

NAME OF PROPERTY CARIBOO (PINKERTON), SANDERS ZONE

OBJECT LOCATED-center of Rainbow claim (Lot 7794).

UNCERTAINTY IN METERS-100. Lat. 53°05'20" Long. 121°33'35"

Mining Division	Cariboo	District	Cariboo
County		Township or Parish	
Lot		Concession or Range	
Sec	Tp.	R.	

OWNER OR OPERATOR AND ADDRESS

DESCRIPTION OF DEPOSIT

The property is underlain by the Snowshoe and Midas formations of the Cambrian and Later (?) Cariboo group. The Snowshoe formation is comprised mainly of lenticular beds of micaceous quartzite and phyllite, and minor limestone. The underlying Midas formation consists of phyllite and argillite. Foliation strikes northwestward and dips about 45° northeastward; bedding is not normally distinguishable. The main fold structure is the Sanders attenuated isoclinal syncline, which trends northwestward through the center of the mine and is overturned to the southwest. Faults in the mine are numerous. The most important are the northerly striking, easterly dipping faults which are spaced roughly 1,000 feet apart. They, and the accompanying vein zones, are named from northwest to southeast, the Tailings, No. 1, Rainbow, Sanders, Lowhee, Goldfinch, and B.C. The relation of veins to faults is most marked. The known veins are see Card 2 ....

Associated minerals or products of value

silver

HISTORY OF EXPLORATION AND DEVELOPMENT

The property extends southeasterly from the town of Wells, covering the north spur of Cow Mountain, Lowhee Creek, and the westerly slopes of Barkerville Mountain. The mine workings extend southeasterly from the north end of Jack of Clubs Lake through Cow Mountain to the Cariboo claim (Lot 93) at the head of Lowhee Creek, a distance of 2 miles.

Gold bearing quartz veins on the property were examined repeatedly from the 1870's. Most of the early work was done on the B.C. (Bonanza) vein, on the American (Lot 92), Cariboo (Lot 93), and St. Laurent (Lot 94) claims, but some was done on the Pinkerton and Enterprise veins (both on the Pinkerton claim Lot 356). Some 36 claims were reported located in 1877. At that time the Cariboo Quartz Mining Company, Limited, was driving an adit on the Cariboo claim. The American and St. Laurent claims were reported under development by the St. Laurent Co.; no record has been found of this incorporation. A 4 stamp quartz mill was operated part time during 1877. The B.C.M. & M. Co., which was apparently the British Columbia Mining and Milling Company, of Spokane, brought a 20 stamp mill to the B.C. vein in 1878 but did not erect it. In the next ten years this company sank an inclined shaft in the vein approximately 150 feet, drove a few hundred feet of drift, and did some drilling but mined little ore. The American, Cariboo, and St. Laurent claims were Crown-granted to the company in 1889.

Work on the Pinkerton and Enterprise veins was reported from 1877. The Enterprise Gold and Silver Mining Company, Limited, drove a 350 foot adit to develop the Enterprise vein. During the 1878-1888 period the "Victoria Company" is reported to have carried out some underground exploration on the Pinkerton and Enterprise veins, sinking a 150 foot shaft on the former. During this same period Jack Pinkerton and associates washed considerable gold from the surface showings, and experimented with gold recovery by rough crushing. In 1897 a 100 foot adit was reported on the Gold Finch claim (Lot 318), which adjoins the Pinkerton claim on the east; the claim was Crown-granted in 1898 to The Oriole Syndicate, Limited, of London, England. Messrs. Baker and Atkin held the Pinkerton and Cariboo claims under option during 1902- see Card 2 ....

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

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## HISTORY OF PRODUCTION

The earliest recorded production was from the Pinkerton Fraction claim in 1902 when 9 tons of ore yielded 4 ounces of gold.

From 1933 to 1953, 1,407,354 tons of ore were milled. From this ore 520,235 ounces of gold, and 45,046 ounces of silver were recovered.

Production from 1954-1958, including ore from the Aurum mine, totalled 447,000 tons. From this ore 194,453 ounces of gold, and 19,703 ounces of silver were recovered. Guiguet (1961) reported the total Cariboo mine production at 1,661,737 tons of ore with a recovery of 627,300 ounces of gold. British Columbia Dept. of Mines reports a production of 1,681,950 tons of ore from which were produced 626,755 ounces of Au and 56,092 ounces Ag. (B.C. Open File Report 1989-22, p. 32).

## MAP REFERENCES

Geological Map of the Antler Creek Area, Sc. 1": $\frac{1}{2}$  mile - accomp. Bulletin 38, British Columbia Dept. of Mines, 1957.

Map 2394, Barkerville Gold Belt, (Geol.), Sc. 1":1,000 ft. - accomp. Memoir 181.

\*Map 93 H/4 E, Wells, (Topo.), Sc. 1:50,000.

Map 2046, Barkerville Area, (Geol.), Sc. 1":1 mile - accomp. Memoir 149.

Map 336 A, Willow River Sheet, (Geol.), Sc. 1" = 1 mile, GSC 1938.

## REMARKS

For Aurum (Island Mountain mine) - see 93 H/4, Au 3.

Comp./Rev. By

DCM

DMacR

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JL

Date

11-73

08-83

08-86

10-90

## REFERENCES

Brown, A. Sutherland; Geology of the Antler Creek Area, Cariboo District, British Columbia; Bulletin No. 38, pp. 74-79, British Columbia Dept. of Mines, 1957.

Holland, Stuart S.; Cariboo Gold Quartz Mining Co. Ltd.; Report of Minister of Mines, British Columbia; 1945, pp. 73-79.

Richards, F.; Cariboo Gold Quartz Mine; Structural Geology of Canadian Ore Deposits, Jubilee Volume, 1948, pp. 162-168, Canadian Institute of Mining and Metallurgy.

Skerl, A.C.; Geology of the Cariboo Gold Quartz Mine, Wells, B.C.; Economic Geology, Vol. 43, pp. 571-597, 1948.

Hanson, G.; Barkerville Gold Belt, Cariboo District, British Columbia; Memoir 181, pp. 22-25, Geol. Surv. of Canada, 1935.

Guiguet, Marcel; Cariboo Gold Quartz; Western Miner & Oil Review, Vol. 34, No. 7, pp. 37-44, July, 1961.

Reports of Minister of Mines, British Columbia: 1877, pp. 395, 397; 1886, pp. 216, 232; 1887, p. 257; 1896, p. 556; 1897, p. 474; 1902, pp. 111, 126; 1922, p. 119; 1923, p. 122; 1924, p. 117; 1925, p. 149; 1926, p. 173; 1927, p. 169; 1928, p. 194; 1929, p. 190; 1930, p. 166; 1932, p. 91; 1933, pp. 120, 312; 1934, p. C-20; 1935, p. G-43; 1937, p. C-33; 1938, p. C-46; 1939, p. 70; 1940, p. 56; 1941, p. 55; 1943, p. 59; 1944, p. 54; 1946, p. 89; 1947, p. 111; 1948, p. 86; 1949, p. 102; 1950, p. 101; 1951, p. 119; 1952, p. 109; 1953, p. 96; 1954, p. 97; 1955, p. 31; 1956, p. 31; 1957, p. 14; 1958, p. 14; 1959, p. 22.

Mineral Policy Sector; Corporation Files: "Cariboo Gold Quartz Mining Company, Limited"; "Coseka Resources Limited"; "Wharf Resources Ltd."; "Mosquito Creek Gold Mining Company Limited" (con't reverse card 2)  
Galloway, John D.; Lode Gold Deposits of British Columbia; Bulletin 1, 1932, p. 59, British Columbia Dept. of Mines.

Stevenson, John S.; Tungsten Deposits of British Columbia; Bulletin 10 (Revised), p. 81, British Columbia Dept. of Mines, 1943.

Mines Branch, Ottawa; Investigations in Ore Dressing and Metallurgy; 1932, No. 736 (Invest. Rept. #442), pp. 66-69.

see reverse Card 2 ....

RAT 024-10

## DESCRIPTION OF DEPOSIT (continued)

concentrated within 250 feet horizontally of the northerly striking faults. Rocks in the vein zones are fractured in two dominant directions. The set of fractures that strike about N30°E represent tensional openings and are occupied by the transverse veins. The fracture set striking N70°E to east is occupied by the diagonal veins. Transverse veins are the most abundant and supplied 60 to 75 per cent of the ore. Their average width is less than 1 foot and most are less than 50 feet long. Diagonal veins are the next most abundant; they are in general slightly wider and somewhat longer. It is only by virtue of the fact that the veins are so numerous and closely spaced that they become of economic importance. The two vein types are mineralized alike. They are quartz veins whose dominant metallic mineral is pyrite, which ranges from 15 to 25 per cent in the ore zones. Other minerals that may be present are galena, sphalerite, arsenopyrite, cosalite, and bismuthinite. The vein quartz also contains ankerite, sericite, and scheelite.

The largest known strike vein is the B.C. vein. This vein is 2,400 feet long, as much as 42 feet wide, and has been developed over 900 feet vertically. It strikes N45°W and dips about 70° northeast. Three oreshoots have been mined, but the ore is reported to present problems in milling.

Pyrite replacement deposits were not found until 1944. All important replacement bodies have been found in the Baker limestone beds (Snowshoe formation) west of the Sanders fault. The replacement bodies are tabular with greater continuity along the dip of the strata than along the plunge of the folds.

## HISTORY OF EXPLORATION AND DEVELOPMENT (continued)

03. The underground workings to that date totalled about 1,000 feet.

From the 1880's little was done until the early 1920's when A.W. Sanders located the Rainbow (Lot 7794) and 2 adjacent claims, extending westerly from the Pinkerton claim. During the period 1922 to 1926 he was able to recover considerable gold by panning from the surface showings, and by rough crushing.

Fred M. Wells, confident that the rich placer deposits emanated from the immediate area, was instrumental in incorporating The Cariboo Gold Quartz Mining Company, Limited, in February 1927. The Pinkerton group of 5 claims was purchased from Clarke and Law, and the Rainbow group from A.W. Sanders. Several groups of claims were staked on behalf of the company. In 1932 the Apex group was purchased from Wells and associates. The Cariboo, and adjacent claims on the B.C. vein, were purchased in 1934. The claims staked by the company were Crown-granted during the period 1935-1939, and included Lots 5862-5867, 5878-5890, and 7798-7805.

In 1927 a crosscut adit was driven from Lowhee Creek towards the downward projection of the showing on the Rainbow claim (Sanders zone); this was abandoned in 1930 before the objective was reached. In 1931 an adit (1,500 level) was begun on the Telluride claim (Lot 7798) at a point about 100 feet above Jack of Clubs Lake and driven southeasterly. Minalable veins were encountered before the Sanders zone was reached and a mill was put into production in January 1933. The initial capacity of 50 tons per day was increased in several stages to 350 tons per day by 1940. By 1942 four internal shafts had been sunk and the 1,500 level extended over 2 miles to meet the B.C. shaft, opening up 6 mineralized zones. Ore from the veins was mined by cut and fill and shrinkage stoping methods. The mine workings are extensive, totalling more than 25 miles. Operations were continuous until September 30, 1969, when the mine closed. Reserves at that time were reported at 46,600 tons averaging 0.27 ounce gold and 68,410 tons averaging 0.37 ounce gold per ton.

Cariboo Gold Quartz Mining Company, Limited, in June 1972 amalgamated with Coseka Resources Limited under the latter name. Coseka in February 1973 incorporated a wholly see reverse Card 2 ....

REFERENCES (continued)

- The Cariboo Gold Quartz Operation - By The Staff; The Miner, August 1938, pp. 44-53.
- Geology, Exploration, and Mining; British Columbia Dept. of Mines: 1969, p. 162.
- Johnston, W.A., and Uglow, W.L.; Placer and Vein Gold Deposits of Barkerville, Cariboo District, British Columbia; Memoir 149, pp. 194, 208, Geol. Surv. of Canada, 1926.
- Campbell, R.B.; Mountjoy, E.W.; Young, F.G.; Geology of McBride Map-Area, British Columbia; (unpublished; G.S.C. Open File 123).
- Exploration in British Columbia; BCDM: 1980, p. 328.

REFERENCES (con't)

- Mineral Policy Sector; Corporation Files: "Mosquito Consolidated Gold Mines Limited"; "Pan Orvana Resources Inc."

HISTORY OF EXPLORATION AND DEVELOPMENT (continued)

owned subsidiary, French Exploration Limited, to receive all its mineral property interests. In March 1973 French Exploration amalgamated with Wharf Resources Ltd. under the name Wharf Resources Ltd.; Coseka was allotted 80.4% of the issued shares of Wharf Resources Ltd.

By 1980 Wharf had 100% interest in the property and Coseka a 32.1% interest in Wharf. Exploration of the property resumed in 1980 with most of the work directed towards surface showings worked in the 1920's on the Rainbow claim. Diamond drilling on this claim in 1980-81 located the Sanders zone; 70 holes were drilled on the zone in 1981. This work indicated approximately 1,000,000 tons of open pit material averaging about 0.1 oz/t Au (Coseka Res L, 1981 AR); or probable 360,000 tons at 0.12 oz/t Au (Mosquito Creek Gold Mining CL, Filing Statement 24/86).

By a February 1985 agreement with Wharf Resources, Mosquito Creek Gold Mining Company Limited acquired 100% interest in the property in exchange for shares of the company. In February 1986 Hecla Mining Company obtained from Mosquito an option to earn a 50% interest in the property, then dropped it. In 1987, Mosquito Creek changed its name to Mosquito Consolidated Gold Mines Limited. In 1988, Pan Orvana Resources Inc. optioned the property to obtain 50% interest. They carried out soil geochemical, magnetic and VLF-EM surveys. From this and earlier work, a geological resource of 1,200,000 tons of 0.12 oz per ton Au were indicated in the Sanders zone to a depth of 300 feet. (Pan Orvana Resources Inc. 1989 Annual Report).