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N.T.S. 104-M-8  
1966  
REPORT  
ON  
THE "AL" CLAIMS

Wann River,  
B. C.

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ATLIN

MINING DIVISION

S. N. Charteris

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(1)

REPORT

ON THE

AL CLAIMS, Wann River

Atlin Area, B.C.

N.T.S. 104-N-8

October 1966

by  
S.N. Charteris

INTRODUCTION:

Copper mineralization was discovered by D. Kimball late in the 1965 prospecting season during his prospecting of the Wann River Valley and adjacent areas. Further prospecting and trenching by Kimball and Schussler in 1966 resulted in the discovery of two separate copper occurrences.

LOCATION:

See 1" = 4 mile location map.

The 1" = 4 mile map shows the general regional geology. In the area prospected, quartzites, biotite gneisses, conglomerate and limestone of "pre-Permian Age" are folded into northwesterly trending folds. Coast range quartz diorites lie to the north. "Volcanics of uncertain age" lie northwest of the AL claims.

GEOLOGY OF THE AL GROUP

See 1" = 100' plan.

Rock units:

- (a) Conglomerate is the oldest unit mapped and is well exposed along Kim Creek. Rounded to subangular boulders of biotite-hornblende gneiss, granite and quartz monzonite up to 2 feet in diameter are in a matrix of grey siltstone. The conglomerate south of Kim Creek and west of Fault Creek is much finer grained with pebbles 1/2 inch and less, grading westerly into a greywacke.
- (b) Sandstone - Greywacke - a light grey-brown arenite underlying the pebble conglomerate west of the Fault Creek fault.
- (c) Biotite hornblende schist overlies the conglomerate quartz laminae up to 1/4 inch thick are separated by equal thickness of biotite and hornblende. In tightly crenulated areas, the mafics turn to chlorite, and a dynamic breccia is developed.
- (d) Marble - a narrow selvage, less than 2 feet wide and not shown on the geological map, overlies the schist.
- (e) Granite - tabular masses of medium grained intrusive containing 40% quartz as grains averaging 1 1/4 mm in diameter, 55% anhedral feldspar and 5% biotite.
- (f) Skarn - magnetite - epidote - amphibole - chalcopyrite skarn is developed between the marble and the granite.

### STRUCTURE

Two fold axes are indicated by the mapping. The simpler of the two is the southwesterly trending open synclinal axis that is well outlined by the bedding of biotite schist indicated by the cliffs and outcrops southwest of Fault Creek. Its northeasterly extension is terminated by the N40°W fault that has been inferred in the bed of Fault Creek. The second fold is a tight northwest trending synclinal axis, parallel to conglomerate contact and Kim Creek. On its northeast limb is the chalcopryrite-magnetite discovery zone.

The two fold axes do not necessarily imply two ages of folding. They could be part of the same fold pattern produced by a northwest couple with gliding over the more competent conglomerate.

The northwest trending fault is probably a normal fault with the northeast side up. A minor fault is inferred between areas of different dips on the east side of the area mapped.

The granitic masses parallel the prominent northeasterly jointing in Kim Creek.

### MINERAL DEPOSITS

There are two occurrences of copper mineralization. The original discovery lens reported last year and a chalcopryrite filled fracture found this year. The discovery lens is an irregular mass of amphibole-epidote-magnetite-chalcopryrite skarn between a tongue of the granite and a thin selvage of limestone. It has about 400 square feet of surface area and is 2 to 3 feet thick. Chalcopryrite is common and the reported assays in the 3 to 5 percent copper range seem reasonable.

The location of the narrow (1/4 inch) and less chalcopryrite filled joint is shown on the 1" = 100' geological plan.

### CONCLUSIONS AND RECOMMENDATIONS

The small mass of chalcopryrite-bearing skarn is well exposed and no extensions can be seen. No further exploration can be justified in these claims.

THE CHISEL CLAIMS

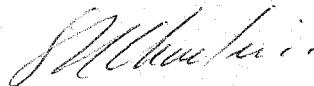
Chalcopyrite-magnetite float was found in the moraines of a glacier in a valley three miles east of the AL claims. Exposures are excellent on the cliffs of the mountain at the head of the glacier. A thick metasedimentary sequence - principally biotite-hornblende gneiss with intercalated limestone and narrow skarn bands - strikes N70W and dips 25° south. The skarn bands were examined but none contained chalcopyrite. Possibly the source is under the glacier.

The eight claims staked this year are not worth holding.

J. SCHUSSLER DISCOVERY

An irregular sheared skarn zone was discovered by Schussler at the margin of a glacier 2.2 miles southeast of the AL Claim copper occurrence. The exposure is up to 11 feet wide and it can be traced for a length of 175 feet. Galena and sphalerite with minor pyrite are the principal sulphide minerals.

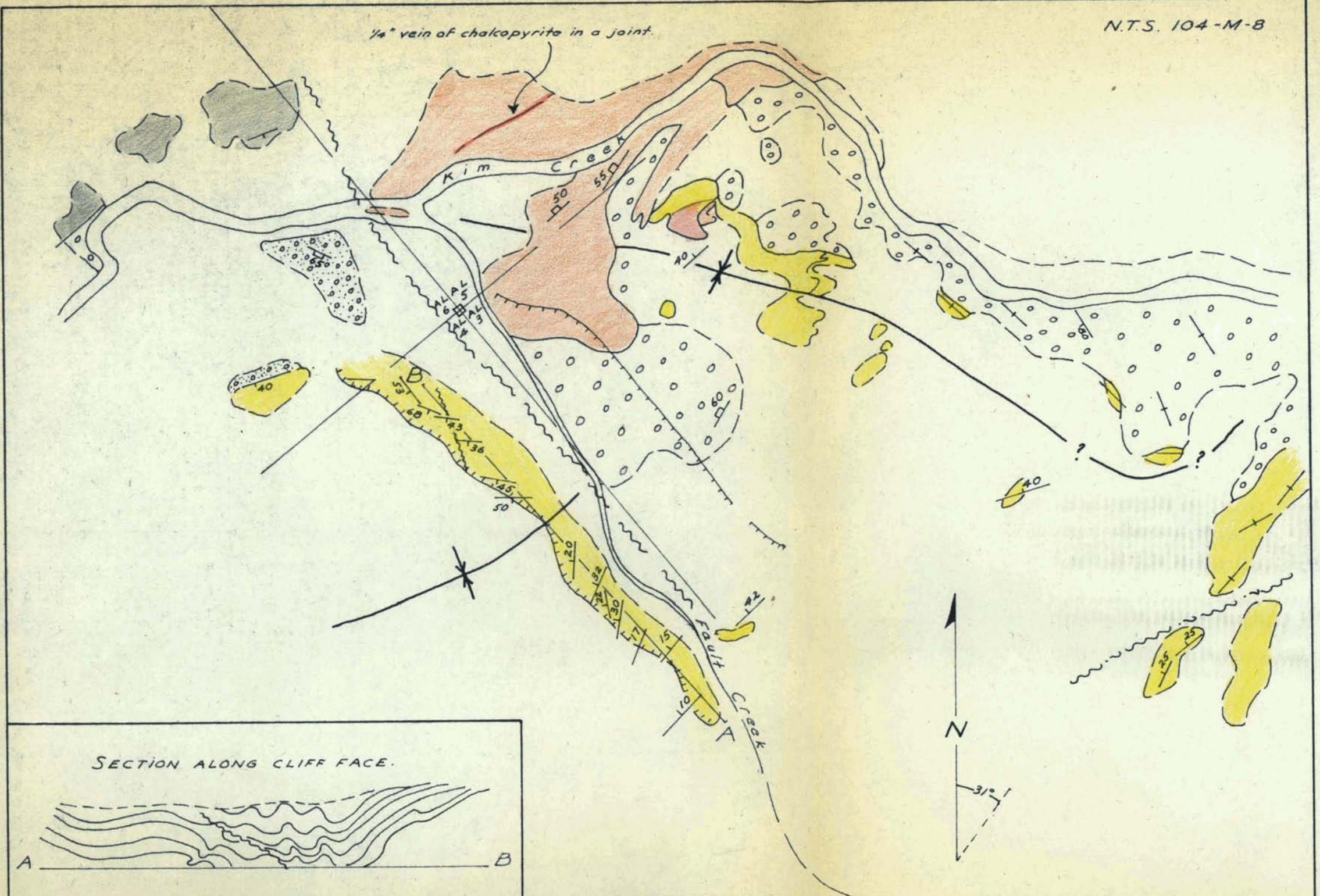
If significant silver values are obtained from the samples, further work should be done.



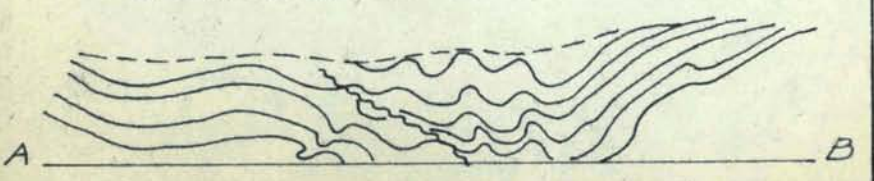
S.N. Charteris

VANCOUVER, B.C.  
October 13, 1966








1/4" vein of chalcopyrite in a joint.

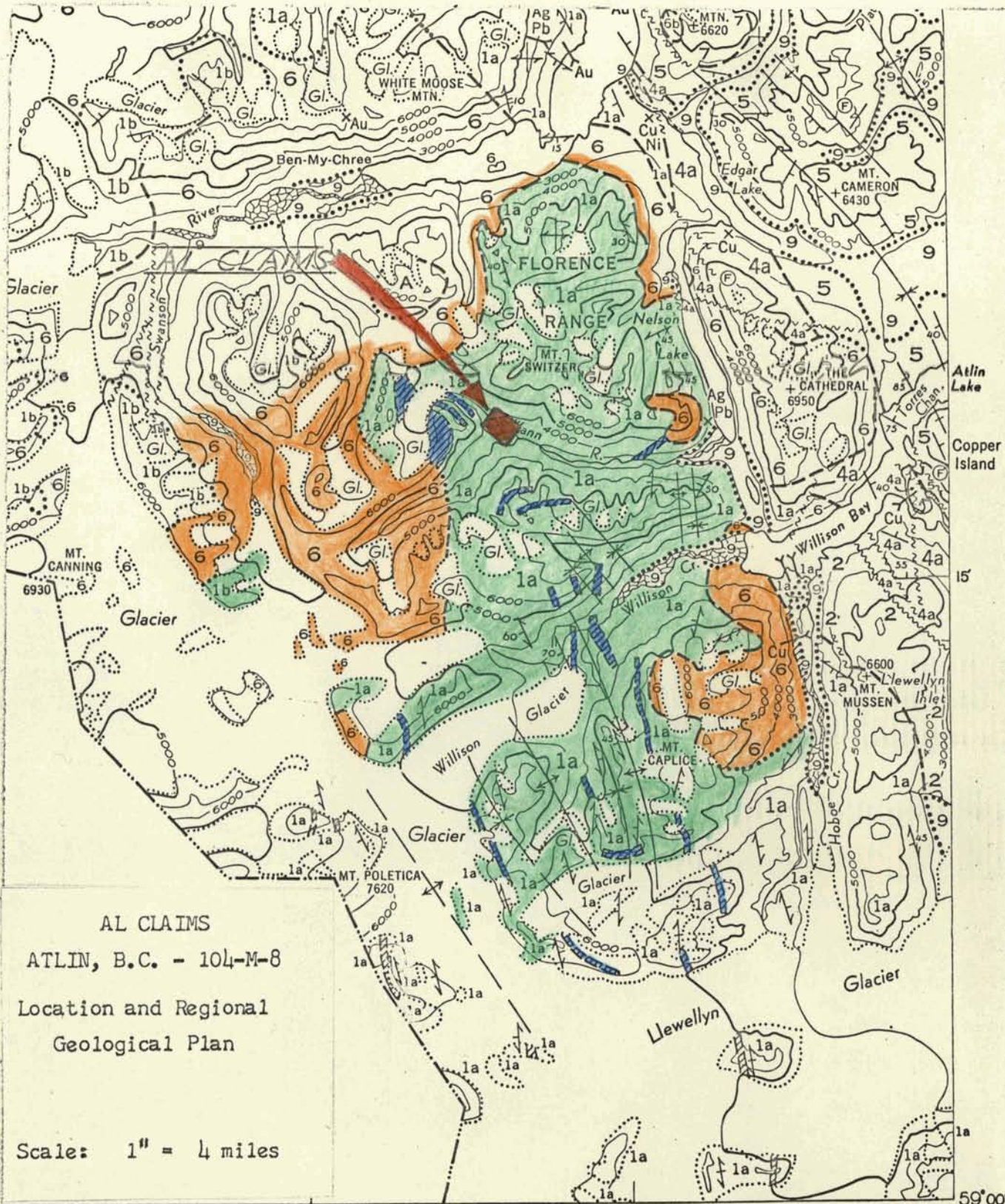


SECTION ALONG CLIFF FACE.



**FALCONBRIDGE NICKEL MINES LTD.**  
**AL GROUP - WANN RIVER AREA - ATLIN, B.C.**  
 DATE: 23 NOV 66 SCALE: 1" = 100' DRAW BY: S.N.C., D.H.H.

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| <p>1<br/> <br/>                 Conglomerate - (1) With boulders up to 2' in diameter in a siltstone matrix</p> <p>2<br/> <br/>                 Conglomerate - (2) a pebble conglomerate - pebbles average 1/4" diameter in quartzitic matrix.</p> <p> Quartz-Biotite-Hornblende Gneiss - laminae average 1/4" thick.</p> <p> Sandstone - Greywacke.</p> | <p> Magnetite - Chalcopyrite - Amphibole skarn.</p> <p> Granite - 40% quartz, 55% feldspar, 5% biotite.</p> <p> Top of cliff.</p> |
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AL CLAIMS  
 ATLIN, B.C. - 104-M-8

Location and Regional  
 Geological Plan

Scale: 1" = 4 miles

JURASSIC OR LATER  
 POST LOWER JURASSIC  
 COAST INTRUSIONS

**6** Granodiorite, quartz diorite, granite; gabbroic and hybrid rocks of various but uncertain ages; 6a, Mid-Cretaceous; 6b, Late-Cretaceous or Tertiary

PRE-PERMIAN (Mainly)

**1** Metamorphic rocks of uncertain age; 1a, quartzite, gneiss, schist; limestone; 1b, chlorite schist, feldspar-chlorite gneiss, amphibole gneiss; limestone

Beds of limestone of various ages, not necessarily to scale .....