

OBJECT LOCATED - mineralized zone.

UNCERTAINTY IN METRES 200. Lat. 50°55'30" Long. 121°25'10"

Mining Division Kamloops District Kamloops

County Township or Parish

Lot Concession or Range

Sec Tp. R.

OWNER OR OPERATOR AND ADDRESS

Bethlehem Copper Corporation.

DESCRIPTION OF DEPOSIT

The property is reported to be underlain variously by argillite, greenstone, and fragmental volcanics assigned to the Permian and (?) earlier Cache Creek Group, intruded by serpentine bodies and acid dykes. The early exploration work was done in a northeasterly striking shear zone that was traced for about 2,000 feet. Within this zone pyrite and chalcopyrite were found in narrow seams and locally as disseminations throughout the adjacent rock.

The overburden-covered copper-molybdenum zone is centered in a series of early Tertiary dyke-like salic porphyritic intrusions, most of which have a northerly strike and steep westerly dip. The mineralized zone is contained in a complex, multiphase, porphyritic intrusion that is designated simplistically as "quartz monzonite porphyry" although an estimated one-half to two-thirds of the volume of the copper-bearing porphyry consist of granodiorite. The quartz monzonite porphyry forms a highly irregular, somewhat tabular body that dips westward and see Card 2

Associated minerals or products of value - Molybdenum, silver.

This property is located in the Bonaparte River valley, 9 miles northwest of Cache Creek.

The Maggie claim is reported to have been staked in the 1890's by a Mr. Hocking. The B.C. Development Company, Limited, in about 1896 acquired the Avoca, Avon, Amazon, etc. group of 12 claims and fractions (Lots 410-421) covering a large conspicuous gossan zone. The relationship of this claim group to the Maggie claim is not clear. Apparently the Maggie claim was located on showings associated with a shear zone adjacent to the gossan zone. The Avoca, etc. claims were Crown-granted to the company in 1898.

Considerable exploration and development work was done on the Maggie property prior to 1905. A shaft was sunk about 265 feet and approximately 1,000 feet of drifts and crosscuts were driven on 3 levels; the upper (No. 1) level was driven at road level and connected to the shaft by a short crosscut. About 1,500 feet southwest of the shaft workings two crosscuts were driven to prospect a zone of cross fracturing. In 1907 the Maggie claim was owned by Messrs. Hocking, Smith, and Bryson. Work during the year, by Messrs. Rombauer and Adams, who held the property under bond, included stoping over a length of 70 feet and a height of 30 feet on No. 2 level, and rehabilitation work on No. 3 level. No further activity was reported until 1915 when W.J. Milne & associates, of Vancouver, bonded the property. Work was begun by the Golden Gate Mining Company, Limited, but little was accomplished other than pumping out the workings. The property was idle again until 1929 when J.C. Hocking, son of the original owner, and J.B. Bromley reported some assessment work. They also held a lease on three of the Crown-granted claims. The old workings were unwatered in 1930 but nothing further was done.

Keneco Explorations Limited in about 1952 is reported to have put down 3 drill holes on the property. In 1963-64 Frobex Limited held, jointly with Tache Lake Mines Limited and Metal Mines Limited, two Crown-grant leases and 54 claims. A small amount of drilling during this period is reported to have cut low values over considerable widths.

Bethlehem Copper Corporation in 1968 acquired the property (Eiggam Group) comprising mineral lease No. 33 (Lots 410-421) and 10 recorded Beth claims; the M claims were

see Card 2

HISTORY OF PRODUCTION

In 1907, 45 tons of sorted ore were shipped from this property. From this ore 73 ounces of silver, and 7,000 pounds of copper were recovered.

REFERENCES

Reports of Minister of Mines, British Columbia:
 1898, p. 1194; 1907, p. 134; 1915, pp. 284, 366;
 1929, p. 215; 1930, p. 199; 1968, p. 173.

Geology, Exploration and Mining; British Columbia Dept.
 of Mines: 1969, p. 241; 1970, p. 324; 1971, p. 304;
 1972, p. 232; 1973, p. 212; 1974, p. 159; 1975,
 p. E91; 1977, p. E 162; 1978, p. E 172.

Duffell, S., and McTaggart, K.C.; Ashcroft Map-Area,
 British Columbia; Memoir 262, p. 102, Geol. Surv. of
 Canada, 1952.

Mineral Policy Sector; Corporation Files: "Bethlehem
 Copper Corporation"; "Frobex Limited"; "Tache Lake
 Mines Limited".

Jambor, J.L.; Geology and Hydrothermal Alteration at the
 Maggie Porphyry Copper-Molybdenum Deposit, South-
 Central British Columbia; Paper 75-17, Geol. Surv. of
 Canada. +

MAP REFERENCES

Map 1010 A, Ashcroft, (Geol.), Sc. 1":4 miles - accomp.
 Memoir 262.

Map 5219 G, Cache Creek, (Aeromag.), Sc. 1":1 mile. (1968).

*Map 92 I/14 W, Cache Creek, (Topo.), Sc. 1:50,000.

#Geology of the Maggie property, Sc. 1":1,800 ft., Fig. 2,
 Paper 75-17, p. 2.

++Miller, D.C.; Maggie; Porphyry Deposits of the Canadian
 Cordillera, Special Vol. 15, pp. 329-335, The Canadian
 Institute of Mining and Metallurgy, 1976.

REMARKS

Comp./Rev. By	DMacR	DMacR	DMacR	DMacR			
Date	8-71	11-76	9-78	02-82			

NAME OF PROPERTY

MAGGIE

DESCRIPTION OF DEPOSIT (continued)

at bedrock surface is elongated to the northwest. Extensive interfingering of the porphyry with host ultramafic rocks of the Cache Creek Group occurs not only along the flanks of the intrusion, but also at the northwest end of the copper zone.

Intense pyritization is a distinctive feature of a prominent gossan zone surrounding the Maggie deposit and occurs both as disseminated grains and along fractures in all rock types, although ultramafics seem to have been the least susceptible to impregnation. Pyrite occurs in lesser amounts throughout the copper zone. Chalcopyrite is the only widespread, abundant copper mineral. It occurs in all rock types as minute disseminated grains and as megascopic and microscopic veinlets, generally with quartz. In the copper zone the proportion of chalcopyrite that occurs in disseminated form is very high; an estimated one third of the volume of the mineral is present as grains unrelated to veinlets, even on a microscopic scale. Bornite is sparse and occurs only in the central part of the copper zone. Tennatite was found in veinlets 2-4 mm wide in five drill holes and appears to be concentrated at the periphery of the copper zone. Molybdenite is confined largely within the copper zone. Some occurs as fine grains and aggregates disseminated in the groundmass of the quartz monzonite porphyry, but most is conspicuously visible in quartz veinlets, many of which contain drusy quartz coated with well-crystallized molybdenite flakes up to 1 mm in diameter.

HISTORY OF EXPLORATION AND DEVELOPMENT (continued)

subsequently staked for a total of 68 claims. Percussion drilling in 1968 totalled 746 feet in 5 holes. Work in 1969 included geological mapping, and 1,487 feet of diamond drilling in one hole. Drilling in 1970 on the valley floor, to the east of the gossan zone, encountered a mineralized zone. To the end of 1971 drilling was done in 57 percussion holes (16,940 feet) and 32 diamond drill holes (42,450 feet). This work "outlined a porphyry deposit containing about 200 million tons of approximately 0.28% copper and 0.029% molybdenum." (Ref. Jambor, 1975).

In 1972 a further 2,708 feet of diamond drilling in 2 holes was done to test the southeast extension of the mineralized zone. Topographic mapping was carried out in 1973 and 1974. The company name was changed in 1974 to Bethlehem Copper Corporation. Work in 1975 included 610 metres of diamond drilling in 2 holes. Reserves were reported in 1976 as "indicated geological reserves of 181,440,000 tonnes grading 0.28% copper and 0.029% molybdenum." (Miller, D.C., Special Vol. 15, p. 329, The Canadian Institute of Mining and Metallurgy). Additional work in 1977-78 included an induced potential survey over 1.2 kilometres, and 53 metres of drilling in an attempt to deepen a previous hole.