Below is an example of an interpreted PIMA spectra from the Pierina Gold and Silver deposit in the Cordillera Negra of northern-central Peru. Such information on many other mineral deposits is available through Data Metallogenica.



Plate 2495.2 - Plerina alteration

The alteration at Pierina is characterised by alunite (K-alunite), pyrophyllite, dickite (+/or kaolinite) and illite/muscovite. Chlorite, carbonate and smectite are identified in the regionally propylitised samples. As often observed in epithermal systems, the illite appears to be mostly Al-rich (which is often due to a paragonitic, Na-rich, composition) although more than two phases of illite are observed in many samples (one of paragonitic composition and another of more muscovitic compositions). The illite also displays variations in crystallinity, and appears to be more smectitic in the outer alteration zones. Baryte associated with the late hypogene oxidation displays a spectrum characterised by deep water absorptions, which are largely non-diagnostic. However, the main water absorption feature near 1900nm has a minimum near 1930nm, which is unusual for most minerals and may be characteristic of the baryte phase at Pierina.

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