

PRODUCT SILVER  
PRODUIT

PROVINCE OR PROVINCE OU  
TERRITORY TERRITOIRE

British Columbia

N.T.S. AREA 82 E/6  
RÉGION DU S.N.R.C.

REF. AG 1  
RÉF.

NAME OF PROPERTY  
NOM DE LA PROPRIÉTÉ

HIGHLAND-BELL (BEAVERDELL)

OBJECT LOCATED-- Bell claim (Lot 2343).  
OBJET LOCALISÉ

UNCERTAINTY 300 m FACTEUR D'INCERTITUDE	Lat. 49°26'00"	Long. 119°03'45"
Mining Division Greenwood Division minière	District District	Similkameen
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

Teck Corporation

DESCRIPTION OF DEPOSIT/DESCRIPTION DU GISEMENT

The western part of Wallace mountain is underlain by Jurassic and/or Cretaceous Nelson granodiorite, part of a larger, very irregular body known as the Westkettle batholith. In the vicinity of the mine these rocks are intruded by a small stock of Valhalla granodiorite. East of the sinuous contact that trends northerly and dips gently eastward lie metamorphosed sedimentary and volcanic rocks of the Permian and/or Triassic Anarchist group that partly roof the intrusive mass. Minor intrusives include dykes of at least three different ages.

The occurrence may be described as highly faulted, moderate to steeply southward-dipping quartz veins and stringer lodes striking east to northeasterly in zones of altered granodiorite or sodic granite.

The faults may be classified into five types: high-angle, northerly striking, normal faults; low-angle northerly trending strike-slip faults; northeasterly striking, high-angle normal faults; northeasterly trending faults; cross-faults. A major fault of the first type, known as the East Terminal fault, dips 65° to the east and has a vertical displacement of

see Card 2 ....

Associated minerals or products - Gold, zinc, lead, cadmium, fluorspar.  
Minéraux ou produits associés

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

The main claims, the Sally, Rob Roy, Bell, and Highland Lass extend in a northeasterly direction along the northwest side of Wallace Mountain, at about the 4,300' elevation, one mile southeast of Beaverdell.

The Sally group of claims was owned and operated by The Vancouver and Boundary Creek Developing and Mining Company, Limited from about 1900 until early in 1910 when work was suspended; mine production to date was transported some 45 miles by wagon. The Sally (Lot 2092) and Rob Roy (Lot 2093) and adjacent claims were Crown-granted to the Company in 1911. The completion of the Kettle Valley railway to within 3 miles of the property led to the re-opening of the mine in 1912 by Lessee James Drum & associates. By 1917 the property had been developed by some 2,500' of underground work.

In 1918 a syndicate comprising Messrs. Nordman, Morley, and 6 associates, of Penticton, optioned the 13 claim property and incorporated Wallace Mountain Mines, Limited in December 1918. Mining operations continued into 1925. In that year the Federal Mining and Smelting Company, of Wallace, Idaho, acquired an option to purchase all the shares of Wallace Mountain mines; the option was subsequently dropped.

Nordman & associates in November 1925 incorporated Okanagan Mining Company, Limited to acquire the property; the company name was changed in April 1926 to Sally Mines, Limited. The company operated more or less continuously until the property was acquired by Highland-Bell, Limited in 1946.

The Bell claim (Lot 2343) was Crown-granted in 1902 to J.T. Bell & associates. The claim was leased by Duncan McIntosh & associates in 1916 and subsequently purchased. Development and mining operations continued into 1930. Bell Mines, Limited was incorporated in February 1930 by R.B. Staples & associates, of Vancouver & Creston, to acquire the property. The company operated until May 1936.

The Highland Lass claim (Lot 2341), Crown-granted to J.T. Bell & associates in 1903, was worked sporadically by the owners and lessees for many years. Highland Lass, Limited was apparently incorporated in the early 1930's to acquire the claim. Considerable development work was carried out and some ore shipped during 1934-35.

Highland-Bell, Limited was incorporated in May 1936 to acquire the Bell and Highland Lass properties. The Beaver

see Card 2 ....

Mineral Policy Sector, Department of Energy, Mines and Resources, Ottawa  
Secteur de la politique minérale, ministère de l'Énergie, des Mines et des Ressources, Ottawa

509248

**HISTORY OF PRODUCTION/HISTORIQUE DE LA PRODUCTION**

Production for the period 1901-1974 inclusive, listed under Bell, Highland Bell, Sally, Beaver, and Highland Lass, totals 673,701 tons. From this ore 14,307 ounces of gold, 31,949,394 ounces of silver, 3,917 pounds of copper, 23,330,021 pounds of lead, 27,312,163 pounds of zinc, and 110,120 pounds of cadmium were recovered.

During the period 1975-1978 inclusive 138,602 tonnes were milled. From this ore 19.843 kg gold, 46078.034 kg silver, 1193 kg copper, 509366 kg lead, 601185 kg zinc, and 4223 kg cadmium were recovered.

**REFERENCES/BIBLIOGRAPHIE**

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 1900, p. 879; 1901, p. 1143; 1902, pp. 303, 304; 1903, pp. 168, 246, 247; 1904, p. 216; 1905, p. 181; 1906, p.159; 1907, p. 109; 1908, p. 141; 1909, p. 132; 1910, p. 118; 1911, p. 291; 1913, pp. 154-156, 162; 1914, p. 336; 1915, pp. 201, 203; 1916, p. 255; 1917, pp. 204, 212; 1918, pp. 210, 220; 1919, pp. 168, 174; 1920, p. 155; 1921, pp. 185, 189; 1922, p. 172; 1923, p. 183; 1924, p. 168; 1925, pp. 204, 206; 1926, pp. 206, 209; 1927, pp. 232, 233; 1928, p. 252; 1929, p. 261; 1930, p. 219; 1931, p. 123; 1932, p. 126; 1933, p. 153; 1934, p. D 9; 1935, p. D 14; 1936, p. D 56; 1937, p. D 34; 1938, p. D 39; 1939, p. 93; 1940, p. 78; 1941, p. 73; 1942, p. 70; 1943, p. 70; 1944, p. 68; 1945, p. 94; 1946, p. 133; 1947, p. 153; 1948, p. 125; 1949, pp. 138-148<sup>+</sup>; 1950, p. 116; 1951, p. 132; 1952, p. 138; 1953, p. 108; 1954, p. 118; 1955, p. 44; 1956, p. 74; 1957, p. 37; 1958, p. 35; 1959, p. 57; 1960, p. 62; 1961, p. 63; 1962, p. 67; 1963, p. 67; 1964, p. 109; 1965, p. 166; 1966, p. 191; 1967, p. 223; 1968, p. 224.

**MAP REFERENCES/RÉFÉRENCES CARTOGRAPHIQUES**

Map 15-1961, Kettle River (West Half), (Geol.), Sc. 1": 4 miles, Geol. Surv. of Canada.  
 Map 538 A, Kettle River (Geol.), Sc. 1":4 miles, Geol. Surv. of Canada.  
 Map 37 A, Beaverdell, (Geol.), Sc. 1":1 mile - accomp. Memoir 79.  
 Silver-Lead Mines on Wallace Mtn, Sc. 1":1,500', Fig. 1, accomp. Memoir 79.  
 Map 8509 G, Beaverdell, (Aeromag.), Sc. 1":1 mile.  
 #Map 82 E/6, Beaverdell, (Topo.), Sc. 1:50,000.  
 Crown-granted claims, Wallace Mtn, Report of Minister of Mines, B.C., 1925, p. 202.

<sup>++</sup>Cairnes, C.E.; Mineral Deposits of the West Half of Kettle River Area, B.C.; Paper 37-21, pp. 28-31, Geol. Surv. of Canada.

Warren, H.V., & Staples, A.B.; Mineralogy of the Ores of the Highland-Bell Mines; Western Miner, Vol. 19, May 1946, pp. 38-43 & June 1946, pp. 54-58.

Reinecke, L.; Ore Deposits of the Beaverdell Map-Area; Mem. 79, pp. 86-124, Geol. Surv. of Canada, 1915.

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Mineral Policy Sector; Corporation Files: "Highland-Bell, Limited"; "Highland Lass, Limited"; "Mastodon-Highland Bell Mines Limited"; "Leitch Mines Limited"; "Beaver Silver Mines, Limited"; "Sally Mines, Limited"; "Teck Corporation".

continued reverse Card 2 ....

**REMARKS/REMARQUES**

Comp./Rev. By Comp./rév. par	DMacR					
Date Date	06-80					

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NOM DE LA PROPRIÉTÉ

DESCRIPTION OF DEPOSIT/DESCRIPTION DU GISEMENT (continued)  
800 feet. This has separated the orebodies into two sections, referred to as the upper and lower workings. The upper workings are on the hangingwall side of the fault; the lower workings are on the footwall side.

The ore occurs in simple veins, composite branching veins, and stringer lodes. The ore shoots generally range in width from a few inches to several feet and average about 12 inches, but massive ore several feet wide and stringer lodes as much as 15 feet wide have been mined. The vein matter includes abundant medium-grained pyrite, sphalerite and galena, with some arsenopyrite and some chalcopyrite, in a gangue of quartz, calcite, and sericitic remnants of the wallrock. The parts of the vein that constitute ore shoots contain, in addition to the common sulphides, visible amounts of silver-bearing minerals such as tetrahedrite, pyrargyrite (ruby silver), polybasite, argentite and native silver.

Native silver occurs as flakes and small hackley masses in the vein walls; as tangled hair-like wires intimately associated with crystals of calcite, fluorite, and argentine in vugs both in the vein walls and in the solid vein matter. Evidently the native silver is of primary origin and is found throughout a vertical range of at least 1,000 feet.

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

claim (Lot 2342), which had been Crown-granted to J.T. Bell in 1903, and operated by Beaver Silver Mines, Limited or by lessees from 1925, was acquired by Highland-Bell in 1938.

Leitch Gold Mines, Limited acquired a large interest in Highland-Bell, Limited in 1945. A 50 ton-per-day mill was installed and officially opened in September 1950. In December 1960 Highland-Bell transferred the property to a subsidiary company, Mastodon-Highland Bell Mines Limited. During the 1960's production was at about 100 tons per day. Leitch Gold Mines acquired control of Highland-Bell, Limited in October 1969. Effective January 1, 1970 Leitch purchased the assets of Mastodon-Highland Bell, including the Beaverdell mine, for 750,000 Leitch shares; the company name (Leitch) was changed in February 1970 to Leitch Mines Limited. In April 1971 the property became a division of Teck Corporation Limited as a result of a merger of interests; the company name was changed to Teck Corporation in August 1978.

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1948, p. 158.