

PRODUCT

IRON

PROVINCE OR  
TERRITORY

British Columbia

N.T.S. AREA 92 L/2

REF. FE 2

NAME OF PROPERTY

CHURCHILL

OBJECT LOCATED - main magnetite outcrop.

UNCERTAINTY IN METERS-200. Lat. 50°04'20" Long. 126°49'45"

Mining Division Alberni District Rupert

County Township or Parish

Lot Concession or Range

Sec Tp. R.

OWNER OR OPERATOR AND ADDRESS

## DESCRIPTION OF DEPOSIT

One large and several smaller bodies of magnetite, mixed with variable amounts of pyrite and pyrrhotite, are exposed on the property. They occur at or near the contact of the Quatsino limestone formation with the intrusive rocks of the Zeballos batholith, and are well exposed in natural outcrops.

The bodies of magnetite occur, for the most part, as irregular, lens-shaped bodies in the limestone at or near the diorite contact, and in several places contain irregular, unreplaced remnants of limestone. In addition to the replacement bodies, there are streaks, vein-like masses, and small irregular bodies of magnetite in the adjoining intrusive rock, accompanied by garnet and other lime-silicate minerals.

The replacement deposits consist of irregular masses composed of magnetite, pyrrhotite, and pyrite, surrounded by relatively pure magnetite. On the weathered surface, the sulphide-bearing parts are characterized by a pronounced limonite boxwork, which stands

Associated minerals or products of value

p.t.o. ....

## HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located at the head of Lime and Fault Creeks, about 6 miles north of Zeballos.

The presence of magnetite bodies in this vicinity was first noted by H.C. Cunning during the course of field work for the Geological Survey in 1931. The Churchill group, comprising the Churchill Fraction Nos. 1 and 2 and Shear Fraction claims, was staked in 1941 by Sam N. Ray and owned jointly by Mr. Ray and J.W. Foster. Work at that time was reported on gold-lead-zinc veins on the property (see Churchill, 92 L/2, Au 4). Privateer Mine, Limited, held an option on the property in 1944 but no work was reported on the magnetite showings. The owners resumed work on the property in 1945. In 1951 the owner was reported to be C.N. Petty, of Vancouver.

The Argonaut Mining Co. Ltd., a subsidiary of Utah Construction & Mining Co., optioned the property in 1951 and diamond drilling in 12 holes totalled 817 feet. Zeballos Iron Mines Limited optioned the property in 1962. A dip needle survey was completed before the option was dropped later in the year. Falconbridge Nickel Mines Limited acquired the adjacent Hiller property (92 L/2, Fe 3) in about 1960 and expanded the holdings to 42 claims in 1964, including the Artlish (92 L/2 Fe 3) and Churchill properties. Work on the Churchill property in 1964-66 included geological mapping, a magnetometer survey and 1,100 feet of diamond drilling. In 1985, combined airborne magnetometer, electromagnetic and VLF-EM surveys were carried out over the combined properties.

Footwall Explorations Ltd. in October 1987 acquired from Falconbridge an option on the Churchill and adjacent properties. A geochemical soil survey indicated anomalous gold values only in the vein showing (92 L/2, Au 4). Reserves on the Churchill claims are reported as 1,000,000 tons averaging 30-40% iron (Kermeen, 1987).

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

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HISTORY OF PRODUCTION

REFERENCES

Stevenson, John S.; Geology and Mineral Deposits of the Zeballos Mining Camp; Bulletin No. 27, pp. 131-133, British Columbia Dept. of Mines, 1950. +

Hoadley, J.W.; Geology and Mineral Deposits of the Zeballos-Nimpkish Area; Memoir 272, pp. 68-70, Geol. Surv. of Canada, 1953.

Reports of Minister of Mines, British Columbia: 1951, p. 197; 1962, p. 100; 1966, p. 73; 1965, p. 232

Muller, Northcote, and Carlisle; Geology and Mineral Deposits of Alert-Cape Scott Map-area; Paper 74-8, p. 59, Geol. Surv. of Canada, 1974.

Gunning, H.C.; Zeballos River Area, Vancouver Island; Summary Rept., Pt. A-2, pp. 48-49, Geol. Surv. of Canada, 1932.

Kermeen, J.S.; A Report on the Hiller-Churchill Group of Mineral Claims, 01/12/87, in Footwall Explorations Ltd. Prospectus, 24/05/88.

George Cross News Letter: 1988, No. 133

Exploration in British Columbia; BCDM: 1986, p. C275

MAP REFERENCES

Map 1028 A, Woss Lake, (Geol.), Sc. 1":1 mile - accomp. Memoir 272.

#Geology of the Churchill Group Showing Magnetite Deposits and Copper-Lead-Zinc veins, Sc. 1":500 feet, Fig. 2, Memoir 272.

\*Map 92 L/2 , Woss Lake, (Topo.), Sc. 1:50,000.

DESCRIPTION OF DEPOSIT (continued)

out in marked contrast with the pure magnetite. The intervening areas are generally composed of massive, fine-grained magnetite, which weathers a dull blue-black colour. In a few places the magnetite was observed to be distinctly crystalline, with crystals ranging from 1/16 to 3/8 inch in diameter. Judging from surface exposures, the average proportion of sulphide-bearing material to pure magnetite is about 1 to 10, the most northeasterly body appearing to contain the least sulphides. Thickness could not be determined, and no obvious structural control of the deposits was apparent.

A sample of the purest, fine-grained magnetite, assayed by the Mines Branch, Ottawa, yielded the following: iron, 67.34 per cent; sulphur, 0.053 per cent; and phosphorus, 0.026 per cent.

REMARKS

For gold-lead-zinc showings see: Churchill, 92 L/2, Au 1.

Comp./Rev. By	LJ	DMacR				
Date	12-76	07-88				