

NAME OF PROPERTY
NOM DE LA PROPRIÉTÉ

ST. EUGENE, CAMBRIAN

OBJECT LOCATED - Shaft - on Lake Shore claim (Lot 756).
OBJET LOCALISÉ

UNCERTAINTY FACTEUR D'INCERTITUDE	300 m	Lat. Lat.	49°17'	Long. Long.	115°49'45"
Mining Division Division minière	Fort Steele	District District		Kootenay	
County Comté		Township or Parish Canton ou paroisse			
Lot Lot		Concession or Range Concession ou rang			
Sec Sect.	Tp. Ct.	R. R.			

OWNER OR OPERATOR/PROPRIÉTAIRE OU EXPLOITANT

DESCRIPTION OF DEPOSIT/DESCRIPTION DU GISEMENT

The host rocks are Precambrian argillaceous quartzites and siliceous argillites of the Aldridge Formation with low north-easterly dip. An east-west fracture zone contains two important veins that dip 70° south. On the 1,000-foot level the two veins are 600' apart and converge downward and to the west. Joining these two main veins is a system of connecting veins that usually meet the main vein at a low angle. Most of the ore occurred at or near such junctions. The ore consisted of massive galena and lesser amounts of sphalerite, pyrite, pyrrhotite, magnetite, and a little chalcopyrite in a mainly quartz gangue.

Associated minerals or products - Zinc, silver, gold.
Minéraux ou produits associés

HISTORY OF EXPLORATION AND DEVELOPMENT

HISTORIQUE DE L'EXPLORATION ET DE LA MISE EN VALEUR

The property is located on the east side of Moyie Lake some 24 km south-southwest of Cranbrook.

The discovery was made by a Kootenay Indian by the name of "Peter", a resident of the St. Eugene Mission. In 1893 the showings were staked by Mining Engineer James Cronin on behalf of Peter, Father Coccola and himself. The following year John Finch, of Spokane, purchased the interest of Father Coccola and underground work was done in several adits. The Peter, St. Eugene, Loretta Fr. and Rose Fr. (Lots 665-667, 1380 respectively) were Crown-granted to Cronin and Finch in 1897. They sold a 2/3 interest to the Gooderham-Blackstock syndicate of Toronto and The St. Eugene Mining Company, Limited was incorporated in September 1899 to develop the property.

Ground adjoining on strike to the west was staked in June 1893 as the Queen of the Hills (Lot 668) and Moyie (Lot 669); these claims were Crown-granted to F. Houghton and E.P. Davis and associates in 1897. Below and adjoining the Moyie is the Lake Shore claim (Lot 756) which was Crown-granted to C. Farrell and associates in 1897. The Gooderham-Blackstock interests purchased the above claims and amalgamated them with the St. Eugene under a new company, The St. Eugene Consolidated Mining Company, Limited, which was incorporated in November 1899. A mill was put into operation in 1900.

The St. Eugene property in 1905 was amalgamated with the Centre Star and War Eagle properties at Rossland, the Trail smelter, and the Rossland Power Company under a new company, The Consolidated Mining and Smelting Company of Canada Limited, which was incorporated in January 1906. By 1911 the ore reserves were depleted but small scale mining of remnants continued into 1914. The upper part of the orebody from the outcrop to 75' above the lake was worked by adits. Below this level a vertical shaft was sunk about 800' and 5 levels established. The underground workings totalled about 20 miles. Lessees worked the upper levels in 1916 while the company resumed mining remnants below 10 level. The mill was under alteration during 1916-17 to experiment with the flotation process on the Sullivan mine ores and to retreat St. Eugene tailings. However, the mill burned just before alterations were completed. In the period 1920-24 intermittent small scale mining was done by lessees and/or by the company.

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see Card 2

HISTORY OF PRODUCTION/HISTORIQUE DE LA PRODUCTION

From 1899 to 1924 a total of 1,062,393 tons of ore were milled or shipped from this property; the mill discarded all the zinc. In the period 1926-29 inclusive 563,817 tons of tailings were retreated. The two operations recovered a total of 2,535 ozs gold, 5,873,731 ozs silver, 249,199,671 lbs of lead, and 31,929,526 lbs of zinc.

REFERENCES/BIBLIOGRAPHIE

Reports of Minister of Mines, British Columbia:
 1893, p. 1066; 1894, p. 748; 1895, p. 673; 1896, p. 521; 1897, p. 569; 1898, pp. 1010, 1034; 1899, pp. 593, 660; 1900, pp. 791-794, 799; 1901, p. 1006; 1902, pp. 131, 257; 1903, p. 93; 1904, pp. 104, 109; 1905, p. 140; 1906, p. 132; 1907, pp. 84, 85, 217; 1908, p. 85; 1909, pp. 88⁺⁺, 94; 1910, p. 90; 1911, pp. 122, 288; 1912, p. 137; 1913, p. 121; 1914, p. 237; 1915, p. 102; 1916, p. 191; 1917, p. 149; 1918, pp. 179, 188, 390; 1919, pp. 115, 148; 1920, pp. 116, 140; 1924, p. 186; 1925, p. 226; 1926, p. 243; 1927, p. 266; 1928, p. 281; 1929, pp. 295, 442; 1937, p. E 52; 1938, p. E 45; 1939, p. 97; 1940, p. 82; 1946, p. 172; 1947, p. 175; 1948, p. 150; 1962, p. 85; 1963, p. 81; 1965, p. 199; 1966, p. 241.

[†]Schofield, J.S.; Geology of the Cranbrook Map-Area, British Columbia; Memoir 76, pp. 118, 125, Geol. Surv. of Canada, 1915.

MAP REFERENCES/RÉFÉRENCES CARTOGRAPHIQUES

Map 11-1960, Fernie (West Half), (Geol.), Sc. 1":2 miles, Geol. Surv. of Canada.

#Map of St. Eugene Mineral Claims, Sc. 1":1,500', Cominco Ltd. Annual Report June 30, 1906.

*Map 82 G/5, Moyie Lake, (Topo.), Sc. 1:50,000.

⁺⁺⁺Alcock, F.J.; Lead and Zinc Deposits of Canada; Economic Geology Series No. 8, p. 324, Geol. Surv. of Canada, 1930.

Mineral Policy Sector; Corporation Files: "Cominco Ltd."; "St. Eugene Extension Mines, Limited"; "St. Eugene Mining Corporation, Limited".

REMARKS/REMARQUES

Comp./Rev. By Comp./rév. par	DMacR						
Date Date	09-83						

PRODUCT PRODUIT	LEAD	PROVINCE OR TERRITORY	PROVINCE OU TERRITOIRE	British Columbia	N.T.S. AREA RÉGION DU S.N.R.C.	82 G/5	REF. PB 1 RÉF.
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HISTORY OF EXPLORATION AND DEVELOPMENT (continued)
HISTORIQUE DE L'EXPLORATION ET DE LA MISE EN VALEUR

A new 500 ton per day concentrator was installed in 1925 to retreat the mine tailings, most of which were deposited in Moyie lake. The mill was put into operation in 1926 and continued until late in 1929 when the tailings supply was depleted.

Ground adjacent to the west, apparently on the line of strike of the St. Eugene vein and lying for the most part under the waters of Lower Moyie lake, was acquired by a local syndicate in 1905. The Black-MacKay Mining Company, Limited was incorporated in February 1906 to explore the property; the company name was changed in 1907 to The Cambrian Mining Company, Limited. The Cambrian and Mabell Fr. claims (Lots 7662 and 9393 respectively), which extend across the lake, were Crown-granted to the company in 1907 and 1911. An attempt was begun in 1905 to sink a shaft through the alluvial deposit on the bed of the lake about 200' from the east shore. A two compartment caisson was sunk through 60' of water and 35' of clay at last report. The plan called for a second shaft to be sunk on a sandy spit on the Mabell claim at the west side of the lake approximately 1/2 mile from the initial shaft.

St. Eugene Extension Mines, Limited was incorporated in 1929 to explore the ground under Moyie lake. The company acquired the Cambrian and adjacent claims and a lease on the St. Eugene. In 1937 the St. Eugene shaft was pumped out and a geological survey begun. St. Eugene Mining Corporation, Limited was incorporated in 1939 by Ventures Limited and Sudbury Basin Mines, Limited to acquire the holdings of the former company. Surface diamond drilling was done on both sides of the lake in 1940. Drilling at intervals along the east side of the lake from 1 mile south to 1 mile north of Moyie village was carried out in 1946. Geological mapping was done in 1948 and some magnetometer work over the lake ice in winter. In 1962-63 St. Eugene Mining, holding 81 Crown-grants, and Consolidated Mining and Smelting (23 Crown-grants) carried out a joint exploration which included geological mapping and diamond drilling on the east side of the lake in 5 surface holes totalling 8,836'; one hole was to a depth of 3,707'.

HISTORY OF EXPLORATION AND DEVELOPMENT (continued)
HISTORIQUE DE L'EXPLORATION ET DE LA MISE EN VALEUR

Falconbridge Nickel Mines, Limited under a joint exploration agreement in 1965-66 carried out geochemical and geophysical surveys, trenching and diamond drilling in 11 holes totalling 2,740' on the east side of the lake. A seismic and hydrosonde survey was carried out on shore and on the surface of lower Moyie lake to investigate geological structures below the lake.

The company name, Consolidated Mining and Smelting, was changed in 1966 to Cominco Ltd.