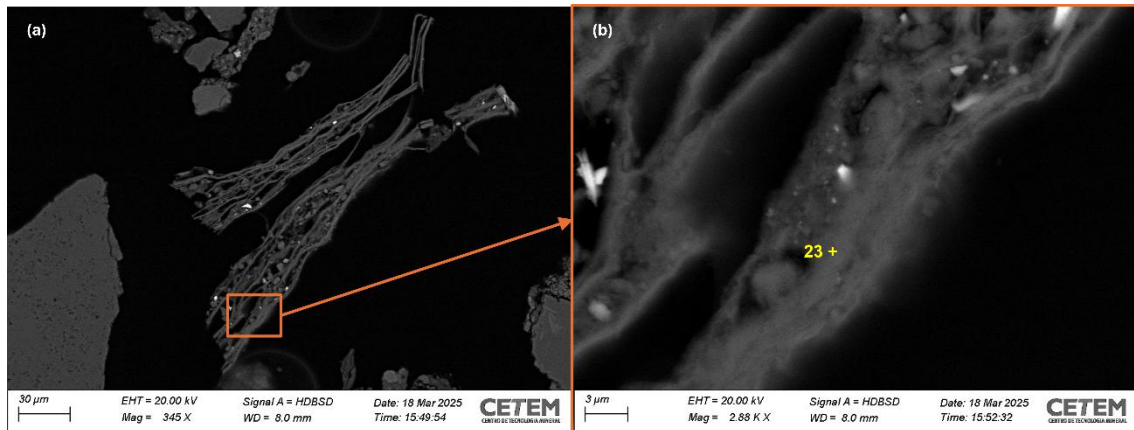


Figure 3. Sample 5496/5499m SEM images. (a) Detrital grains-rich cutting. (b) Highlight of (a). Number indicates EDS chemical analysis gathered in Supplementary Table 4.

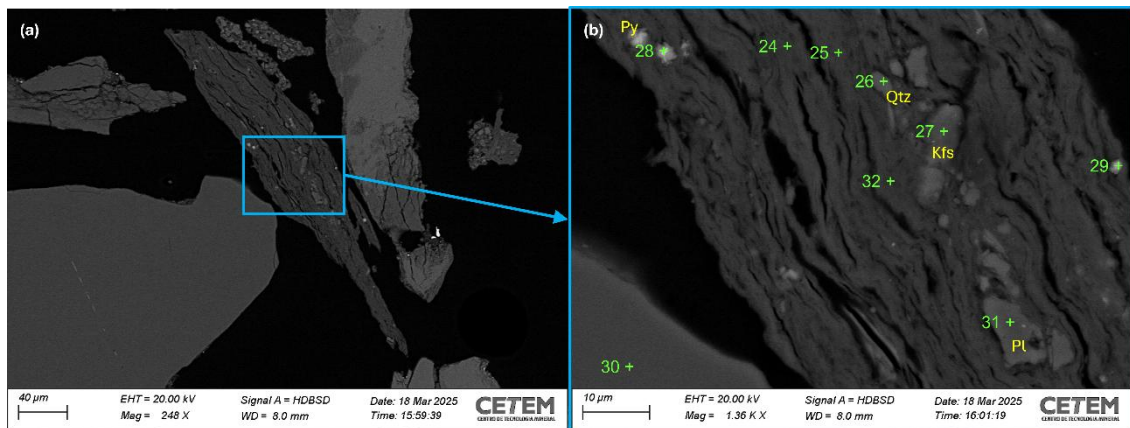


Figure 4. Sample 5496/5499m SEM images. (a) Clay-rich laminated cutting. (b) Highlight of (a). Qtz = quartz; Pl = plagioclase; Kfs = alkaline feldspar; Py = pyrite. Numbers indicate EDS chemical analysis gathered in Supplementary Table 4.

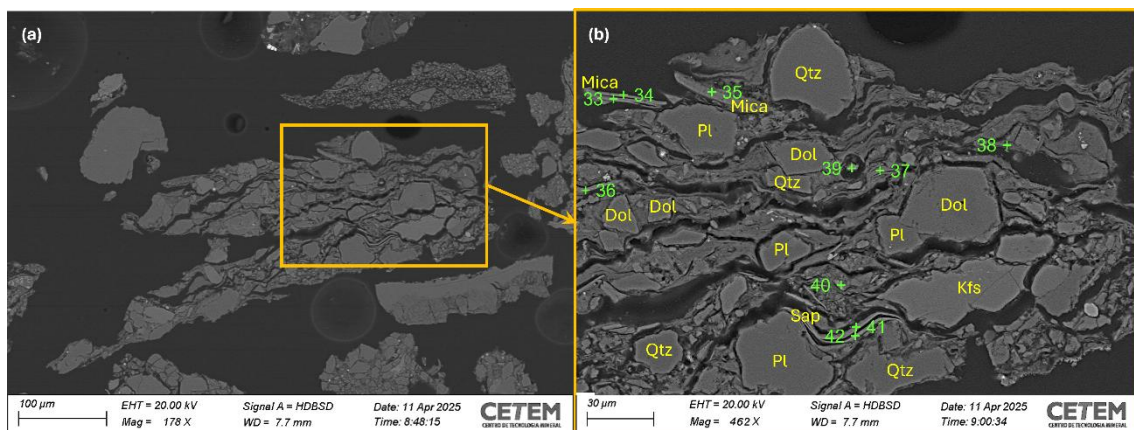


Figure 5. Sample 5496/5499m SEM images. (a) Detrital grains-rich cutting. (b) Highlight of (a). Qtz = quartz; Pl = plagioclase; Kfs = alkaline feldspar; Dol = dolomite; Py = pyrite; Sap = saponite. Numbers indicate EDS chemical analysis gathered in Supplementary Table 4.

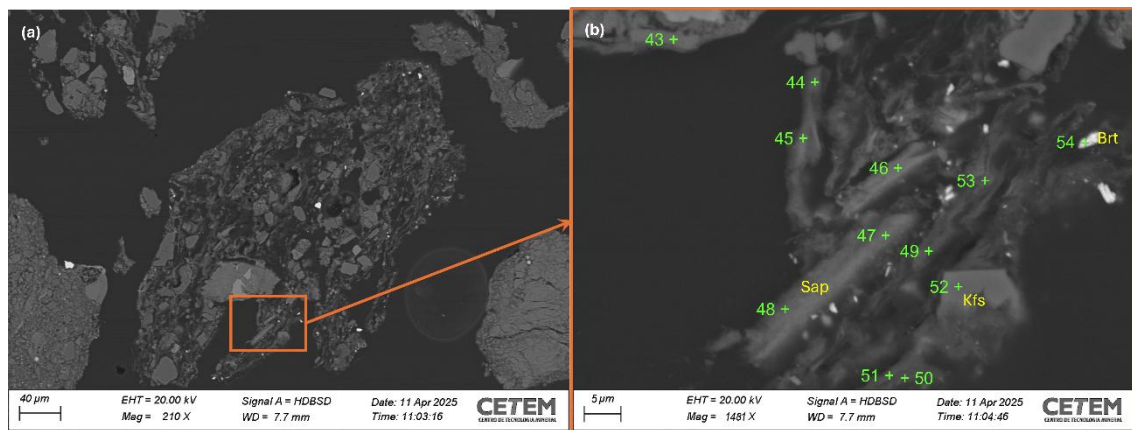


Figure 6. Sample 5496/5499m SEM images. (a) Detrital grains-rich cutting. (b) Highlight of (a). Kfs = alkaline feldspar; Sap = saponite; Brt = Barite. Numbers indicate EDS chemical analysis gathered in Supplementary Table 4.