

PRODUCT MOLYBDENUM  
PRODUIT

PROVINCE OR TERRITORY PROVINCE OU TERRITOIRE

British Columbia

N.T.S. AREA 93 E/6  
RÉGION DU S.N.R.C.

REF. MO 1  
RÉF.

NAME OF PROPERTY  
NOM DE LA PROPRIÉTÉ

CAFB, RED BIRD (OLD GLORY)

OBJECT LOCATED - Centre of pluton.  
OBJET LOCALISÉ

UNCERTAINTY 300 m  
FACTEUR D'INCERTITUDE

Lat. 53°17'50"

Long. 127°00'20"

Mining Division Omineca  
Division minière

District  
District

County  
Comté

Township or Parish  
Canton ou paroisse

Lot  
Lot

Concession or Range  
Concession ou rang

Sec  
Sect.

Tp.  
Ct.

R.  
R.

OWNER OR OPERATOR/PROPRIÉTAIRE OU EXPLOITANT

DESCRIPTION OF DEPOSIT/DESCRIPTION DU GISEMENT

Red Bird Mountain and vicinity is mainly underlain by Middle Jurassic clastic rocks of volcanic origin, chiefly tuffs and volcanic sandstones of the upper volcanic division of the Hazelton Group. Three small intrusive bodies cut the Hazelton Group: a red granite about 2 miles east of the summit of Red Bird Mountain; a granodiorite tongue, similar to Coast Range rocks, north of Red Bird Mountain; a quartz monzonite porphyry southwest of the summit of Red Bird Mountain. The latter is the host of the CAFB molybdenum deposit. The CAFB pluton is an irregular elliptical cylinder with a semicircular ring-dyke around the northern circumference. In plan the main mass is about 2,500 by 3,500 feet in major and minor axes. At depth the pluton rakes southward at about 75 degrees. The northern dyke is about 150 to 500 feet wide and is separated by a screen of hornfels some 800 feet wide. The contacts are irregular in detail, and interleaving of small peripheral concentric dykes and hornfels screens is normal. Radial dykes occur in lesser degree.

Alteration and mineralization are arranged concentrically to the pluton. Pyroclastic rocks surrounding the pluton are

p.t.o. ....

Associated minerals or products - Copper.  
Minéraux ou produits associés

HISTORY OF EXPLORATION AND DEVELOPMENT

HISTORIQUE DE L'EXPLORATION ET DE LA MISE EN VALEUR

The mineralized zone is located at approximately 4,500 feet elevation on the north side of Haven (Bone) Lake, between Haven and Eutsuk Lakes. The zone is on the south slope of a partly separated minor peak southwest of the summit of Red Bird Mountain. The deposit lies just outside the southern boundary of Tweedsmuir Provincial Park. The original staking was done on minor copper showings on the northeast side of the mountain.

Copper mineralization was discovered on the mountain in 1929 by Messrs. Harrison and Worth who staked the Red Bird group of claims on the showings. These claims subsequently lapsed and the showings were restaked in 1944 by Molly Nutter as the Old Glory group. The claims subsequently lapsed. No worthwhile work was done on the showings by either of the owners.

Phelps Dodge Corporation of Canada, Limited, a wholly owned Canadian subsidiary of Phelps Dodge Corporation of New York, prospected the mountain in 1958 and located the CAFB group in 1959. Additional staking was done until by 1966 the CAFB group consisted of 239 claims, centered on the molybdenum showing. Exploration work on the property began in 1960 with a program of trenching and ground sluicing. No further work was done until 1962 when trenching was resumed and magnetic and induced potential surveys were carried out. A diamond drill program was begun in 1963 and to the end of 1966 totalled 45,299 feet in 58 holes. The property was transferred to Ashfork Mines Limited, another wholly owned Canadian subsidiary of Phelps Dodge Corporation of New York. Diamond drilling in 1967-1968 totalled 12,566 feet in 17 holes. This work indicated some 20 million tons containing approximately 0.24% molybdenite (NM 19/02/70).

Craigmont Mines Limited optioned the property in 1979 and in 1980 completed a diamond drill program totalling 45,900'. This work outlined three possible open pit zones with preliminary estimates indicating about 37,000,000 tons at 0.18% MoS<sub>2</sub>, at a cutoff grade of 0.10%. An additional indicated 33,000,000 tons at 0.16% MoS<sub>2</sub>, and a similar cutoff grade, would require underground mining (Craigmont Mines, 1980 Annual Report). Feasibility studies carried out in 1981 indicated the deposit is sub-economic in the near term. Craigmont dropped the option in 1982.

DESCRIPTION OF DEPOSIT/DESCRIPTION DU GISEMENT (continued)

pyritized and weathered in a prominent annular gossan about 3 km in maximum diameter. A smaller exterior annulus is converted to hornfels characterized by very fine new biotite. The core of the pluton has a moderate potassic alteration. An annulus that overlaps the contact but is principally within the pluton has an intense stockwork of quartz veinlets with accompanying, moderately intense, pervasive silicification. Quartz-molybdenite-pyrite mineralization occurs in banded and drusy veins. In the smallest veinlets, laminae containing platelets of molybdenite are commonest at the margins or center.

Molybdenite is widely distributed in trace amounts in the pluton but mineralization approaches ore-grade only in an annulus whose outer margin is roughly coincident with the contact. The maximum grade occurs about 20 metres within the pluton. Beyond the contact molybdenum mineralization falls off sharply but pyrite with minor chalcopyrite continues in the quartz stockwork. Still further out the quartz-filled stockwork grades to dry pyrite-coated fractures. Oxidation has been deep and on surface the veins look barren of molybdenum.

MAP REFERENCES/RÉFÉRENCES CARTOGRAPHIQUES

#Geology in the vicinity of Haven Lake, Sc. 1":2.5 miles, Fig. 17, and Geology of the Red Bird, Sc. 1":800 ft., Fig. 18, Report of Minister of Mines, British Columbia, 1966, p. 113.

Map 1064, Whitesail Lake, (Geol.), Sc. 1":4 miles - accomp. Memoir 299.

\*Map 93 E/6, Chikamin Mountain, (Topo.), Sc. 1:50,000. General Geology, Sc. 1":5 mi, Fig. 8, Bulletin 64.

REFERENCES/BIBLIOGRAPHIE

Reports of Minister of Mines, British Columbia: 1929, p. 185; 1945, p. 73; 1960, p. 14; 1962, p. 17; 1963, p. 29; 1964, p. 57; 1965, p. 88; 1966, pp. 112-116<sup>+</sup>; 1967, p. 114; 1968, p. 142.

Duffell, S.; Whitesail Lake Map-Area, B.C.; Memoir 299, p. 100, Geol. Surv. of Canada, 1959.

††Brown, A. Sutherland; Red Bird Prospect; International Geological Congress, Canada, 1972, Guidebook, Field Excursion A 09-C 09, pp. 24-26.

Mineral Policy Sector; Corporation Files: "Phelps Dodge Corporation of Canada, Limited"; "Craigmont Mines Limited".

Geology, Exploration, and Mining; British Columbia Dept. of Mines: 1970, p. 102.

Exploration in British Columbia; BCDM: 1979, p. 212; 1980, p. 315.

Carter, N.C.; Porphyry Copper and Molybdenum Deposits West-Central British Columbia; Bulletin 64, p. 132, British Columbia Dept. of Mines, 1981.

REMARKS/REMARQUES

Comp./Rev. By Comp./rév. par	DMacR	DMacR	DMacR				
Date Date	12-78	03-82	08-86				