

INTERPRETED PIMA-II SWR MINERALOGY

PLATE No. 2465.1

Batu Hijau Cu-Au 2

porphyry

Australasian & Pacific Porphyries

Sample	Mineral1	Mineral2	Mineral3	Mineral4	Possible Mineral1	Possible Mineral2	Dominant Illite/muscovite composition
001r1	noise						
001r2	illite	biotite	ankerite		+/-chlorite		tending to paragonitic (i.e. sodic and/or high octahedral Al)
002r	illite/muscovite	biotite/chlorite	ankerite		+/-kaolinite		tending to paragonitic (i.e. sodic and/or high octahedral Al)
003r	illite?				+/-kaolinite		muscovitic (i.e. potassic or of "normal" muscovite or illite compositions)
004r	illite	chlorite	biotite		+/-ankerite		muscovitic (i.e. potassic or of "normal" muscovite or illite compositions)
005r	kaolinite	chlorite	illite	smectite	+/-dickite		
006r	kaolinite	chlorite	illite	smectite	+/-dickite	+/-chrysocolla	
007r	illite?						tending to phengitic (i.e. Mg/Fe substituted and/or low octahedral Al)
008r	illite	smectite	biotite/chlorite		+/-hornblende		muscovitic (i.e. potassic or of "normal" muscovite or illite compositions)
009r	illite	smectite	kaolinite	biotite/chlorite			muscovitic (i.e. potassic or of "normal" muscovite or illite compositions)
010r	biotite/chlorite	ankerite	smectite-illite				
011r	illite/muscovite	biotite/chlorite			+/-ankerite		muscovitic (i.e. potassic or of "normal" muscovite or illite compositions)
012r	illite-smectite	kaolinite	biotite/chlorite				muscovitic (i.e. potassic or of "normal" muscovite or illite compositions)
013r	?						
014r	biotite	ankerite			+/-chlorite	+/-illite	
015r	biotite/chlorite						
016r1	chlorite/biotite	epidote	ankerite	illite			
016r2	chlorite/biotite	epidote	ankerite		+/-illite		
017r	smectite	chlorite/biotite	ankerite				
018r	noise						
019r	chlorite/biotite	ankerite			+/-epidote		
020r	chlorite/biotite?	ankerite?					

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, dunitite (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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