

INTERPRETED PIMA-II SWIR MINERALOGY

PLATE No. 2494.2

Pierina Mine ores Au-Ag 2

Epithermal acid sulphate

South American Epithermals

Sample	Mineral1	Mineral2	Mineral3	Mineral4	Possible Mineral1	Possible Mineral2	Dominant Illite/muscovite composition
001r	water	kaolinite			+/-illite		
002r	K-alunite	water			+/-illite		
003r	K-alunite	water			+/-illite		
004r	water	kaolinite			+/-illite		
005r1	noise						
005r2	water	kaolinite					
006r	water	kaolinite			+/-illite		
007r	water	kaolinite			+/-illite		
008r	noise						
009r1	water	kaolinite			+/-alunite		
009r2	noise						
010r	noise						
011r	noise						
012p	noise						
013r1	dickite	water			+/-kaolinite		
013r2	noise						
014r	K-alunite						

Samples on Lithotheque plates number left to right, commencing at top left. Samples are numbered 001-020. The letter after the number refers to the type of measurement made: r = representative; v = vein; vs = vein selvage; m = matrix; c = clast; l = layer; p = phenocryst (if large). Not all plates contain 20 samples; not all samples have been measured; some samples have multiple measurements. THIS PAGE IS DESIGNED TO BE PRINTED.

Summary of Pierina Lithotheque Plates 2494.1, 2494.2, 2495.1, 2495.2, 2496.1

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 1900 nm has a minimum near 1930 nm, which is unusual for most minerals and may be characteristic of the baryte phase at Pierina.

Please note that the summary is based on a relatively small number of samples which are not spatially attributed. Conclusions drawn are, therefore, indicative rather than definitive of the spectral and mineralogical characteristics of this deposits.

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