

NAME OF PROPERTY **BIG CANYON & RUFFNER (CHEROKEE & BARBER)
(CRATER CREEK)**

OBJECT LOCATED—of mine symbol on Map 104 N/12 E.

UNCERTAINTY IN METERS -100. Lat. 59°44'10" Long. 133°31'

Mining Division **Atlin** District **Cassiar**

County Township or Parish

Lot Concession or Range

Sec Tp. R.

OWNER OR OPERATOR AND ADDRESS

DESCRIPTION OF DEPOSIT

The country rock is quartz monzonite of the Fourth of July Creek body of the Coast intrusions, cut by a number of parallel lamprophyre dykes striking N30° to 50°E and dipping steeply northwest. These dykes apparently have formed weakness lines for subsequent shearing and mineralization. On the Big Canyon group a fault zone, in part mineralized, was traced for a distance of 3,000 feet. Throughout that length the fault zone was confined to a dyke not more than 15 feet thick. On the Ruffner group a vein, which is probably continuous for upward to 5,000 feet, apparently is confined to a dyke not more than 30 feet thick. The shear zones in the dykes are intermittently filled and replaced with quartz, calcite, and ankerite carrying galena, sphalerite, arsenopyrite, and minor pyrite and chalcopyrite. Ore occurs in irregular bands and lenses, widths of 6 feet being
see Card 2

Associated minerals or products of value — Lead, gold, zinc, copper.

HISTORY OF EXPLORATION AND DEVELOPMENT

The Big Canyon and Ruffner claim groups, as well as the Vulcan group and numerous other claims staked in later years, are located to the east of Fourth of July Creek in the vicinity of Crater Creek, about 14 miles northeast of Atlin.

Silver-lead deposits were first discovered here in 1897. In 1900 the Big Canyon group of claims, owned by Mr. Gleason of Atlin, were reported to be under bond to a syndicate of Juneau, Alaska, people. Several adits were driven during this first period of exploration. In 1914 the Big Canyon group, including the Big Canyon Nos. 1 & 2, Hurrah, Nellie, Tom and Barber (Lot 1173) claims, was owned by Thomas Vaughan, John Malloy, and Mrs. E. Lambert, of Atlin. Additional claims were subsequently staked, some of which were Crown-granted in 1916.

Mr. J.M. Ruffner optioned the 12 claim Big Canyon group in 1919 and staked the adjoining 13 claim Ruffner group, which included the Cherokee and Barber claims. Mr. Ruffner succeeded in forming Ruffner Mines Limited, of Seattle, Wash., to carry on the exploration work. In 1922 the company was reorganized under the name of Atlin Silver-Lead Mines Limited. The company held 15 claims, the option on the Big Canyon group having been terminated; the Big Canyon group was returned to owners J. Malloy (Mallory) and J. Cunningham, who continued exploration work on two veins, presumably veins Nos. 6 and 7 appearing on the adjoining Ruffner group.

Atlin Silver-Lead Mines Limited carried on exploration and development work until 1925 when the Ruffner group was leased to the Federal Mining & Smelting Company of Wallace, Idaho. Several hundred feet of underground workings were driven before the option was dropped in 1926. Mr. Ruffner continued exploration work on the property until his death in 1929. The Chas. V. Bob interests of New York secured control of the property and in March 1929 formed the Atlin-Ruffner Mines, Limited. Work was resumed in 1930 and continued into 1932. A long crosscut at the 4,126 foot elevation was driven with the objective of cutting vein Nos. 1, 2, 3, and 4. No. 2 vein was intersected and drifted on for
see Card 2

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

510257 *

HISTORY OF PRODUCTION

From 1916 to 1951, inclusive, 327 tons of sorted ore were shipped from this property. From this ore 57 ounces of gold, 39,996 ounces of silver, 188 pounds of copper, 144,074 pounds of lead, and 8,057 pounds of zinc were recovered.

In 1975, 137 tonnes of crude ore were shipped. From this ore .607 KG gold, 313.518 KG silver, and 18386 KG of lead were recovered.

During 1976, 1,610 tonnes of ore were milled at this property. From this ore .678 KG gold, 429.843 KG silver, 376 KG copper, 34455 KG lead and 4017 KG zinc were recovered.

During 1981, there were shipped 31.3 tons of lead concentrate of 235 ounces per ton Ag, 55% Pb, 12% Zn, 0.28 ounce per ton Au plus 9.4 tons of zinc concentrate averaging 41% Zn and 15 ounces Ag per ton.

MAP REFERENCES

Map 1082 A, Atlin, B.C., (Geol.), Sc. 1":4 miles - Accomp. Memoir 307.

Map 104 N, Atlin, B.C., (Topo.), Sc. 1:250,000.

Map 104 N/11 W, Surprise Lake, B.C., (Topo.), Sc. 1:50,000.

* Map 104 N/12E, Atlin, (Topo), Sc. 1:50,000.

REMARKS

Comp./Rev. By	DMacR	DMacR	DMacR	DMacR	JL		
Date	12-73	5-75	8-79	06-81	10-90		

REFERENCES

Aitken, J.D.; Atlin Map-Area, British Columbia; Memoir 307, p. 71, Geol. Surv. of Canada, 1959.

Cockfield, W.E.; Silver-Lead Deposits in Atlin District; Summary Report 1925, Pt. A, pp. 15-24, Geol. Surv. of Canada.

Reports of Minister of Mines, British Columbia: 1900, pp. 760, 778; 1914, p. 87; 1920, p. 74; 1921, pp. 78-81; 1922, p. 89; 1923, p. 90; 1924, p. 79; 1925, p. 115; 1926, pp. 107, 108; 1927, p. 114; 1930, p. 123; 1931, p. 64; 1932, p. 65; 1934, p. B-36; 1952, p. 75; 1965, p. 8; 1966, p. 17; 1967, p. 24; 1968, p. 23.

Mineral Policy Sector; Corporation Files: "Atlin Silver-Lead Mines Limited"; "Atlin-Ruffner Mines, Limited"; "R.J. Jowsey Mining Company Limited"; "Armore Mines Limited"; "Turismo Industries Ltd."; "Atlin Silver Corporation"; "Trident Resources Inc."; "Cyclone Developments Ltd."; "Universal Trident Industries Inc."; "Taywin Resources Ltd."

Geology, Exploration, and Mining; British Columbia Dept. of Mines: 1969, p. 28; 1971, p. 54.

Geological Fieldwork, British Columbia Dept. of Mines: 1976, p. 69.

NAME OF PROPERTY BIG CANYON & RUFFNER (CHEROKEE & BARBER)
(CRATER CREEK)

DESCRIPTION OF DEPOSIT (continued)

common. The oxidation of the ore bodies near the surface suggests secondary enrichment of the deposit.

HISTORY OF EXPLORATION AND DEVELOPMENT (continued)

about 330 feet southwest and 350 feet northeast. From this intersection the main crosscut was continued for an additional 1,200 feet. From the face of the crosscut 3 diamond drill holes were drilled a total of 2,500 feet. Development work to this date has been done mainly on No. 2 and No. 4 veins. On No. 2 vein about 6,165 feet of underground workings are distributed over a total length of 5,400 feet and a vertical range of 1,700 feet. On No. 4 vein a total of 1,295 feet of underground workings explore parts of the vein over a distance of 3,100 feet and a vertical range of 645 feet.

During 1934 Bobjo Mines, Limited acquired an interest in the property and some prospecting was done underground. No further activity was reported until 1949 when Atlin Ruffner Mines (B.C.) Limited was formed to explore and develop the Ruffner group. In 1952 the Big Canyon and Vulcan groups were acquired and 20 diamond drill holes, totalling 4,005 feet, were put down to test the continuation of the veins into these groups. Following this work the property lay idle for a number of years. The company name, Atlin Ruffner Mines (B.C.), Limited was changed in 1965 to Armore Mines Limited. The property now held consisted of 58 Crown-granted claims. During 1965 geological mapping and a geophysical survey was carried out over an area 3,200 feet by 520 feet, and 3,500 feet of bulldozer trenching was done. Following new surface indications turned up by this work, 30 more claims were acquired adjacent to the original Ruffner group on the north and east. Diamond drilling was done by the company in 1966.

Interprovincial Metals Ltd. in 1967 optioned 58 Crown-granted claims and fractions, including Lots 4633-4651, 1172-1175, and 6100-6104, from Armore Mines Limited. The Big Canyon (Lot 4660) and Big Canyon No. 2 (Lot 4661) were optioned, as Mineral Lease M22, from C.G. McLennan, of Whitehorse. The Big Canyon Extension claims, Lots 1170 and 1171 (Mineral Leases M20 & M21, respectively), were purchased from L.G. White, of Vancouver. The Canuck 1-25 claims were purchased from principals of Interprovincial Metals and additional staking was done to a total of 147 claims. Work during 1967 included geological mapping, trenching, and 9,200 feet of diamond drilling in 45 holes. The company name was changed in January 1968 to Interprovincial Silver Mines Ltd. Work during 1968 included drifting, raising, underground

History of Exploration and Development (continued from
right side)

In 1981, there were milled 1,606 tons and in 1986, Trident Resources changed its name to Universal Trident Industries Ltd. In 1988, Taywin Resources Ltd. optioned 28 claims containing the deposit. Proven and probable reserves in 1975 were 63,920 tons of 18.63 ounces per ton Ag and combined Pb and Zn of 5%-10%. (News release Taywin Resources November 24, 1988).

HISTORY OF EXPLORATION AND DEVELOPMENT (continued)

diamond drilling, and bulk sampling. Dolmage-Campbell & Associates Ltd. in January 1969 estimated proven and probable reserves at 55,830 tons averaging 25 ozs/ton silver and 5% combined lead-zinc; of this total about 15,000 tons occurs on the optioned Big Canyon group. Work during 1969 was directed towards preparing the property for production. The option on the Big Canyon claims (Lease M22) was given up and the claims reverted to the owner in December 1969.

The property remained idle during the following years. The company name (Interprovincial) was changed in 1971 to Turismo Industries Ltd. In 1972 Turismo assigned the option agreement to a wholly owned subsidiary, I.P. Metals Limited. The company name (Armcore) was changed in 1973 to Marcana Resources Limited. By agreements of September 1974 I.P. Metals and Marcana gave an option to develop and mine the property to Taseko Mines Limited (50%), Claude W. Dansey (20%), Jarl Whist (20%), and L.E. Ross (10%). A new company, Atlin Silver Corporation was incorporated in November 1974 to operate the mine.

Underground development work during 1975 produced about 150 tons of high-grade and some 800 tons of stockpiled millfeed. A 50-75 ton per day concentrator was moved to the property early in 1976. The mill operated intermittently from early summer until forced to close in November of that year due to lack of operating capital. Atlin Silver defaulted on its option agreement and the property reverted to Turismo Industries and Marcana Resources.

The company name (Turismo) was changed in July 1978 to General Energy Corp. A new lease agreement was made with Marcana Resources in June 1978. By an agreement of October 30, 1978 General Energy gave a sublease on the property to Trident Resources Inc. Wallis (1979) reported an average of the proven and probable reserve calculations by five independent engineers between 1968 and 1975 at 49,500 tons grading 0.04 oz/ton gold, 20.0 ozs/ton silver, 6.4% lead-zinc (J.E. Wallis, 1/04/79 - in VSE Statement of Material Facts 14/08/79, Trident Resources Inc.).

The 1978 sublease to Trident covered only the main part of the property; the south part, including the Big Canyon vein, was optioned to Cyclone Developments Ltd. Trident carried out rehabilitation and development work in the fall of 1981 and the mill operated at about 60 tons per day for a short period during Nov.-Dec.; the mine closed for the winter and re-opened in May 1981. Marcana Resources Limited retains a 5% working interest in the property.

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