

NAME OF PROPERTY SPAR (REXSPAR)

OBJECT LOCATED Spar 1 & Spar 2
(Lots 5390 and 5391).

UNCERTAINTY IN METRES 100. Lat. 51°33'50" Long. 119°54'20"

Mining Division Kamloops District Kamloops

County Township or Parish

Lot Concession or Range

Sec Tp. R.

OWNER OR OPERATOR AND ADDRESS

DESCRIPTION OF DEPOSIT

Map 48-1963 indicates the Foghorn Creek area is underlain by Permian or Earlier rocks that include sericitic quartzite, greenstone, and quartz-feldspar-chlorite gneiss. The host rock in and immediately adjacent to the mineralized area consists essentially of feldspar with variable amounts of sericite and scattered pyrite. The feldspar is present as phenocrysts, as much as one-half inch long, mostly microcline, and as felted masses of microlites.

The fluorite mineralization is in a fine-grained foliated breccia zone in highly feldspathic porphyritic rock. The zone extends across the ridge on a strike that ranges from north 20 to 65 degrees east, averaging north 35 degrees east, and it dips northwesterly from 20 to 60 degrees, averaging 38 degrees. It is about 1,000 feet long and is terminated at each end by the topography. Within the zone the fluorite occurs in irregular lenses of markedly variable concentrations. The lenses change thickness rapidly and are drawn out both along and up and down the foliation. The fluorite of possible economic see Card 2

Associated minerals or products of value - Strontium, cesium, rare earths.

HISTORY OF EXPLORATION AND DEVELOPMENT

The fluorite showings are located at approximately 4,400 feet elevation on top of a ridge on the east side of Foghorn Creek 2½ miles south of Birch Island.

The showings were originally staked in 1918 as the Atlantic and Pacific claims by A.G. McDonald as agent for J.F. Garner and E.H. Mansfield. In 1924 the showings were restaked as part of the Smuggler property (82 M/12, PB 2). The Smuggler Hill Development Company, Limited explored the property for silver-lead mineralization during 1926 and 1927 and for manganese during 1929-1930. In prospecting for the source of the manganese oxide the fluorite showing was re-discovered. A short adit was driven on the fluorite zone in 1929 or 1930.

The fluorite showings were restaked as the Spar 1 and 2 claims by Ole Johnson of Chu Chua in 1942. During the winter of 1942-43 diamond drilling totalling 4,985 feet in 36 holes, and bulk sampling, was carried out under the name B.C. Fluorspar Syndicate. During 1949 the property was under lease to T.A.E. Sjoquist and associates of Kamloops. Samples of fluorite sent out for examination at this time revealed the presence of uranium.

Rexspar Uranium & Metals Mining Co. Limited, incorporated May 1951, optioned 24 claims, including Spar 1 and 2, from E.H. Kellner and in May 1952 staked 64 adjacent claims. Exploration work for several years following was concentrated on the uranium showings (see: 82 M/12, U 1). Diamond drilling on the fluorite zone in 1957 totalled 572 feet in 4 holes.

The company name was changed in 1959 to Rexspar Minerals & Chemicals Limited. In 1960 diamond drilling was done in 7 holes totalling 730 feet. During the winter of 1962-63 trenching and further diamond drilling was carried out. Based on drilling to that date reserves were estimated at 1,500,000 tons measured and indicated and 500,000 tons inferred, averaging an estimated 29% fluorite. (Consolidated Rexspar 1968 Annual Report).

The company name was changed in June 1967 to Consolidated Rexspar Minerals & Chemicals Limited. Late in 1968 an agreement was reached whereby Denison Mines Limited would carry out exploration work. During 1970 a geochemical soil survey (221 samples) and 3,908 feet of diamond drilling in 26

see Card 2

HISTORY OF PRODUCTION

REFERENCES

- Reports of Minister of Mines, British Columbia: 1930, p. 193; 1949, pp. 250-255 ++ ; 1957, p. 31; 1963, pp. 141-143 + .
- Geology, Exploration, and Mining; British Columbia Dept. of Mines: 1970, p. 301; 1972, p. 92.
- Walker, J.F.; Clearwater River and Foghorn Creek Map-Area, Kamloops District, British Columbia; Summary Report 1930, Pt. A., p. 148, Geol. Surv. of Canada.
- Wilson, M.E.; Fluorspar Deposits in Canada; Economic Geology Series #6, p. 21, Geol. Surv. of Canada, 1929.
- Spence, H.S.; Barium and Strontium in Canada; Report No. 570, p. 85, Mines Branch, Ottawa, 1922.
- Investigation No. 4501; Report on Concentration of a Fluorite Ore from the B.C. Fluorspar Syndicate, Birch Island, B.C.; Mines Branch, Ottawa, April 12, 1945.
- Investigation No. 2437; Differential Separatory Procedures on a Fluorite-Celestite Ore from Birch Island, B.C.; Mines Branch, Ottawa, June 19, 1948.
- Investigation Report IR 63-33; Concentration of Birch Island, B.C., Fluorspar to Metallurgical Grade; Mines Branch, Ottawa, February 1963.
- Mineral Policy and Sector; Corporation Files: "Consolidated Rexspar Minerals & Chemicals Limited"; "Denison Mines Limited".
- Exploration in British Columbia; BCDM: 1982, p. 123.
- Geology in British Columbia; BCDM: 1977-1981, pp. 44-55.
- Uranium Deposits of Canada; CIM Special Volume 33, p. 306, 1986.
- George Cross News Letter: 1987, No. 207.

MAP REFERENCES

- Map 48-1963, Adams Lake, (Geol.), Sc. 1":4 miles.
- Birch Island Fluorite, Sc. 1":200 ft., Fig. 29, Report of Minister of Mines, British Columbia, 1949, p. 252.
- #Map 82 M/12 W, Vavenby, (Topo.), Sc. 1:50,000.
- Generalized geology of the Rexspar property, Fig. 2, CIM Bull., Dec. 1978, p. 83.
- Geology of the Rexspar Area, Sc. 1.6 cm:1 km, Figure 18, accomp. Geology in British Columbia 1977-1981.

REMARKS

Comp./Rev. By	DMacR	DMacR	DMacR	DMacR			
Date	06-76	09-81	12-86	05-88			

NAME OF PROPERTY

SPAR (REXSPAR)

DESCRIPTION OF DEPOSIT (continued)

interest is concentrated in a band with a surface width averaging 125 feet that forms the southwestern two-thirds of the length of the mineralized zone. Fluorite grades out to the northeast, and its place is taken by lenses of a highly micaceous material that contains relatively little fluorite. Diamond-drill cores indicate that the fluorite disappears and mica often takes its place in the same way at distances of 150 to 400 feet down the dip of the foliation from the surface. Fluorite is present in the country rock for some distance laterally on either side of the concentrated band, but in minor quantities. It is generally in small irregular streaks parallel to the foliation or in scattered hairline veinlets.

The fluorite occurs as variable-sized angular fragments mixed with pyrite, feldspathic rock, and celestite. In the more highly concentrated lenses, fluorite makes up most of the mass and forms a dark-purple to blackish almost vein-like massive matrix surrounding the other materials. In other lenses the grain size is small and the fluorite is evenly distributed throughout, giving the whole rock a purple coloration. Celestite, at times as abundant as fluorite, occurs chiefly as very small crystals around the fluorite grains and filling fractures in them. The rare-earth mineral bastnaesite has been identified as being irregularly distributed with the fluorite and celestite. Much strontium and significant amounts of caesium, lanthanum, ytterbium, and yttrium are associated with the fluorite.

HISTORY OF EXPLORATION AND DEVELOPMENT (continued)

holes was carried out on the fluorite zone. Extensive metallurgical testing at Lakefield Research of Canada Limited developed a flotation procedure which obtained satisfactory recovery and grade of concentrate. In 1972 a geochemical soil survey (186 samples), trenching, and 2,373 feet of diamond drilling in 7 holes was done on Spar 2 and Rex 12 claims in search for an extension of the fluorite zone. As of December 31, 1974, Denison held a 46.9% interest in Consolidated Rexspar. Reserves of potential open pit material were estimated in 1971 at 1,441,820 tonnes with a weighted average grade of 23.46% CaF₂ and significant amount of molybdenum, strontium, calcium, lanthanum, ytterbium and yttrium (CIM Special Volume 33, p. 306).

Placer Development Ltd optioned the property in October 1981 to explore for base metals. Work in 1982 included geochemical sampling and 539 m of diamond drilling in 1 hole.

Consolidated Rexspar in September 1987 sold the property to Gold Ventures Limited.