

September 3, 1969

802575

J. Springer, Esq.
Mastodon-Highland Bell Mines
300 - 999 West Pender Street
Vancouver 1, B. C.

PETROLOGICAL NOTES
Specimen Description

JS 7 and JS 10

Hand Specimen

Grey, mottled with numerous sericitic patches, probably pseudomorphs after feldspar in a fine grained matrix. Fine fractures, probably corresponding to joint directions infilled with iron sulphides.

JS 7

Polished Section

The polished section brings out a rather more igneous texture than is apparent from the thin sections. The sulphides identified as pyrite are concentrated in narrow, secondary veins with minor disseminations in the body of the rock. Although consisting of fine aggregates, the light patches are often well formed and are almost certainly after feldspar phenocrysts. Minor amounts of manganese oxide noted in hand specimens were not included in the polished section and would almost certainly have been too soft to survive polishing.

JS 10

Thin Section

Minerals

Quartz	30 - 40%
Sericite and white mica	50 - 60%
Fe ore - accessory	2%

Description

Large, irregular masses of sericite and illitic micas are set in a fine grained matrix of recrystallized quartz. Occasionally the sericite patches attain shapes comparable with feldspar pseudomorphs. Pyrite occurs as scattered grains and concentrations in

thin veins. There is evidence of partial resolution and erosion of quartz at sulphide/quartz boundaries. This rock contains more sericite than previous specimens of similar rock.

CONCLUSIONS

The rocks in question are still too altered to submit definite conclusions as to origin. They are now in the simplest possible terms quartz-sericite rocks. The previous use of the term micaceous was intended as a simplification, but was probably ill-advised.

Notable points are as follows:

- 1) The igneous aspect of the rock in polished section.
- 2) The presence of sericite pseudomorphs presumably after feldspar.
- 3) The relatively fine-grained albite recrystallized quartz matrix.
- 4) The overall acid nature of the specimens.
- 5) The extent of alteration of original minerals and recrystallization implying metamorphic alteration to some degree, probably as a result of fracture and circulation of quartz-sulphide rich solutions.

The most likely origin of the present rock would appear to be a feldspar porphyry (rhyolite porphyry), which would explain almost all of the observed features. This may be in the form of an intrusive dyke or an extrusive sheet, the former being more likely.

Apart from the presence of iron sulphides and minor manganese oxide, either or both of which might be regarded as mineral indicators, no other minerals of economic significance were noted.

Yours very truly,


Dr. J. G. Simpson.

JGS/ph