Location/Identification

MINFILE Number: 082FNE116
National Mineral Inventory Number: 082F9 Zn1
Name(s): **STEMWINDER (L.2998)**

Status: Past Producer
Mining Method Underground
Regions: British Columbia
BCGS Map: 082F070
NTS Map: 082F09E
Latitude: 49 41 36 N
Longitude: 116 00 58 W
Elevation: 1500 metres
Location Accuracy: Within 500M

Mining Division: Fort Steele
Electoral District: Columbia River-Revelstoke
Resource District: Rocky Mountain Forest District

UTM Zone: 11 (NAD 83)
Northing: 5505000
Easting: 570959

Mineral Occurrence

Commodities: Zinc, Lead, Silver, Gold

Minerals **Significant:** Pyrrhotite, Pyrite, Galena, Sphalerite

Deposit
Character: Stratiform, Stratabound, Massive, Vein
Classification: Syngenetic, Sedimentary, Exhalative
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	------
Proterozoic	------	------	Moyie Intrusions

Isotopic Age	Dating Method	Material Dated
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Lithology: Argillaceous Quartzite, Hornblende Gabbro

Geological Setting

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

Inventory

No inventory data

Summary Production

	Metric		Imperial	
Mined:	25,620	tonnes	28,241	tons
Milled:	25,620	tonnes	28,241	tons

Recovery	Silver	1,955,197	grams	62,861	ounces
	Gold	1,306	grams	42	ounces
	Zinc	3,990,900	kilograms	8,798,428	pounds
	Lead	945,317	kilograms	2,084,067	pounds

Capsule Geology

The Stemwinder hostrock consists of argillaceous quartzites of the Middle Proterozoic Aldridge Formation, Purcell Supergroup. These are intruded by several sills of hornblende gabbro of the Proterozoic Moyie Intrusions. The mineralized zone is a lens of massive sulphides entirely enclosed by the quartzites. The lens consists largely of pyrrhotite, strikes nearly north, and dips about 75 degrees west. The thickness of the sulphide zone is about 60 metres. The occurrence is considered to be similar to the Sullivan mine (082FNE052).

The ore zone lies along the footwall side of the sulphide lens. It consists of a fine-grained mixture of galena and sphalerite passing into a fine-grained mixture of pyrrhotite, pyrite and sphalerite. The ore zone has width of about 6 metres. It is separated from the normal quartzite by a cherty layer. Underground work and diamond drilling indicates a that the ore zone is 80 metres long with a width of 4.5 to 9 metres.

The Stemwinder property is located on Mark Creek about 2.4 kilometres west-northwest of the center of Kimberley, and is adjoined on the north by the Sullivan mine and on the south by the North Star property.

In 1896, the Stemwinder was one of 13 recorded claims held by the Mann & McKenzie interests as part of the North Star property, under the name of the North Star Mining Company, Limited Liability. Exploration work began in an adit about 140 metres above the creek and by 1899 this had been driven 183 metres, intersecting a mineralized zone which appeared to be mainly iron sulphide. The Stemwinder claim (Lot 2998) was Crown granted to D.D. Mann and Wm. McKenzie in 1899. Further limited development work was reported in 1905.

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 1917-1918 carried out diamond drilling. Results were not encouraging and the option was dropped. In 1921 the Federal Mining and Smelting Company again optioned the Stemwinder and Ontario claims from the Mann & McKenzie interests and further diamond drilling was carried out; the option was subsequently dropped. The property was reported held in 1923 by the Stemwinder Mining Company, Limited but details are lacking. In 1923 O.C. Thompson & associates bonded the property and in June 1924 gave a 3 year lease and option to Porcupine Goldfields Development and Finance Company, Limited, of London, England. Exploration and development work included sinking a shaft to the 78-metre level and crosscutting drifting, and raising totalling 1638 metres was done on the 24, 38, and 76 metre levels. Diamond drilling on surface and underground totalled 3762 metres. An additional 40 metres or shaft sinking was reported but details are lacking. This work indicated, on the 38-metre level, an orebody 79 metres long by 6 metres wide of mainly zinc ore. Ore reserves to the 206-metre level were estimated at 90,700 tonnes. Exploration and development work was suspended in May 1926, at which time ore shipments began to Trail. Ore shipments continued to December 1926 when operations were suspended due to poor mill recoveries and markets. The lease and option expired in 1927. Reserves were reported at 66,410 tonnes, grade unstated (Porcupine Goldfields Development and Finance Company, Limited June 1927 Annual Report). The Consolidated Mining and Smelting Company of Canada Limited purchased the property in 1929 for $115,000.

The recorded total ore mined came from 1926 when 25,620 tonnes of ore was shipped and 1,955,197 grams of silver, 1,306 grams of gold, 3,990,900 kilograms of zinc and 945,317 kilograms of lead were recovered.

Bibliography

EM OF 2000-22
EMPR AR 1896-518, 1898-1021, 1899-593,661,841, 1906-132,215, 1911-121, 1912-137, 1913-119, 1917-149, 1918-150,187, 1921-128-166, 1923-204, 1924-186, 1925-226, 1926-242, 1929-295
EMPR BC METAL MM00543
EMPR INDEX 3-215
EMPR OF 1998-10; 2000-22
GSC ECON GEOL SERIES 8-327
GSC MEM 76-135, 207-44
CIM SPECIAL VOL 8-271,272,286,287
EMPR PFD 1885, 750652, 823070, 822660, 822661, 822662, 822664, 822665, 822666, 822668, 822670, 822669, 827926

Date Coded:	1985/07/24	**Coded By:**	BC Geological Survey (BCGS)	**Field Check:**	N
Date Revised:	1999/12/01	**Revised By:**	Garry J. Payie (GJP)	**Field Check:**	N