

INTERPRETED PIMA-II SWR MINERALOGY

PLATE No. 2464.1

Batu Hijau Cu-Au 1

porphyry

Australasian & Pacific Porphyries

Sample	Mineral1	Mineral2	Mineral3	Mineral4	Possible Mineral1	Possible Mineral2	Dominant Illite/muscovite composition
001r	water	illite			+/-kaolinite	+/-diaspore?	muscovitic (i.e. potassic or of "normal" muscovite or illite compositions)
002r	Na-alunite	illite			+/-kaolinite		
003r	montmorillonite	kaolinite	chrysocolla		+/-brochantite		
004r	chrysocolla	brochantite			+/-smectite-illite		
005r	chrysocolla	kaolinite			+/-smectite		
006r1	kaolinite	smectite	chrysocolla				
006r2	malachite?						
007r	kaolinite	smectite	chrysocolla				
008r	illite	chrysocolla			+/-kaolinite		muscovitic (i.e. potassic or of "normal" muscovite or illite compositions)
009r1	chrysocolla	smectite			+/-kaolinite		
009r2	malachite?				+/-azurite		
010r1	malachite	azurite?					
010r2	chrysocolla				+/-malachite		
011r	malachite						
012r1	chrysocolla				+/-malachite		
012r2	water				+/-chrysocolla		
013r	malachite						
014r	malachite						
015r	chrysocolla?						
016r	kaolinite	chrysocolla					
017r1	malachite	chrysocolla					
017r2	kaolinite	chrysocolla			+/-malachite		
018r	chrysocolla	kaolinite	brochantite				
019r	chrysocolla				+/-smectite	+/-?	
020r	chrysocolla				+/-smectite	+/-?	

Samples on Lithothèque 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 Batu Hijau Lithothèque Plates 2464.1, 2465.1, 2466.1, 2467.1, 2468.1

The samples from the supergene alteration zones at Batu Hijau are characterised by spectra that are dominated by chrysocolla and malachite, with minor brochantite, alunite (Na-alunite) and kaolinite. The spectra from the chalcocite and hypogene zones are typically of low reflectances and noisy due to the presence of sulphides and magnetite. These zones are dominantly characterised by biotite, ankerite, illite, kaolinite/dickite, smectite and chlorite, minor (probably primary) hornblende. The biotite appears to be of an intermediate Fe-Mg composition, which appears to be a characteristic of the Batu Hijau alteration system, as biotites in porphyry systems are often more Mg-rich. The alteration zones represented by the samples in plate 2467 are characterised by chlorite, epidote and ankerite (propylitic altered samples), illite/sericite, kaolinite, pyrophyllite, smectite, chlorite (sericite-chlorite-clay zone) and biotite, ankerite and chlorite (biotite alteration zone). The illite at Batu Hijau appears to be Al-rich (which is often due to a paragonitic, Na-rich, composition) and of varying crystallinities from moderate to high.

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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