

PRODUCT SILVER
PRODUIT

PROVINCE OR TERRITORY PROVINCE OU TERRITOIRE

British Columbia

N.T.S. AREA 82 F/14
RÉGION DU S.N.R.C.

REF. AG 64
RÉF.

NAME OF PROPERTY
NOM DE LA PROPRIÉTÉ

MAMMOTH, MONARCH

OBJECT LOCATED - No. 7 adit.
OBJET LOCALISÉ

UNCERTAINTY 300.
FACTEUR D'INCERTITUDE

Lat. 49°57'30" Long. 117°17'20"
Lat. Long.

Mining Division Slolocan
Division minière

District Kootenay
District

County
Comté

Township or Parish
Canton ou paroisse

Lot
Lot

Concession or Range
Concession ou rang

Sec. Tp. R.
Sect. Ct. R.

OWNER OR OPERATOR/PROPRIÉTAIRE OU EXPLOITANT

DESCRIPTION OF DEPOSIT/DESCRIPTION DU GISEMENT

The property is underlain by Mesozoic sediments of the Slolocan series intruded by dykes and sills of quartz and feldspar porphyry and by tongues of hornblende diorite and quartz diorite from the Nelson granite. The sediments comprise a variety of argillaceous, quartzitic, and calcareous types which are mostly massive but are associated with some more slaty beds. These sediments vary greatly in both strike and dip, being situated in a focal area of extreme deformation in which recumbent folds are warped round, down, and under into a spiral form. The rocks are locally brecciated, sheared, and disrupted by faults.

The northeasterly striking Buffalo lode meets the easterly striking Mammoth lode and merges with it, in part through a bedded zone. The two lode movements were in the same direction and were additive. Although they were contemporaneous, the influence of the Buffalo was to produce a swelling and slight jog in the Mammoth lode on No. 7 level and above, that contributed to the formation of a site for ore deposition in the master lode. No. 1 and No. 4 adits were driven on a shear zone which is thought to be an extension of the Buffalo lode
see Card 2

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

HISTORY OF EXPLORATION AND DEVELOPMENT

HISTORIQUE DE L'EXPLORATION ET DE LA MISE EN VALEUR

The property is located at elevations of 4,600 to 5,700 feet at the head of Arison (Buffalo) Creek, 3 miles east of Silverton. The Standard mine lies about 1 mile to the west.

The showing was discovered and staked in May 1921. Five claims, the Monarch, Mammoth, Moose, Highore, and Hercules (Lots 13571-13575 respectively) were subsequently Crown-granted. Owners H.V. Dewes, S. Wetterhouse, and associates optioned the property in 1922 to Standard Silver-Lead Mining Co., of Spokane. A total of 560 feet of underground development was carried out before the option was given up in 1923. The owners resumed work on the property the following year. R.A. Grimes obtained an option on the property and in June 1926 re-optioned to The Porcupine Goldfields Development & Finance Company, Limited. Exploration and development work continued into 1927 when the option was given up.

Western Exploration Company, Limited acquired an option on the property from Grimes in 1928. During 1929 a 16,000 foot aerial tramline was installed to connect the No. 7 level with a 100 ton-per-day flotation mill installed at Silverton on the shore of Slolocan Lake. The equipment was given a trial run early in 1930 and the mine was shut down later in the year pending better metal prices. Lessees carried out small scale mining operations during 1932-34. The company resumed work in 1935 and the mill operated from July 1935 until March 1936, and again from the spring of 1937 until december 1937.

Following a period of inactivity when company attention was directed to reopening the Standard and reclaiming tailings from Slolocan Lake, the mine again came into production in 1942. By 1944 the orebody between Nos. 7 and 5 levels was mined out, and a considerable amount of exploratory drilling was done, much of it below No. 7. The same year a new adit, the Monarch, was started to investigate intersections obtained by surface drilling. All work ceased in May 1945. The company began driving No. 9 level in September 1948. The aerial tramway was rehabilitated in 1950 and the mill operated from November of that year until November 1952. During 1954-55 the No. 7 level was extended westerly through the Monarch claim into the Hecla zone of the Standard property (82 F/14, AG 65). Production from the Mammoth resumed in 1956. During 1958-59 the No. 12 crosscut adit was driven 2,600 feet to the downward extension
see Card 2

HISTORY OF PRODUCTION/HISTORIQUE DE LA PRODUCTION

Recorded production for the periods 1925-37 and 1959-62 totals 75,675 tons. From this ore 86 ounces of gold, 850,289 ounces of silver, 5,913,281 pounds of lead, 8,045,021 pounds of zinc, and 33,882 pounds of cadmium were recovered.

Complete production figures are not available because ore has been milled jointly with that from the Standard and Enterprise properties during the periods 1942-45, 1950-52, 1956-59, and 1965-66.

REFERENCES/BIBLIOGRAPHIE

Reports of Minister of Mines, British Columbia:
 1922, p. 202; 1923, p. 227; 1925, pp. 246, 446;
 1926, p. 256; 1927, p. 275; 1928, p. 291⁺;
 1929, p. 314; 1930, p. 251; 1932, p. 178; 1933,
 p. 206; 1934, p. E 34; 1935, pp. E 31, G 48;
 1936, p. E 51; 1927, p. E 55; 1942, p. 73; 1943,
 p. 72; 1944, p. 72; 1945, p. 106; 1948, p. 146;
 1949, p. 191; 1950, p. 148; 1951, p. 174; 1952,
 p. 178; 1953, p. 141; 1955, p. 63; 1956, p. 96;
 1957, p. 54; 1958, p. 47; 1959, p. 69; 1961,
 p. 77; 1962, p. 82; 1963, p. 78; 1965, p. 193;
 1966, p. 220.

++Cairnes, C.E.; Description of Properties, Slocan Mining Camp, British Columbia; Memoir 184, pp. 75-78, Geol. Surv. of Canada, 1935.

+++Hedley, M.S.; Geology and Ore Deposits of the Sandon Area, Slocan Mining Camp, British Columbia; Bulletin No. 29, pp. 86-90, British Columbia Dept. of Mines, 1952.

Mines Branch, Ottawa; Investigations in Ore Dressing and Metallurgy; 1935, Rept. 763, pp. 17-22 (No. 612).

Mineral Policy Sector; Corporation Files: "Standard Silver-Lead Mining Co."; "The Porcupine Goldfields Development & Finance Company, Limited"; "Western Exploration Company, Limited"; "Johnsby Mines Limited"; "Arjan Pacific Ltd."

Geology, Exploration, and Mining; British Columbia Dept. of Mines: 1976, p. E 42.

MAP REFERENCES/RÉFÉRENCES CARTOGRAPHIQUES

#Map 273 A, Sandon, (Geol.), Sc. 1":4,000 ft. - accomp. Memoir 173, Geol. Surv. of Canada.

Map 1090 A, Nelson, (Geol.), Sc. 1":4 miles - accomp. Memoir 308, Geol. Surv. of Canada.

Map 8482 G, Slocan, (Aeromag.), Sc. 1":1 mile.

*Map 82 F/14, Slocan, (Topo.), Sc. 1":50,000.

REMARKS/REMARQUES

Comp./Rev. By Comp./rév. par	DMacR						
Date Date	01-80						

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TERRITORY TERRITOIRE

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NAME OF PROPERTY MAMMOTH, MONARCH
NOM DE LA PROPRIÉTÉ

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

DESCRIPTION OF DEPOSIT/DESCRIPTION DU GISEMENT (continued)

but in which little mineralization is apparent. To the west the Mammoth lode has been explored by short adits and by diamond drilling as far as the Monarch adit. It splits at some point east of the Monarch adit and crosses the next ridge to the west, and Emily Creek, in two members, the southernmost of which passes through the Robin claim to the vicinity of the Alpha workings of the Standard mine. The Mammoth is a branch of the Standard lode.

The Mammoth lode is a mineralized shear zone averaging from 30 to 40 feet wide and has been traced by surface and underground workings over a length of about three-quarters of a mile on this property. It strikes north 75 degrees east and dips southeast at angles varying from 40 to 65 degrees. The lode is a notably strong shear zone with, in general, well-defined foot- and hanging-wall sections, in either of which vein deposits containing valuable ore deposits may occur, though developments to date indicate more mineralization in the foot-wall side. The orebody on the whole is pipe-like in form and has a known vertical range of about 1,000 feet. Above No. 5 level it divides into two tabular masses in a comparatively straight fissure. The tabular or vein-like part above No. 5 level persisted to the apex of the lode, but the heavily oxidized uppermost part was not mined. On No. 8 level, in addition to the main pipe-like orebody, ore extends eastward on the footwall Mammoth fissure.

The ore consists of masses and disseminations of sphalerite and galena in a gangue of rock, calcite, and siderite. Quartz is present locally. The ore minerals are in many instances concentrated in pods and tabular masses which may be parallel to the walls of the lode, dip flatter than the lode, or lie along northeasterly trending slips, and may be of random attitude and distribution within the ore zone.

of the Mammoth zone. The adit for the most part parallels, and in two places cuts the vein on the adjacent Buffalo property. Work ceased in June 1959.

Loma Minerals Ltd. acquired a lease on the property and carried out development work from February 1961 until October 1962. Johnsby Mines Limited was incorporated in November 1962 to operate the property under the terms of an agreement between the owner, Western Exploration, and Rayrock Mines Limited and Faraday Uranium Mines Limited. Development work began in a new exploration adit on the Standard property. Mining began on the Mammoth between 9 and 12 levels in 1965 and continued until the ore was exhausted late in 1966. Total development work to that date is estimated at approximately 8,400 feet of drifts and crosscuts in 6 adits, Nos. 1, 2, 4, 7, 9, and 12, and 6 intermediate levels. No. 3½ and two other short adits lie to the west of the main orebody, and an exploratory crosscut, the 500 foot long Monarch adit, lies farther to the west.

Arjan Pacific Ltd. by an agreement dated September 26, 1973 purchased the Mammoth and adjacent properties from Western Exploration Company, Limited. In 1976 the Mammoth and Buffalo properties were owned by D.W. Pengelly, of Silverton.

*Johnsby Mines Ltd. in 1980.
Rept. SMF 17-81.*