

NAME OF PROPERTY GEM (IDA) (BLACK BULL) (CROESUS 3-4)

OBJECT LOCATED - Vein, on Croesus 3 & 4.

UNCERTAINTY IN METRES 600. Lat. 54°32'50" Long. 128°25'30"

Mining Division Omineca District Coast, Range 5

County Township or Parish

Lot Concession or Range

Sec Tp. R.

OWNER OR OPERATOR

#### DESCRIPTION OF DEPOSIT

The principal mineral showing is a quartz-pyrite vein which contains some high gold concentrations. The vein follows a north-northeast, easterly dipping fault zone in the contact area between grey, silicified metavolcanic rocks and quartz diorites, quartz monzonites, and hybrid rocks of the Coast Plutonic Complex. The quartz vein is exposed intermittently by 3 adits and a number of open cuts for a distance of 750 feet, and through a vertical range of about 400 feet. The vein undulates slightly, strikes north 10 to 26 degrees east, and dips 60 to 72 degrees eastward. Southward the vein is drift-covered; northward it narrows and splits into crooked stringers which soon pinch out. The vein pinches and swells, averaging about 14 inches in width. Locally it splits into two or more stringers, and irregular tapering veinlets extend outward into the wall-rocks. The walls are free, and some movement is indicated by striations and thin gouge-seams. The various rocks which the vein traverses do not appear to affect its structure of mineralogy.

see Card 2 ....

Associated minerals or products - Silver, tungsten.

#### HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located at the 2,200 foot elevation on the south slope of Kleanza Mountain,  $6\frac{1}{2}$  miles northeast of Terrace.

The Black Bull group of 8 claims, including the Gem No. 1 and Bluebird No. 3 claims, was owned during the 1930's and 40's by William Hagan and associates of Terrace. The property was reported on in 1946 under the name "Ida". Development work to that date included 3 adits between elevations of 2,200 and 2,397 feet. The upper adit (No. 1) had been driven 138 feet, the middle (No. 2) 152 feet, and the lower (No. 3) 27 feet. From time to time small shipments of hand-sorted ore from No. 1 adit were made to the Department of Mines sampling plant at Prince Rupert.

Kleanza Mines Ltd. in June 1966 purchased the Croesus group of claims from Richard Bates, Daniel Small, and John Brown. The company carried out additional staking in the Croesus group to a total of about 120 claims covering the Gem showing and adjacent properties; the Gem showing was staked as the Croesus 3 and 4 claims. Work over the entire claim group during the period 1969-1972 included geological mapping, electromagnetic surveys, a geochemical soil survey (954 samples), trenching, and diamond drilling. In 1971 a bulk sample was taken from the Gem workings for mill tests.

Indicated reserves, based on sampling in No. 1 and No. 2 adits, were estimated at 4,800 tons averaging 0.76 ounce gold and 1.73 ounces silver per ton, over an average width of 3 feet (W.M. Sharp, 30/08/71 in VSE SMF 13/09/72, Kendall Mng & Expl C L).

The company name was changed in 1972 to Kendal Mining and Exploration Company Limited. By 1975 the claims had all been allowed to lapse.

Cathedral Minerals Ltd held the property in 1979 and carried out a geochemical survey and 127 m of diamond drilling in 2 holes.

## HISTORY OF PRODUCTION

Small shipments of sorted ore were made to the Prince Rupert sampling plant during the period 1938-1942, inclusive. Thirteen small lots of ore shipped in 1940 totalled 2.28 tons (listed in Index No. 3 under Black Bull). From this ore, 1 ounce of gold and 2 ounces of silver were recovered. Ore shipments of almost 9 tons was reported in 1941; a portion of this ore, 5.9 tons, assayed 1.46 ounces gold and 2.60 ounces silver per ton, and 0.10% copper. A shipment of 2.19 tons in 1942 assayed 1.06 ounce gold and 1.8 ounces silver per ton, 0.2% copper, and 16.3% iron. (Ref. Reports of Minister of Mines, British Columbia, 1940, pp. 23, 42; 1941, p. 41; 1942, p. 31).

## MAP REFERENCES

Map 1136 A, Terrace, (Geol.), Sc. 1":4 miles - accomp. Memoir 329, Geol. Surv. of Canada.

Geology of underground and surface workings of the Croesus (Gem) property, Sc. 1":100 feet, Fig. 20, Geology, Exploration, and Mining, 1971, p. 115, British Columbia Dept. of Mines.

#Gem showings, Claim map, Sc. 1":3,000 ft., Fig. 3, Geological Report by W.M. Sharp, in Kendal Mining, Statement of Material Facts, Sept. 1972.

\*Map 103 I/9, Usk, (Topo.), Sc. 1:50,000.

## REMARKS

Comp./Rev. By	DMacR	DMacR					
Date	2-79	02-85					

## REFERENCES

Reports of Minister of Mines, British Columbia:  
 1938, p. B-37; 1939, p. 69; 1946, p. 85 + ;  
 1940, p. 54.

Geology, Exploration, and Mining; British Columbia Dept. of Mines: 1969, p. 77; 1971, pp. 114-116 ++ ; 1972, p. 500; 1967, p. 81; 1968, p. 107.

Kindle, E.D.; Mineral Resources of Terrace Area, Coast District, British Columbia; Memoir 205, p. 37, Geol. Surv. of Canada, 1937.

Mineral Policy Sector; Corporation Files: "Kendal Mining and Exploration Company Limited"; "Cathedral Minerals Ltd".

Mines Branch, Ottawa; Investigations in Ore Dressing and Metallurgy; 1974, Investigation Report 74-4.

Stevenson, J.S.; Tungsten Deposits of British Columbia; Bulletin No. 10 (Revised), p. 58, British Columbia Dept. of Mines, 1943.

Little, H.W.; Tungsten Deposits of Canada; Economic Geology Series No. 17, p. 43, Geol. Surv. of Canada, 1959.

NAME OF PROPERTY

GEM (IDA) (BLACK BULL) (GROESUS 3-4)

## DESCRIPTION OF DEPOSIT (continued)

In Nos. 2 and 3 adits and in open-cuts below No. 2 adit the vein-quartz is compact and glassy, and contains only occasional veinlets and disseminated crystals of pyrite.

The vein in No. 1 adit and in open-cuts from 50 to 100 feet above is closely banded, and contains from 5 to 25 per cent coarse friable pyrite and minor amounts of chalcopyrite. This well-mineralized ore-shoot is about 130 feet long and averages 15 inches wide. It is apparently continuous above No. 1 adit to the surface, but its downward continuity is unknown because No. 2 adit has not been driven far enough to test it. Post-mineral tectonic and intrusive activity is represented by later movement on the northeast fault zone along which the quartz vein was emplaced, slight offsetting of the northeast fault and vein by a northwest fault in the upper adit, and the intrusion of hornblende lamprophyre dykes which strike northeast and northwest and cut both the northeast fault and the vein.

Laboratory tests indicate the gold and silver are present as tellurides which occur as tiny inclusions and fillings in spongy pyrite. Scheelite was found in the workings on the Gem claim.