

FIG. 9. Scanning electron micrographs (SEM) of the mixed-layer kaolinite/smectite minerals in a bulk sample from A layer. Top photo shows interstratified kaolinite/smectite with inclusion of amorphous silica. Bottom photo exhibits interstratified kaolinite/smectite admixed with non-clay impurities.

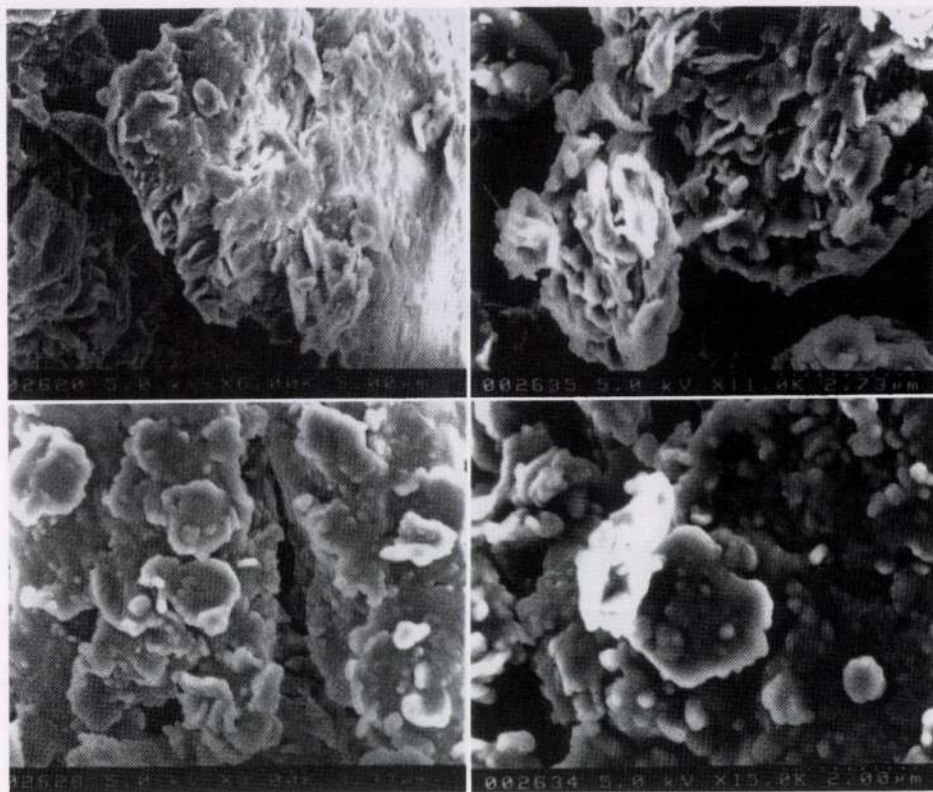


FIG. 10. Scanning electron micrographs (SEM) of the mixed-layer kaolinite/smectite minerals in a fine sample from B layer, showing characteristic aggregations and morphologies. The 2 photos on top, set at lower magnification correspond respectively to the 2 photos at the bottom, set at higher magnification.

Energy Dispersive X-ray (EDX) Analysis

An array of EDX results of some bulk and fine samples portrays almost homologous bulk composition. The SiO_2 generally hovers between 58–65% and Al_2O_3 between 20–25%. Notable amount of FeO exists in the range 8–15% and minimal K_2O between 1–3%. The CaO and TiO_2 occur in negligible amount. Sodium and magnesium cations are apparently absent. Single crystal analyses of same set of selected samples depicted composition closely similar to the above values. Example of results obtained from fine samples in different horizons is shown in Figure 12.



FIG. 11. Scanning electron micrographs (SEM) of the mixed-layer kaolinite/smectite minerals in a fine sample from C layer. Both photographs reveal stacked flakes of the interstratified minerals with faint irregular outlines and curled edges.

