

BARRIERE LAKES AREA:

BIRK CREEK SHOWINGS:

Also Known as: Anaconda, Lynx, Rainbow, Copper Cliff,

Minfile number: 082M-067, (059, 131)

Mineral Inventory number: 82M5-Cu3

Map number: 008; Lat. 51.330N Long. 119.900W

Location: The area is situated 3km west of North Barriere Lake. The showings are accessible by trail that follows the NE side of Birk Creek.

Host Rock: The area is underlain by sericite schist, chlorite schist, black phyllite, and some recrystallized limestone (unit EBAA). Two stratigraphic sections; A-A', B-B' and a longitudinal section D-D' crossing the section C-C', are shown on Figures, and are described in the following paragraphs.

Section A-A'

A cliff section is exposed from an elevation of 970m at the creek to 1,102m up section. It consist dominantly of quartz-eye sericite schist. The strike of the foliation varies from 265 to 290 degrees and dips 5 to 20 degrees to the north. The overall minimum thickness (perpendicular to foliation, which is approximately coincident with bedding) is 175m (Fig.**). At the base of the section the schists contain 15 per cent phenocrysts (maximum size 2mm) of quartz and plagioclase in a quartz-muscovite-plagioclase matrix. The plagioclase is altered to calcite but up section this alteration is not apparent because the plagioclase content decreases. Autolithic fragmental units (average fragment size 1.5mm), occur locally. Disseminated pyrite with an average grain size of 0.5mm, constitutes up to 8 per cent of the rock. Trace amounts of interstitial chalcopyrite are present with the pyrite. No markedly sulphide-rich horizons were observed.

Section B-B'

This section (Fig.) passes close to several old workings. Exposure is limited to one or two outcrops and the collars of two slumped adits. A well-developed foliation, parallel to compositional layering, trends 265 to 275 degrees and dip gently north (3 to 20 degrees). Observable bedrock is composed of quartz-sericite and chlorite schist with limonite altered pyrite-rich layers, and minor laminated black phyllites. Thin sections of the schists show zones with elongated fragments (up to 3mm) of polycrystalline quartz grains. Disseminated pyrite is present throughout much of the section. Silicified massive pyrite lenses with minor chalcopyrite were observed within an 8-metre section near the old adits. The pyrite is euhedral, but fragmented, and associated with chalcopyrite which generally is located at the borders of the pyrite grains. Material observed on a dump in the immediate area contains

similar mineralization, as well as a few blocks of vein quartz with blebs of sphalerite and galena. The latter type of mineralization was not observed in outcrop.

Sections C-C' and D-D'

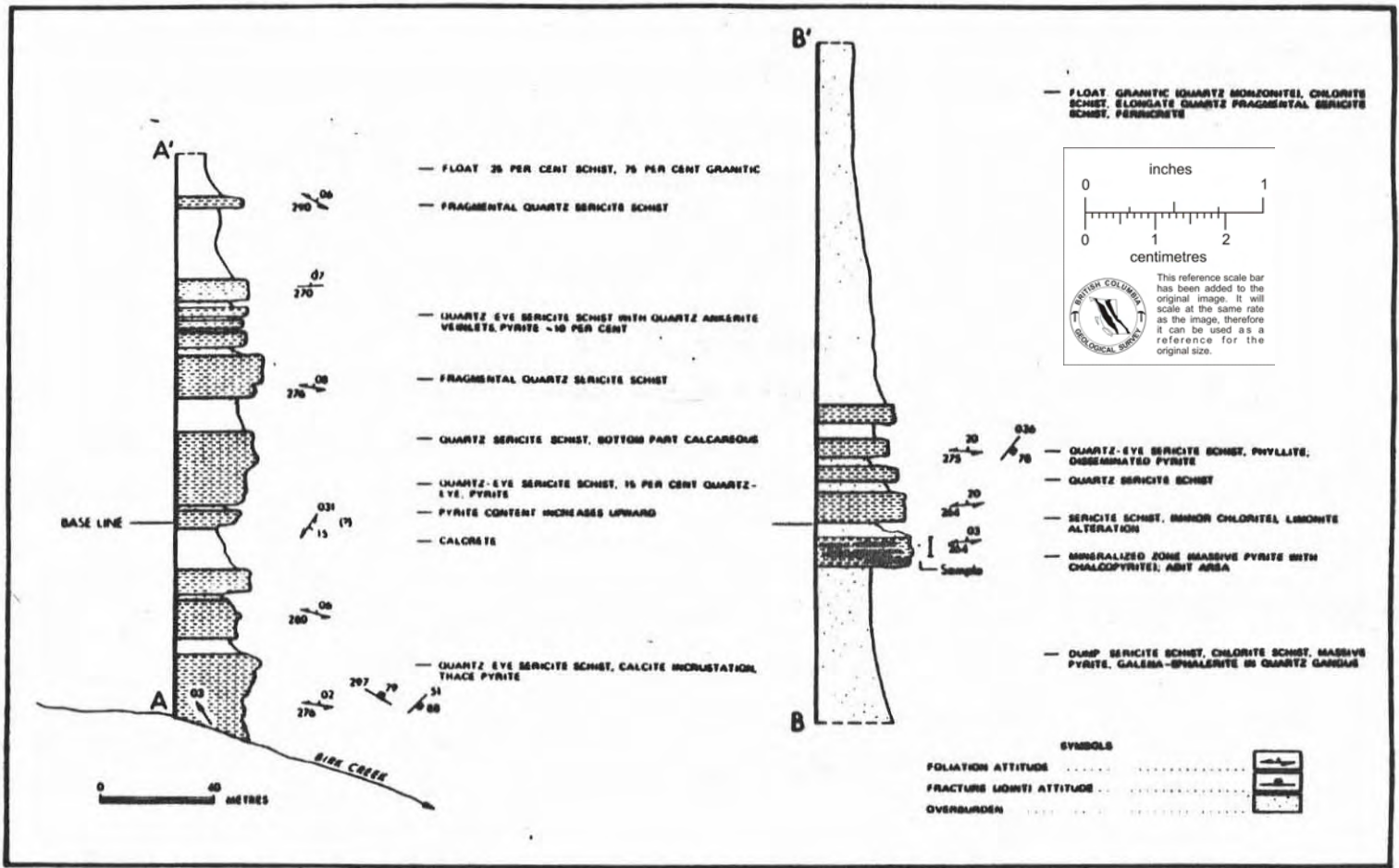
Sections C-C' and D-D' ~~(1/1/1)~~ cross a major showing along a cliff section on the south side of Birk Creek. Three short accessible adits, about 9 metres long, parallel a major joint direction (012 degrees). Other workings in the immediate vicinity have been flooded by the creek and are observable when water levels are low (V. Preto, pers. comm., 1984). This section is composed of sulphide-rich sericite schist in fault contact with an impure limestone unit.

Structure: A well developed foliation parallel to bedding strikes east-west and dips variably to the south and north. A superimposed north striking, shallow east-dipping crenulation cleavage is pronounced on outcrops near the creek. Early mesoscopic recumbent isoclinal folds with axial planes parallel to the pronounced schistosity and axes plunging parallel to the mineral lineation, probably indicate a large structure which controls the distribution of the stratiform mineralized zones (Preto, pers. comm., 1984).

Mineralization: Mineral occurrences are stratiform massive pyrite deposits with minor chalcopyrite sphalerite and galena. Sulphides occur as massive pods (up to 1m thick), as layers (up to 10cm thick) and as fragments in silicified breccia. Sulphide mineralization is composed mainly of well-formed but disrupted pyrite grains (average size 2.5mm across) with minor chalcopyrite in an ankeritic quartz matrix. This unit looks like a pyrite-silica exhalite. Locally the sulphide horizons are well layered (layers are 8cm thick) over an exposed thickness of 3.5m). Attitudes of layering and coincident foliation are the same as those observed in the limestone. Most mineralization appears to be stratabound and syngenetic with the host felsic schists.

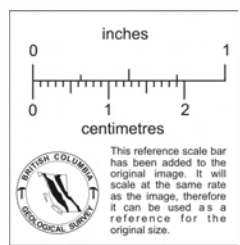
Sample description: Collected samples consist of fine grained galena disseminated through massive iron sulphide horizons. Vein material, also analysed, contains coarser galena and sphalerite in quartz gangue.

Reference: GOUTIER et al, 1985.



- FLOAT 25 PER CENT SCHIST, 75 PER CENT GRANITIC
- FRAGMENTAL QUARTZ SERICITE SCHIST
- QUARTZ EYE SERICITE SCHIST WITH QUARTZ ANKERITE VEINLETS, PYRITE ~10 PER CENT
- FRAGMENTAL QUARTZ SERICITE SCHIST
- QUARTZ SERICITE SCHIST, BOTTOM PART CALCAREOUS
- QUARTZ-EYE SERICITE SCHIST, 15 PER CENT QUARTZ-EYE PYRITE
- PYRITE CONTENT INCREASES UPWARD
- CALCRITE
- QUARTZ EYE SERICITE SCHIST, CALCITE INCRUSTATION, TRACE PYRITE

— FLOAT GRANITIC (QUARTZ MORPHONITE), CHLORITE SCHIST, ELONGATE QUARTZ FRAGMENTAL SERICITE SCHIST, PERRUCITE



- QUARTZ-EYE SERICITE SCHIST, PHYLLITE, DISSEMINATED PYRITE
- QUARTZ SERICITE SCHIST
- SERICITE SCHIST, MINOR CHLORITE LIMONITE ALTERATION
- MINERALIZED ZONE MASSIVE PYRITE WITH CHALCOPYRITE, FINE ARS
- OUMP SERICITE SCHIST, CHLORITE SCHIST, MASSIVE PYRITE, GALENA-SPHALERITE IN QUARTZ GARDIAS

SYMBOLS

FOLIATION ATTITUDE

FRACTURE MOUNT ATTITUDE

OVERBURDEN



RISE CREEK