

NAME OF PROPERTY

GEM (MEG) (H.L.M.)

OBJECT LOCATED - Area of best mineralization.

UNCERTAINTY IN METRES 300. Lat. 49°43'12" Long. 121°43'05"

Mining Division New Westminster District Yale

County Township or Parish

Lot Concession or Range

Sec Tp. R.

OWNER OR OPERATOR

DESCRIPTION OF DEPOSIT

The property lies within an area underlain by Coast Range intrusions, Jurassic or later in age and consisting of granite, granodiorite, quartz diorite and diorite, and a series of metamorphic rocks, consisting of quartzose granulites and fine-grained schists and gneisses. These latter rocks are of uncertain age, but they are likely to be late Paleozoic or early Mesozoic.

The oldest rocks in the mapped area are the quartz-feldspar-biotite schists and gneisses which occur as alternate bands rich in quartz-feldspar or biotite. Schistosity is well developed in the biotite parallel to the banding. The rock is non-magnetic and non-calcareous, and the hardness is quite variable.

The schists and gneisses are intruded by a light grey, medium-grained, gneissic granodiorite composed mainly of quartz and feldspar, with about 20 per cent biotite, and exhibiting prominent lineation. This rock is not magnetic. The gneissic granodiorite occurs as sill- or dyke-like masses in the metamorphic series and becomes more massive near the granite contact.

Associated minerals or products

see Card 2

HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located between elevations of 2,500 and 4,000 feet on Clear Creek, a tributary of Big Silver Creek, 29 miles north of Harrison Hot Springs.

The showings were held in the 1930's as the H.L.M. group, owned by Mrs. Minnie Peterson, of Louis Creek. Considerable surface work and prospecting was done in 1938 by H.L. Batten and associates before dropping their option in the early part of 1939.

Early exploration work was directed towards narrow molybdenum-bearing quartz veins. The original showing, the Gem vein, was optioned by J.B. Bailey in 1961 to Vancouver interests who in June 1962 incorporated Gem Explorations Limited. The property was expanded to 80 claims in the Bailey and MEG groups. Utah Construction and Mining Co. subsequently acquired the adjoining Sash group of 18 claims. During 1962 and 1963 Gem Explorations carried out some stripping and X-ray diamond drilling. An adit was collared on the Gem vein on the southeast side of Clear Creek late in 1963. This quartz vein, from 1 to 3 feet wide, strikes north 12 degrees east and dips 65 degrees westerly. The adit was driven to a length of 493 feet in 1964.

Utah Construction and Mining Co. optioned the property in July 1964 and exploration efforts were directed towards outlining a large low-grade type of deposit. Geological mapping, induced potential, resistivity, and soil geochemical surveys were carried out during the year. From 1965 to 1968, inclusive, Utah completed 14,443 feet of diamond drilling in 20 holes.

Drilling to mid-1966 indicated a mineralized zone in excess of 30 million tons grading about 0.205% molybdenite (Financial Record, 4/7/66).

The company name, Gem Explorations, was changed in 1968 to Consolidated Gem Explorations Ltd., and in 1972 to Brendon Resources Ltd. In 1973 the company still held the Bailey 1-8, MEG 11-76, and MEG 1, 3, and 4 Fractions.

In 1975 the property was acquired as the Gem 1-4 claims (13 units) by Amax Potash Limited. The company name was changed in August 1979 to Amax of Canada Limited. A deep hole, drilled by Amax Minerals in 1981 to test the central portion of the stock, encountered low molybdenum values. The Canadian exploration activities of the parent company

see Card 2

Mineral Policy Sector, Department of Energy, Mines and Resources, Ottawa

507793

HISTORY OF PRODUCTION

REFERENCES

Young, M.J., and Aird, C.A.; Geology of the Gem Molybdenum Deposit; Canadian Institute of Mining & Metallurgy Bulletin, Vol. 62, No. 681, pp. 41-45, January, 1969.

Reports of Minister of Mines, British Columbia: 1939, p. 100; 1963, p. 91; 1964, p. 143; 1965, p. 219; 1966, p. 61; 1967, p. 67; 1968, p. 82.

Mineral Policy Sector; Corporation Files: "Brendon Resources Ltd."

Stevenson, John S.; Molybdenum Deposits of British Columbia; Bulletin 9, p. 89, British Columbia Dept. of Mines, 1940.

Geology, Exploration, and Mining; British Columbia Dept. of Mines: 1975, p. E74.

MAP REFERENCES

Map 12-1969, Hope, (Geol.), Sc. 1:250,000 - accomp. Paper 69-47, Geol. Surv. of Canada.

Map 737 A, Hope, (Geol.), Sc. 1":4 miles.

#Gem Molybdenum Property, (Geol.), Sc. 1":1,100 ft., Fig. 2, Report by Young and Aird.

*Map 92 H/12, Mount Urquhart, (Topo.), Sc. 1:50,000.

REMARKS

Comp./Rev. By	DMacR	DMacR					
Date	9-78	12-83					

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DESCRIPTION OF DEPOSIT (continued)

Its gneissic character changes to a granitoid texture in a few places.

The granite of the Gem pluton is typically a white to light grey, medium-grained rock, containing numerous smoky quartz phenocrysts. Locally, the quartz is massive and has a somewhat graphic texture.

The granite occurs as a plug roughly 4,000 by 1,800 feet in plan at the surface, with the long dimension trending north-south. Numerous discontinuous granite dykes and/or sills were noted in the dioritic and metamorphic rocks near the periphery of the plug.

The granite is intruded by a smaller plug or pipe of quartz-monzonite porphyry breccia. This is a medium to dark grey, hard rock with an aphanitic groundmass containing phenocrysts of euhedral quartz, and fine to coarse subhedral and anhedral potash and plagioclase feldspar crystals.

A mixed breccia outcrops along the northeast edge of the quartz-monzonite porphyry breccia. The mixed breccia consists of tightly packed angular to subangular fragments of quartz-feldspar-biotite schist, gneissic granodiorite, granite and aplite. A peculiar feature of this rock is the absence of any introduced matrix material between the fragments. Surface outcrops indicate that the mixed breccia is in contact with quartz-monzonite porphyry breccia, granite, and quartz-feldspar-biotite schists and gneiss.

The area of best mineralization is arcuate in shape and fits around the northeast edge of the quartz-monzonite porphyry breccia, where the granite envelope thins. Granodiorite seems to be the best host rock and the molybdenite seems to have an affinity for the coarse biotite.

Locally, small amounts of disseminated pyrrhotite, pyrite, chalcopyrite, sphalerite and scheelite occur with the quartz veins. Acicular bismuthinite is found in some of the vugs in the quartz. Normally, the vugs have only a carbonate coating.

There has been a moderate degree of silicification in the area, both as quartz veining and locally pervasive flooding. The quartz stockwork is more prominent in the granite and in portions of the quartz-monzonite porphyry breccia.

HISTORY OF EXPLORATION AND DEVELOPMENT (continued)

Amax Inc were combined under a new company Canamax Resources Inc, which was incorporated in December 1982. Canamax has 100% interest in the property. Geological reserves were estimated at 25,000,000 tons grading 0.15% MoS₂ (Canamax Resources Inc Listing Statement 2956, July 1983, p. 22).