



PROPERTY EXAMINATIONS
WEST CENTRAL BRITISH COLUMBIA

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TWEEDSMUIR PARK (93E/2)

Two contiguous claim groups south of Pondosy Bay on Eutsuk Lake were examined in 1974. A directive from the provincial Parks Branch in 1973 curtailed exploration work on these and other properties lying within the boundaries of provincial parks.

The Bob, Jam, Ron, and Pete groups of claims, owned by Stenecha Exploration Ltd., are situated on the northeast slope of Mount Preston, which is underlain by Hazelton Group volcanic rocks.

Copper mineralization occurs in several areas on the property. The principal showings are on the north side of a northeast-trending creek canyon at about 1,370 metres elevation. Northwest-striking fracture zones in massive andesitic flow rocks contain disseminated chalcopyrite and bornite over a distance of 150 metres along the canyon wall. Copper staining is visible on the steep rock faces. Some copper mineralization is also contained in a bedded pyroclastic sequence in the cirque area at the head of the creek.

The Pond claims, owned by Adastral Mining Corporation Ltd., are situated on the steep southwest-facing slope of Mount Preston. The central part of the property features a prominent gossan area which appears to be restricted to a northeast-striking fault block 1.5 kilometres wide. Rocks within this area of gossan are principally rhyolite flows and breccias and small (250-metre diameter) quartz-feldspar-porphyry plugs. Basic dykes cut all rock types. Fracturing is intense and pyrite is widespread both as disseminations and as fracture fillings.

POPLAR (93L/2W)

This porphyry copper prospect is situated 48 kilometres south-southwest of Houston on the north side of Tagetochlain (Poplar) Lake. Access is by four-wheel-drive vehicle off the Tahtsa Reach road, or by helicopter. The following description is based on field observations and information gathered by the writer and T.G. Schroeter, District Geologist, Smithers.

The property was originally located for El Paso Mining and Milling Company by M. Callaghan, F. Onucki, and C. Critchlow in 1971. In 1971 and 1972, El Paso carried out soil geochemistry, geological mapping, and bulldozer trenching on the property. Results were disappointing and the property was subsequently acquired by the original locators. Limited drilling and hand trenching were done on the claims in mid-1974, and the property was optioned by Utah Mines Ltd. in late September. Geochemical and geophysical surveys and diamond drilling were in progress in November.

Original soil samples yielded anomalous copper values distributed around a crudely circular area 1,500 metres in diameter. Trenching, done to test some of these anomalous areas, exposed hornfelsed volcanic and sedimentary rocks cut by dykes of feldspar porphyry. All of these rocks exhibit features typical of a quartz-sericite-pyrite or phyllic alteration zone. Pyrite and minor chalcopyrite are contained in closely spaced fractures.

Work by one of the owners in 1974 in the central part of the claim group resulted in the discovery of sub-outcrops of biotite-feldspar porphyry and hornfels containing copper mineralization (over an 1,800-square-metre area). Three directions of closely spaced fractures are evident and each contains finely disseminated chalcopyrite and some pyrite.

Four hundred metres southeast of this zone, intensely fractured hornfels is exposed in a creek canyon. Abundant pyrite occurs in narrow fractures and in northerly striking quartz veins up to 30 centimetres wide. Old claim posts nearby suggest that this zone was investigated many years ago. The hornfels exhibits significant bleaching marginal to the closely spaced (one per 5 centimetres) fractures. Just south of this zone the hornfels is capped by a small remnant of non-mineralized Tertiary basalt.

REFERENCE

Assessment Report 3665 (Government file, *B.C. Dept. of Mines & Pet. Res.*)

BABINE RANGE (93L/15)

A study of the mineral potential of the Babine Range, 25 kilometres northeast of Smithers, was undertaken in 1974 as part of an integrated resource study involving several provincial government departments. The study was conducted by the writer and T. G. Schroeter.

The Babine Range is underlain by a northwest-trending sequence of Lower and Middle Jurassic volcanic and sedimentary rocks. Argillaceous sedimentary rocks of possible mid-Cretaceous age are found along the east flank of the range. Eastward-directed thrust faulting is evident along the west flank of the Range where the bulk of the volcanic-sedimentary sequence exhibits features of dynamic metamorphism. Intruding the layered rocks are elongate plugs, dykes, and sills of rhyolite and lesser granitic rocks. The intrusive rhyolites contain abundant disseminated pyrite.

The great number of mineral showings in the Babine Range were originally explored and developed in the early 1900's. Of these, only one, the Cronin silver-lead-zinc deposit, has had any record of sustained production.

The known mineral deposits may be broadly subdivided into four main types, including: (1) copper-silver deposits in volcanic rocks, (2) silver-lead-zinc deposits in volcanic rocks, (3) silver-lead-zinc deposits in sedimentary rocks, and (4) porphyry copper-molybdenum deposits.

Copper-silver deposits in volcanic rocks are apparently restricted to the predominantly maroon pyroclastic sequence of Early Jurassic age on the west flank of the Range. These deposits consist of discontinuous quartz veins, fracture fillings, and disseminations of bornite, chalcopyrite, chalcocite, and minor tetrahedrite. Examples of these deposits include the Rainbow, Harvey, and Copper Queen showings.

Silver-lead-zinc deposits in volcanic rocks include the Silver King showings at the head of Driftwood Creek and similar showings near the head of Debenture Creek on the east side of the Range. At the Silver King deposit, branching quartz veins up to 4 feet wide, crudely parallel to the schistosity in enclosing silicified andesites, contain pyrite, galena, sphalerite, and tetrahedrite. At Debenture Creek, argentiferous galena occurs in quartz veins and in massive lenses in pyritized and silicified volcanic rocks.

Silver-lead-zinc deposits in sedimentary rocks are represented by the Cronin, Hyland Basin, Native Mines, and Little Joe properties, all of which are situated on the east flank of the Babine Range. The mineral showings are veins and fissures which occur in schistose argillaceous sedimentary rocks and sericite schists adjacent to plugs, dykes, and sills of rhyolite. The deposits consist essentially of argentiferous galena, sphalerite, tetrahedrite, and some native silver in a gangue of quartz and siderite. The rhyolite intrusions contain disseminated pyrite and near the principal showings, narrow quartz-filled fractures with silver-lead-zinc mineralization.

The Big Onion porphyry copper-molybdenum deposit on Astlais Mountain at the southeast end of the Range is the only example of this type. An elongate intrusive consists of two phases including a quartz-feldspar porphyry which has been intruded by an inner quartz diorite porphyry. Chalcopyrite and molybdenite mineralization is best developed near the contacts between the two intrusive phases.

REFERENCES

- Hanson, G. (1924): Driftwood Creek Map-Area, *Geol. Surv., Canada*, Sum. Rept., Pt. A, p. 19.
- Lang, A. H. (1940): Houston Map-Area, British Columbia, *Geol. Surv., Canada*, Paper 40-18.

BLUNT (93M/3E)

The Blunt porphyry copper-molybdenum prospect is situated on the southwest side of Blunt Mountain near the headwaters of Luno Creek, 25 kilometres east-southeast of New Hazelton. Exploratory work including diamond drilling was carried out by Noranda Exploration Company, Limited in the late 1960's.

Copper and molybdenum mineralization occurs near the western contact of a large granodiorite stock which forms the core of Blunt Mountain and intrudes Bowser Group sedimentary rocks. The sedimentary rocks near the intrusive contact are notably hornfelsed and pyritized.

The principal mineral showings are in a spur ridge underlain by medium-grained equigranular to sub-porphyritic granodiorite cut by narrow fine-grained aplite dykes. Chalcopyrite and molybdenite are disseminated in quartz-K-feldspar-filled fractures which range in width from hairline to 3 millimetres. Two fracture directions, trending north and east and having steep dips, are spaced 7 to 12 centimetres apart. Only the north-trending fracture set was seen to contain copper-molybdenum mineralization.