

NAME OF PROPERTY

ROBB LAKE

OBJECT LOCATED - centre of area of showings.

UNCERTAINTY IN METRES 500. Lat. 56°56'30" Long. 123°43'40"

Mining Division Laird District Peace River

County Township or Parish

Lot Concession or Range

Sec Tp. R.

OWNER OR OPERATOR AND ADDRESS

DESCRIPTION OF DEPOSIT

The Robb Lake area is contained within a north-northwest trending belt of Lower and Middle Palaeozoic miogeoclinal carbonate rocks and shales exposed in a series of folded thrust slices. Devonian rocks at Robb Lake are subdivided into four litho stratigraphic units: basal orthoquartzite, Stone Formation, Dunedin Formation, and Besa River Formation. Host rock of the Robb Lake mineralization is predominantly the Stone Formation (Middle Devonian) which is approximately 1,760 feet thick and comprises a massive, fine to medium crystalline grey stromatolite-bearing dolostone; interbeds of sandy and silty dolostone and orthoquartzite occur throughout the formation. The Stone is overlain by the Dunedin Formation which comprises 190 feet of carbonaceous dolostone with very fossiliferous interbeds. The Dunedin is overlain by the Besa River Formation, comprising a thick succession of siltstone and shale.

The mineralized showings occur mainly on the west limb and crest of a large south-plunging anticline. Approximately 12 mineralized outcrops were found during the initial exploration work.

Associated minerals or products of value - Lead.

see Card 2

HISTORY OF EXPLORATION AND DEVELOPMENT

The showings lie north of the Halfway River, approximately 3 miles northeast of Robb Lake and 120 miles northwest of Fort St. John.

Attention was focused on the area by the occurrence of lead-zinc mineralization in drill core from oil and gas exploration work further to the east. Stratabound lead-zinc occurrences were discovered in September 1971. Approximately 900 claims were subsequently staked in the Robb, Cleo, FG, MV and other groups by Peregrine Exploration Ltd., Ecstall Mining Limited (a subsidiary of Texas Gulf Sulphur Company), and Arrow Inter-America Corporation (a subsidiary of W.R. Grace & Co., of New York). In December 1971 the above companies entered into a joint venture agreement to pool, explore, and develop their claims.

In May 1972, Peregrine amalgamated with Windermere Exploration Ltd. to form Barrier Reef Resources Ltd. During 1972 a geochemical soil survey was carried out over approximately 56 line-miles, and diamond drilling totalling 14,910 feet was done in 29 holes; 7 of these cut mineralization that ranged in thickness from 8 to 15 feet and in grades from 4.3 to 26.1 per cent lead-zinc. Sixteen known outcrops containing lead-zinc mineralization in significant quantities were sampled; 17 chip-sample sections were cut in 10 of these.

Work during 1973, on the Webb Ridge area, included a time domain induced potential survey over 11 line-miles, and 8,975 feet of diamond drilling in 11 holes (Nos. 30 to 40), and hole No. 26 was deepened. During 1974 diamond drilling totalling 17,134 feet in 26 holes was carried out. "Reserves inferred by drilling in 3 different areas are estimated at 6.1 million tons of 7.3% combined lead and zinc" (Northern Miner, Jan. 30, 1975, p. 3).

Ecstall Mining Limited in Jan. 1975 changed its name to Texasgulf Canada Ltd. Work in 1975 under the joint venture agreement included geological mapping, and surface diamond drilling in 14 holes totalling 734 metres on MV 5, 23, 55, Cleo 117, 132, and Rex 14 Fr.

Interest in the Robb Lake Joint Venture (the December 1971 agreement) was divided as to Texasgulf Canada Ltd. (40%), Arrow Inter-America (40%), and Barrier Reef (20%), with Texasgulf and Arrow providing the funds for exploration. The property in 1978 comprised 459 claims.

see Card 2

HISTORY OF PRODUCTION

REFERENCES

Thompson, R.I.; Robb Lake Property; Geology, Exploration, and Mining, British Columbia Dept. of Mines, 1972, pp. 463-476. +

Sangster, D.F.; Geology of Canadian Lead and Zinc Deposits; Paper 73-1, Pt. A., p. 129, Geol. Surv. of Canada. ++

Mineral Policy Sector; Corporation Files: "Barrier Reef Resources Ltd."; "Ecstall Mining Limited".

Geology, Exploration, and Mining; British Columbia Dept. of Mines: 1973, p. 389; 1974, p. 289; 1975, p. E 156.

Macqueen, R.W. and Thompson, R.I.; Carbonate-hosted lead-zinc occurrences in northeastern British Columbia with emphasis on the Robb Lake deposit; Canadian Journal of Earth Sciences, Vol. 15, No. 11, November 1978, pp. 1737-1760.

Exploration in British Columbia; B.C. Dept. of Mines: 1980, p. 414; 1981, p. 26; 1982, p. 321.

MAP REFERENCES

Map 1232 A, Halfway River, (Geol.), Sc. 1":4 miles - accomp. Paper 69-11, Geol. Surv. of Canada.

#Geological Map, Robb Lake area, Sc. 1":1.6 miles, Fig. 61 - accomp. Report by Thompson.

*Map 94 B/13 E, Mount Robb, (Topo.), Sc. 1:50,000.

REMARKS

Comp./Rev. By	DMacR	DMacR	DMacR	DMacR			
Date	5-76	8-78	12-83	08-86			

PRODUCT

ZINC

PROVINCE OR
TERRITORY

British Columbia

N.T.S. AREA 94 B/13

- Card 2 -
REF. ZN 1

NAME OF PROPERTY

ROBB LAKE

DESCRIPTION OF DEPOSIT (continued)

Zinc and lead mineralization is associated primarily with dolostone breccias comprising tabular and lenticular zones which commonly conform with bedding. The Stone Formation contains the greatest proportion of breccias, especially in the western limb of the folded lower thrust panel. Thickness of the 'sheet-like' breccia zones normally ranges from a few inches to several tens of feet but may rarely exceed 150 feet. Lateral dimensions in the order of 1,000 feet are common. Margins of breccia zones vary from sharp to gradational. The sharp contacts appear undisturbed with few irregularities: evidence of chemical or mineralogical alteration is lacking. Across gradational contacts there is a progressive outward decrease in the degree of brecciation which passes into a zone of rectilinear fracturing.

Sulphide mineralization occurs principally within the Stone Formation where it is largely confined to breccias. In most mineral showings, pale to medium brown sphalerite is the dominant mineral with much less galena and minor pyrite. The sulphides occur as rims around dolostone fragments and as large crystals and crystal aggregates within the sparry filling. Pyrite, where present, occurs as thin fine-grained fragment coatings beneath sphalerite and hence possibly predates it depositionally. The large euhedral nature of many sphalerite crystals attests to the very porous conditions that must have existed at the time of sulphide deposition.

One sulphide occurrence is known in the Dunedin Formation. Here, the mineralization is contained in narrow vertical and sub-vertical fractures filled with white sparry dolomite. Where these fractures crosscut porous features such as birds eye fabric, sphalerite and pyrite extend from the fracture into the porous area.

HISTORY OF EXPLORATION AND DEVELOPMENT (continued)

Texasgulf was acquired in June 1981 as a wholly owned subsidiary of Canada Development Corporation, which was then 87.7% owned by the Government of Canada. The company name (Texasgulf) was changed in November 1981 to Kidd Creek Mines Ltd. As of Dec. 21, 1982 Arrow Inter-America Corporation quit-claimed its interest and withdrew from the joint venture. The property was then owned by Barrier Reef (53%) and Kidd Creek (47%). Diamond drilling in the period 1980-82 inclusive totalled some 37,800' in 39 holes.

Estimates of drill-indicated reserves over a minimum mining thickness of 8' are:

Tons	Average Grade (PB-Zn) (%)	Cutoff (%)
7,110,000	7.11	5.0
or 11,900,000	6.6	3.5
or 22,200,000	5.0	2.0

(Consolidated Barrier Reef Res L, Rights Offering Circular 29/11/84). The company name (Barrier) was changed in 1984 to Consolidated Barrier Reef Resources Ltd and in 1986 to MFC Mining Finance Corp.