

NAME OF PROPERTY

MAGNUM (CHURCHILL COPPER)

OBJECT LOCATED -centre of Magnum vein.

UNCERTAINTY IN METERS-500.

Lat. 58°30'35"

Long. 125°24'10"

Mining Division Liard

District

Peace River

County

Township or Parish

Lot

Concession or Range

Sec

Tp.

R.

OWNER OR OPERATOR AND ADDRESS

DESCRIPTION OF DEPOSIT

The property is underlain by Precambrian sedimentary rocks of the Aida Formation, comprising a lower unit that is mostly thin-bedded calcareous shale and interbedded calcareous shale and limestone, and an upper unit of interbedded dolomitic shale and dolomite. The Magnum vein system occurs in a zone of deformation, alteration, mineralization and dyke intrusion that trends N35°E, dips steeply, and is up to 300 feet wide. The zone has been explored for a length of 4,500 feet and a depth of 1,200 feet. Strata in the zone are buckled by small irregular folds, and altered to non-limy rocks. An intense cleavage which dips about 60°E is developed. The mineralized veins lie more or less central in the zone and were formed later than the folds and cleavage. The veins consist of varying proportions of ankerite, quartz, chalcopryrite and locally pyrite, together with partly replaced remnants of the sedimentary host rock. The

see Card 2

Associated minerals or products of value

HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located at elevations of 5,100 to 6,700 feet at the headwaters of the Racing River, approximately 100 miles west-southwest of Fort Nelson. The main haulage level (5,200 level) is connected by 13 miles of road to the millsite at the junction of Delano Creek and the Racing River.

Eleven claims in the Al, Caribou, and Canyon groups were staked on the showings in 1957 by Messrs. Larson and Lembke. Magnum Copper Limited, incorporated July 1958, optioned the property and staked 48 additional claims in the Don group. Exploration work during 1958-1959 included trenching, and 6,936 feet of diamond drilling in 11 holes. The exploration program was carried out under the direction of the major shareholder, Canadian Exploration, Limited; Centennial Mines Ltd. contributed financially. The deposit was not considered economic and exploration work ceased. The company name (Magnum) was changed in 1962 to Magnum Consolidated Mining Co. Ltd.

Churchill Copper Corporation Ltd., incorporated December 1964, acquired 19 claims covering the mineralized zone from Magnum Consolidated in return for 200,000 shares of stock. The claims were a relocation of the Al, Caribou, and Canyon claims. Additional staking was done to expand the property to 71 claims comprising the Me, Don, Mac, and other groups. Churchill Copper in 1965 reached an agreement whereby Nippon Mining Company, Limited, would participate in financing further development of the property. The claims were surveyed in 1967 and a major development program begun. At the 6,150 foot level a crosscut adit, two drifts, and a raise, totalling 1,885 feet were driven, and 30 holes totalling 1,681 feet were diamond drilled from these workings. Development work during 1968 was carried out on the 6,100 foot level and the new 5,900 level. Total of all crosscuts, drifts, and raises to the end of 1968 totalled 6,428 feet. A main haulage level (5,200) was driven in 1969. Work during the year included 7,850 feet of drifting, 1,450 feet of raising, and stope preparation totalling 1,260 feet of drifting and 600 feet of raising. Diamond drilling totalled 12,400 feet underground and 4,160 feet on surface. Reserves

see Card 2

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

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HISTORY OF PRODUCTION

From April 1970 to October 1971, 347,649 tons of ore were milled at this property. From this ore 22,198,863 pounds of copper were recovered.

Production during 1974 totalled 201,450 tons of ore. From this ore 8,367,210 pounds of copper were recovered.

During the 15 month period of production from January 1974 to March 1975, 250,386 tons of ore were milled. From this ore 13,544,145 pounds of copper were recovered (Consolidated Churchill Copper, 1975 Annual Report).

REFERENCES

Carr, J.M.; Geology of the Churchill Copper Deposit; The Canadian Institute of Mining and Metallurgy, Bulletin, Vol. 64, No. 710, June 1971, pp. 50-54.

Preto, V.A. and Tidsbury, A.D.; Magnum Mine; Geology, Exploration, and Mining, 1971, pp. 81-88, British Columbia Dept. of Mines.

Reports of Minister of Mines, British Columbia: 1958, p. 13; 1959, p. 21; 1967, p. 25; 1968, p. 34.

Geology, Exploration, and Mining; British Columbia Dept. of Mines: 1969, p. 50; 1970, p. 43; 1973, p. 478; 1974, p. 317.

Mineral Policy Sector; Corporation Files: "Magnum Consolidated Mining Co. Ltd."; "Consolidated Churchill Copper Corporation Ltd."; "Brameda Resources Limited"; "The Dickenson Group of Companies".

MAP REFERENCES

#Geology of the Magnum Creek Area, Sc. 1":1 kilometre, Fig. 11, Geology, Exploration, and Mining, 1971, British Columbia Dept. of Mines.

Map 1343 A, Tuchodi Lakes, (Geol.), Sc. 1:125,000 - accomp. Memoir 373, Geol. Surv. of Canada, 1973.

*Map 94 K/11 W, Racing River, (Topo.), Sc. 1:50,000.

REMARKS

Comp./Rev. By	DCM	DMacR	DMacR				
Date	11-73	9-76	08-81				

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DESCRIPTION OF DEPOSIT (continued)

principal veins strike with the zone and most are nearly vertical. As many as ten such veins have been noted, although some may prove to be extensions of the others. They vary in width from less than 3 feet to as much as 25 feet and possess a continuity, both on strike and in depth, which is measured in hundreds of feet. From their appearance the veins were emplaced largely by replacement and in several stages. The first stage was principally ankerite with only minor quartz and sulphide. One or more later stages caused the introduction of quartz and sulphides, principally chalcopyrite, as veins and patches mostly within or adjoining the ankerite veins. The precious metal content in the ore is negligible. A post-ore diabase dyke of irregular shape and generally steep dip closely follows the southeast side of the vein system and invades it progressively southward in the zone.

HISTORY OF EXPLORATION AND DEVELOPMENT (continued)

were estimated in October 1969 at 1,178,100 tons averaging 3.92% copper.

By a January 1970 agreement between Churchill Copper and Brameda Resources Limited, the latter was to continue the development and manage the operation of the mine and mill. A 750 ton-per-day concentrator was completed and tune-up operations began in April 1970. The mine closed on October 1, 1971, due to the low price of copper. The long term debts of Churchill were assumed by Brameda by a refinancing agreement of April 1972. The company name (Churchill) was changed in July 1972 to Consolidated Churchill Copper Corporation Ltd.

A joint venture agreement of September 1973 between Brameda and Kam-Kotia Mines Limited called for Kam-Kotia to finance the re-opening of the mine at 500 tons-per-day; ore from the nearby Davis-Keays property (94 K/11, Cu 2), in which Kam-Kotia has an interest, was to be milled at the rate of 500 tons-per-day under a custom milling arrangement. Following a 2 year shut down, rehabilitation of the mine and mill began in September. Mining began in November and some 13,400 tons of ore were stockpiled by year end. Milling began in January 1974. Development work during the year included 171 feet of crosscutting, 2,026 feet of drifting, 616 feet of raising, 981 feet of decline, and 8,070 feet of diamond drilling. The mine closed in April 1975. Reserves at the time were estimated at about 100,000 tons averaging 3.0% copper (Northern Miner, May 8, 1975, p. 27).

Brameda Resources Limited, owner of a 50.3% interest in Consolidated Churchill Copper, in February 1979 amalgamated with Tecksub Limited and The Yukon Consolidated Gold Corporation Limited to form Amalgamated Brameda-Yukon Limited, a wholly owned subsidiary of Teck Corporation. In September 1979 Amalgamated Brameda purchased all the remaining shares of Consolidated Churchill.