

826239

92 F/14E

File NTS
92F#18?WOLF MINERAL PROSPECT

LOCATION: N.T.S. 92F/14E Lat. 49°46'N Long. 125°12'W
Nanaimo Mining Division; Elevation: 350 metres
Mineral Inventory No: 92F#183

ACCESS: The property is located about 19 km by road from Courtney. (Fig. 1)

PROPERTY DEFINITION: The "Wolf" Claim (Tag No: 83833) consists of 6 units (3Wx2N) recorded 24 January 1983.

REGIONAL GEOLOGY: The claim is underlain by greenstones of the Karmutsen formation which are unconformably overlain by late Cretaceous sediments of the Nanaimo group which have been locally invaded by early Tertiary dacite porphyry plugs and sills. (Fig. 2) The property covers a major, east trending fault zone, emanating from a mineralized (Cu, Au, Ag) Tertiary volcanic centre at Mount Washington and a similar centre at Constitution Hill (Carson, 1960).

PROPERTY GEOLOGY: The property was described briefly by Hurst (1927) and Gunning (1930) and reported herewith. According to the descriptions given the brecciated, arsenopyrite-bearing, fault zone may have carried gold and copper bearing mineralizing solutions from the Mount Washington or Constitution Hill volcanic centres. The presence of arsenopyrite in andesitic wall rock and breccia fragments suggests that the fault zone might carry associated gold values at depth or along strike as observed in arsenopyrite-gold quartz veins at Mount Washington and Forbidden Plateau. (Carson 1969).

PROPOSED EVALUATION PROGRAM: In view of the untested gold potential of this strong fault zone, it would seem appropriate to initiate a low cost exploration program designed to test its gold potential. I suggest a two stage approach involving grid preparation, soil sampling and VLF-EM surveys along the projected strike length of the fault zone. This should be followed up by trenching, rock chip sampling and a series of short x-ray diamond drill holes into indicated surface anomalies.

REFERENCES CITED:

Carson, J.T., 1969, Tertiary mineral deposits of Vancouver Island, C.I.M. Trans., V.72, pp116-125.

_____, 1960, Geology of Mount Washington, Vancouver Island. Unpublished M.Sc. thesis at U.B.C., 116p.

Gunning, H.C., 1931, Buttle Lake Map area, Vancouver Island, B.C., G.S.C. Sum Rpt. 1930 Pt. A. pp56-78.

Hurst, M.E., 1927, Arsenic-bearing deposits in Canada; G.S.C. Econ. Geol. Series #4, pp36-38.

1. Wolf Lake

(See Figure 4)

This property consists of two unsurveyed claims, the Good Hope No. 1 and No. 2, in the vicinity of a small creek flowing northeasterly into the west end of Wolf lake. The claims are reached from Headquarters camp of the Comox Logging Company, 12 miles north of Courtenay. A trail about 3 miles long leads southwesterly from Headquarters to the east end of Wolf lake. From this point a canoe trip of 2 miles is necessary to reach the west end of the lake, where a rough trail of about one-half mile has been cut to the deposit, which lies at an elevation of 850 feet, or 260 feet above the lake. The property is owned by E. Morrison and associates, of Vancouver, B.C.

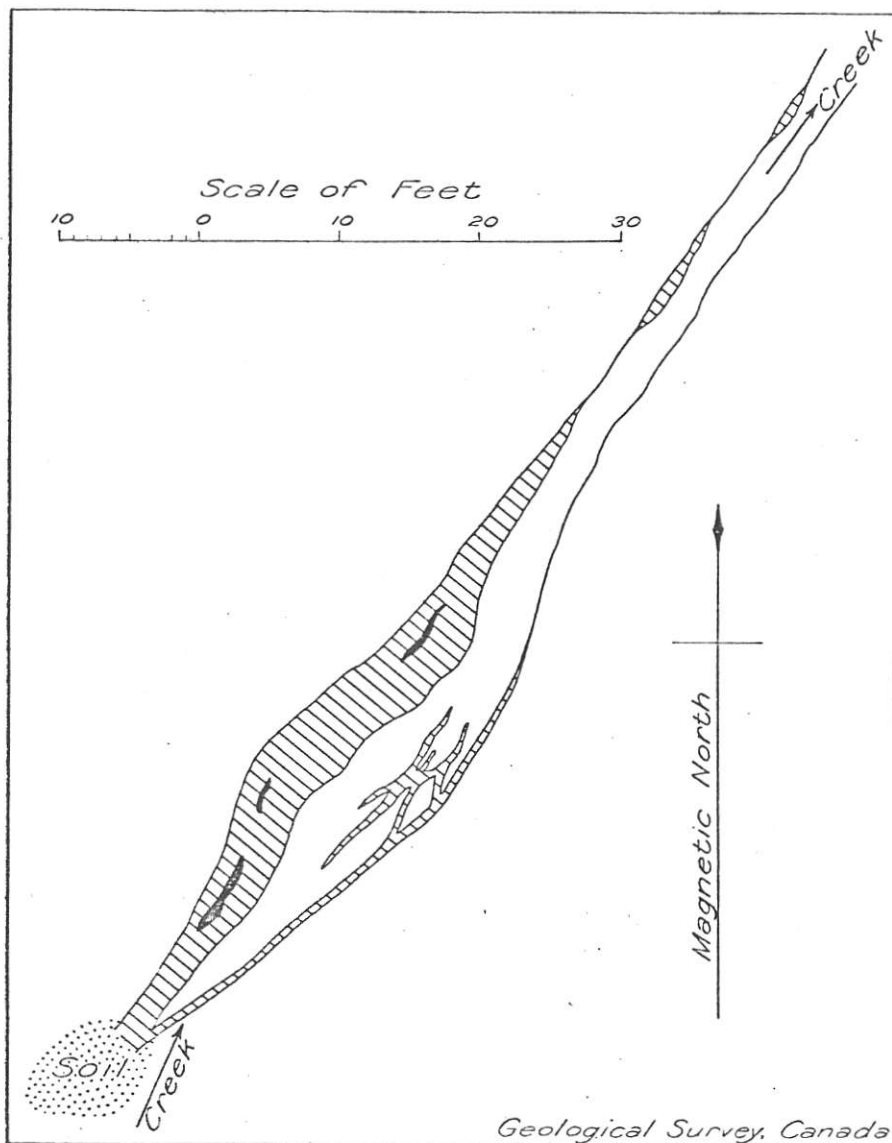


Figure 4. Realgar deposit, Good Hope claim, Wolf lake, Vancouver island, B.C. Small bodies (black) and particles of realgar lie in lenses and veins of calcite (diagonal ruling) within a zone of brecciated andesite.

The showings occur in a creek bed which, at the time of inspection (August, 1924) was almost dry. For about 250 feet the creek follows, and has exposed, a brecciated zone in andesitic rocks. This brecciated zone varies from 2 to 12 feet in width, strikes north 35 degrees east (magnetic), and appears to dip steeply to the southeast. It contains lenses and veins of calcite, some as much as 6 feet wide, in which numerous, angular fragments of the shattered andesite are embedded. These bodies of calcite outcrop at intervals for about 150 feet along the creek bottom and contain occasional lenticular masses of realgar. The largest exposure of the arsenic sulphide, and the one for which the claims were originally staked, measures 4 feet in length with a maximum width of 9 inches. Another lens is 30 inches long and 8 inches at the widest point. Several smaller stringers of realgar were also seen at various places along the shear zone. Tiny veinlets of arsenopyrite occur here and there in the andesitic wall-rocks.

The minerals found in the shear zone are chiefly calcite and realgar, with minor amounts of quartz and arsenopyrite. Realgar appears to be confined to the calcite and arsenopyrite to the andesite. Small amounts of arsenopyrite occur in the andesitic fragments embedded in the calcite and it is conceivable that the sulphide may have been deposited either before or after the brecciation of the andesite. The realgar, on the other hand, was obviously introduced after the andesite was fractured. Hence the realgar may have been derived from the alteration of arsenopyrite or have been deposited contemporaneously with, or later than, the latter mineral. The writer is inclined to the view that, following the brecciation of the andesite and the cementation of the zone by calcite, arsenic-bearing solutions ascended along this line of weakness and deposited selectively, arsenopyrite in the andesite and realgar in the calcite. No evidence was observed to further the idea that the realgar might have been derived from the arsenopyrite by alteration, since the two minerals do not occur together. The only evidence of secondary action noticed was the replacement of realgar by native arsenic due to the leaching out of sulphur.

Practically no work had been done on the deposit up to the time it was visited and the only outcrops visible were those exposed by stream erosion. As the brecciated zone passes out of the creek within a distance of 250 feet and is there covered by soil, stripping and trenching will be necessary in order to explore the continuation of the mineralized belt. The quantity of realgar in sight, as indicated by the measurements given above, is small. No other values are known to be present in the deposit.

Gunning (1931) p76A.

ARSENIC AT WOLF LAKE

No work has been done on this property since M. E. Hurst examined it,¹ nor, so far as known, is it at present held by anyone. The showings are in a small creek and $\frac{1}{2}$ mile southwest of Wolf lake which is 3 miles by trail from Headquarters. There is an old dugout canoe on the lake by which one may paddle to the cabin at the northwest end of the lake, whence there is a poor trail to the property. Hurst states that a brecciated zone, from 2 to 12 feet wide, in andesitic rocks, is exposed for nearly 250 feet in the creek bottom. The zone strikes north 35 degrees east and contains lenses and veins of calcite, up to 6 feet in width, in which are numerous angular fragments of the country rock. The lenses outcrop for 150 feet and contain occasional lenticular masses of realgar the largest of which measured 4 feet by 9 inches. There is a little arsenopyrite in the wall-rock and in included fragments in the vein and there is also a little quartz in the calcite. In part, the realgar has been altered to native arsenic by leaching of sulphur. Where the shear zone passes out of the creek to the south it is covered by soil, so that trenching would be necessary for further exploration in that direction. The mineralization has in all probability been formed by solutions emanating from a body of quartz diorite porphyry (hornblende porphyry) which intrudes the rocks near the property and also invades overlying Upper Cretaceous sandstone a short distance south of the workings and on the east side of Wolf lake. As the intrusive is placed tentatively as of Oligocene age, the mineralization would then likewise be Oligocene or younger.

LEGEND

- E'H Sr«ocio»
- E23 Quartz Diorite
Dacite Porphyry
- CZJ Nanaimo Group (LoU Cralaciwji)
- E3B Karmul»8n Formation (Trloic)

Seal.

i."A

MT. WASHIIM^TriNJ
CONSTITUTION HII i

previous work by