

Location/Identification

MINFILE Number:	082FNE053	National Mineral Inventory Number:	082F9 Pb2
Name(s):	<u>NORTH STAR MINE</u> QUANTRELL		
Status:	Past Producer	Mining Division:	Fort Steele
Mining Method	Underground, Open Pit	Electoral District:	Columbia River-Revelstoke
Regions:	British Columbia	Resource District:	Rocky Mountain Forest District
BCGS Map:	082F070		
NTS Map:	082F09E	UTM Zone:	11 (NAD 83)
Latitude:	49 40 42 N	Northing:	5503324
Longitude:	116 01 28 W	Easting:	570380
Elevation:	1833 metres		
Location Accuracy:	Within 500M		
Comments:	SEE MAP 82G NW-21: SULLIVAN MINE		

Mineral Occurrence

Commodities: Lead, Zinc, Silver, Copper

Minerals **Significant:** Pyrrhotite, Sphalerite, Galena, Pyrite, Chalcopyrite, Arsenopyrite, Cerussite, Silver

Deposit **Character:** Stratiform, Stratabound, Massive

Classification: Sedimentary, Exhalative, Replacement, Syngenetic

Type: E14: Sedimentary exhalative Zn-Pb-Ag, I05: Polymetallic veins Ag-Pb-Zn+/-Au

Host Rock

Dominant Host Rock: Sedimentary

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Middle Proterozoic	Purcell	Aldridge	-----

Isotopic Age	Dating Method	Material Dated
-----	-----	-----

Lithology: Argillaceous Quartzite

Geological Setting

Tectonic Belt:	Omineca	Physiographic Area:	Purcell Mountains
Terrane:	Ancestral North America		

Inventory

No inventory data

Summary Production

	Metric	Imperial
Mined:	61,330 tonnes	67,604 tons
Milled:	0 tonnes	0 tons

Recovery	Silver	41,674,193 grams	1,339,856 ounces
	Lead	21,775,030 kilograms	48,005,724 pounds
	Zinc	6,304 kilograms	13,898 pounds

Capsule Geology

The property is located at about the 1590 metre elevation on the northeast slope of North Star Hill, 3 kilometres west of Kimberley.

The host rocks are argillaceous quartzites of the Middle Proterozoic Aldridge Formation, Purcell Supergroup. The original orebody was a replacement deposit similar to the Sullivan mine (082FNE052). The ore was primarily a very clean and solid argentiferous galena with only a small amount of sphalerite. Wire silver and crystals of cerussite occur as well as iron sulphides.

The showings were discovered and staked in June 1892 by Messrs. Bourgeois and Langill, who bonded the claims to the Woods Brothers, of Quebec; the latter sold 4/5 of their interest to D.D. Mann & associates, of Montreal, in 1893. The initial development work, in a shaft and crosscut adit, exposed a large body of high-grade ore. In 1894, four claims, the North Star, O.K., Buckhorn, and Dreadnaught (Lots 657-660, respectively), were Crown-granted to the North Star Mining Company, Limited Liability, which was incorporated that same year. The initial production from the mine was hauled by wagon 32.1 kilometres to the Kootenay River for transport by boat to Jennings, Montana, and then by rail to the smelter at Great Falls. Shipments ceased in 1897 to await the construction of the railway and mine operations were confined to development work. In April 1899 a new company, The North Star Mining Company, Limited, was incorporated with D.D. Mann as president; the former company was dissolved in 1900. The property at that time included, in addition to the Crown-grants, 13 claims held by location, including the Stemwinder. The C.P.R. railway was completed to Cranbrook in 1899 and a branch line was completed to Kimberley in 1900. During 1903 the limits of the orebody were reached and efforts were directed towards further exploration by means of numerous shallow workings and a shaft. The orebody had been mined from surface workings and from an adit driven in the footwall 18.2 metres below the surface outcrop.

In 1904 the company accountant, Mr. N. Curran, was appointed manager of the property to salvage the few tons of known ore left and to wind up the operation. This "clean up" project revealed a surprising amount of ore at the edges of old stopes and also the existence of considerable carbonate ore underlying surface gravels and soils. Mining operations continued into 1910 when the mine finally closed.

The Federal Mining and Smelting Company, a subsidiary of the American Smelting and Refining Company, optioned the property in 1917 and for 2 or 3 months during 1918 carried out limited diamond drilling. Later that same year O.C. Thompson & associates leased the North Star and began shipping ore sorted from the old dumps.

In June 1924 Thompson and associates gave a 3-year sub-lease and option on the property to the Porcupine Goldfields Development and Finance Company, Limited, of London, England. Work on the property during 1924 and 1925 included 624 metres of diamond drilling in a few shallow holes, and electrical prospecting. The lease and option expired in 1927. The North Star Mining Company charter was surrendered in 1931.

The Consolidated Mining and Smelting Company of Canada Limited acquired the property prior to 1937.

Bibliography

EM 2000-22

EMPR AR 1892-535,538, 1893-1064,1083, 1894-748, 1895-672, 1896-517, 556, 1897-463,523, 1898-993,1020, 1899-593,661, 1900-794,800,946, 1901-1006, 1902-131,257, 1903-73,93,214, 1904-105,109,270, 1905-24,140,219, 1906-132,248, 1907-84,163,213, 1908-246, 1909-96, 154,272, 1910-90,243, 1911-121, 1912-137, 1913-119, 1917-249, 1918-150,187, 1919-115, 1920-140, 1923-204, 1924-186, 1925-226, 1929-284,295

EMPR ASS RPT 6656, 6660, 6661, 6785, 6786, 6970, 7020, 7181, 7182, 7428, 7460, 7461, 7548, 9095, 9096

EMPR EXPL 1978-E58, 1979-65

EMPR GEM 1969-145, 1974-72

EMPR OF 1998-10; 2000-22

EMR MINES BR(CANMET) SUM RPT 1921 NO.586-79,144-117,1945-122

GSC ECON GEOL 8-325

GSC MAP 15-1957, 396A

GSC MEM 207-44, 76-133, 228-61

CIM TRANS VOL V P 512

W MINER & OIL REVIEW V36 SEPT 1963, pp. 24-27

EMPR PFD 1885, 1888, 1889, 823070, 822660, 822662, 822666, 822667, 827888, 827926

Date Coded:	1985/07/24	Coded By:	BC Geological Survey (BCGS)	Field Check:	N
Date Revised:	2000/01/06	Revised By:	Garry J. Payie (GJP)	Field Check:	N