

PRODUCT	COPPER	PROVINCE OR TERRITORY	British Columbia	N.T.S. AREA	93 E/14	REF. CU 3
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NAME OF PROPERTY **BERGETTE**

OBJECT LOCATED -of breccia zone.

UNCERTAINTY IN METERS-200. Lat. 53°47'52" Long. 127°16'40"
 Mining Division **Omineca** District **Range 4 Coast**
 County Township or Parish
 Lot Concession or Range
 Sec Tp. R.

OWNER OR OPERATOR AND ADDRESS

DESCRIPTION OF DEPOSIT

The Sibola Range is underlain by Jurassic sedimentary and volcanic rocks of the Hazelton group, with a granitic stock covering an area of about 20 square miles in the central core of the range. The sedimentary unit includes impure sandstone, some argillite, and minor chert and quartzite and is metamorphosed to hornfels near the stock. The volcanic unit is largely acid pyroclastic rock. The gossan zone covers roughly 2.5 square miles and is elongated northwesterly, subparallel to the main fracture direction prevalent in the area. Two main types of mineralization were tested in the 1971 work: these are the occurrence of sulphides in a breccia zone in the stock, and sulphides more generally dispersed such as in fractures and as disseminations beyond the limits of the breccia zone. The breccia zone, roughly 1,500 feet long, extends from a bulbous north end, in contact with a feldspar porphyry intrusion, to a
 see Card 2

Associated minerals or products of value - **Molybdenum.**

HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located at the 5,800 foot elevation $3\frac{1}{2}$ miles west-northwest of Sibola Peak, approximately 45 miles southwest of Houston.

Kennco Explorations (Western), Limited, was attracted to the area in the early 1960's by anomalous high copper and molybdenum concentrations in silt samples taken from local streams. A follow-up investigation led to the discovery of scattered copper and molybdenum bearing zones in a large gossan. After some additional investigations over a period of several years, Kennco abandoned the property.

The showings were restaked in July 1970 by G.O.M. Stewart. By an agreement of December 1970 Frontier Exploration Limited optioned 27 claims and fractions in the Bergette and BS groups from G.O.M. Stewart and R.R. Blusson. This was superceded by an agreement of July 1971 between Frontier, the Optioners, and Granges Exploration Aktiebolag, of Sweden. Further staking in the BF, FG, and LK groups expanded the property to some 190 claims and fractions. A joint exploration program during 1971 included geological mapping, a geochemical soil survey (1,171 samples), a magnetometer survey over 26.2 line miles, trenching, and diamond drilling in 6 holes totalling 4,011 feet.

*See Card 2, p. 75 for info on 14-10-1970
 New Frontier Petroleum Corporation in 1985*

Mineral Resources Branch, Department of Energy, Mines and Resources, Ottawa.

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HISTORY OF PRODUCTION

REFERENCES

Church, B.N.; Bergette; Geology, Exploration, and Mining,
1971, pp. 147-157, British Columbia Dept. of Mines.

Mineral Policy Sector; Corporation Files: "Frontier
Exploration Limited".

MAP REFERENCES

Geology of the Bergette Copper-Molybdenum Prospect, Sc. 1":
2,200 ft., Fig. 23, Geology, Exploration, and Mining,
1971, British Columbia Dept. of Mines.

Map 1064 A, Whitesail Lake, (Geol.), Sc. 1":4 miles -
accomp. Memoir 299, Geol. Surv. of Canada, 1959.

Map 93 E/14, Newcombe Lake, (Topo.), Sc. 1:50,000.

REMARKS

Comp./Rev. By

DCM

Date

11-73

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NAME OF PROPERTY

BERGETTE

DESCRIPTION OF DEPOSIT (continued)

narrow curved tail adjacent to a small rhyolite intrusion on the south. The breccia occurs in a matrix of gypsum, pyrite, some molybdenum-bearing quartz, and fluorite. Vugs are abundant measuring from one-quarter inch to 1 inch or larger in diameter. These are partly filled or lined with a diverse assemblage of minerals including carbonate, pyrite, chalcopyrite, magnetite, epidote, and secondary biotite. Intersection of the primary mineralization in drill hole No. 1 below the leached cap reportedly averaged 0.36 per cent copper over 130 feet.

The most widespread mineralization is associated with the highly fractured, but unbrecciated, west marginal section of the Sibola stock. In places the main mineralized section may be several hundred feet across consisting in detail of pyrite and chalcopyrite-bearing fracture zones measuring several feet wide alternating with panels of relatively sulphide-free rock tens of feet wide. Elsewhere, chalcopyrite occurs with pyrite in seams of solid sulphide a few inches wide or zones of intense disseminated sulphides measuring several feet wide. Diamond drill hole No. 2, a cross-section of numerous small seams and zones of disseminated sulphides, reportedly averaged 0.15 per cent copper over 687 feet.