

Location/Identification

MINFILE Number:	082KSE029	National Mineral Inventory Number:	082K8 Pb2
Name(s):	<u>PARADISE (L.4341)</u> PARADISE MINE, SHAMROCK (L.4344), ROYAL STAG (L.4343), MOUNTAIN-TOP MINE		
Status:	Past Producer	Mining Division:	Golden
Mining Method	Underground	Electoral District:	Columbia River-Revelstoke
Regions:	British Columbia	Forest District:	Rocky Mountain Forest District
BCGS Map:	082K049		
NTS Map:	082K08W	UTM Zone:	11 (NAD 83)
Latitude:	50 28 18 N	Northing:	5591307
Longitude:	116 18 09 W	Easting:	549497
Elevation:	2300 metres		
Location Accuracy:	Within 500M		
Comments:	Portal of 7800 Level.		

Mineral Occurrence

Commodities:	Lead, Zinc, Silver, Cadmium, Gold		
Minerals	Significant:	Galena, Sphalerite, Pyrite, Cerussite	
	Alteration Type:	Oxidation	
	Mineralization Age:	Unknown	
Deposit	Character:	Stratiform, Massive, Vein	
	Classification:	Replacement	
	Type:	E12: Mississippi Valley-type Pb-Zn, J01: Polymetallic manto Ag-Pb-Zn	
	Shape:	Irregular	

Host Rock

Dominant Host Rock:	Sedimentary		
Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Middle Proterozoic	Purcell	Mount Nelson	-----
Middle Proterozoic	Windermere	Toby	-----
Isotopic Age	Dating Method	Material Dated	
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Lithology:	Dolomite, Sandstone, Chert, Shale		

Geological Setting

Tectonic Belt:	Omineca	Physiographic Area:	Purcell Mountains
Terrane:	Ancestral North America		
Metamorphic Type:	Regional		
Grade:	Greenschist		

Inventory

No inventory data

Summary Production

		Metric		Imperial	
	Mined:	64,635	tonnes	71,247	tons
	Milled:	53,172	tonnes	58,612	tons
Recovery	Silver	22,928,788	grams	737,178	ounces
	Gold	995	grams	32	ounces
	Lead	7,247,973	kilograms	15,979,045	pounds
	Zinc	3,623,589	kilograms	7,988,646	pounds
	Cadmium	9,999	kilograms	22,044	pounds

Capsule Geology

The Paradise mine is situated near the head of Springs Creek on the ridge between Springs and Bruce creeks, at 2300 metres elevation above sea level, in the Golden Mining Division.

Regionally, the area is underlain by Proterozoic clastic sedimentary rocks of the Purcell and Windermere supergroups and by lower Paleozoic strata of the Beaverfoot and Mount Forster formations (Geoscience Map 1995-1).

The Purcell Supergroup strata include the Aldridge, Creston, Kitchener, Dutch Creek and Mount Nelson formations. The Windermere Supergroup unconformably overlies the Purcell Supergroup rocks and includes the Toby Formation and Horsethief Creek Group (Paper 1990-1).

In the vicinity of the occurrence, rocks of the Kitchener and Dutch Creek formations have been further subdivided and assigned to the Van Creek and Gateway formations. The Van Creek Formation correlates with the Lower Kitchener Formation while the Gateway Formation is equivalent to the lower portion of the Dutch Creek Formation. The Mount Nelson Formation has been subdivided into seven discrete members, a lower quartzite, a lower dolomite, a middle dolomite, a purple dolomite, an upper middle dolomite, an upper quartzite, and an upper dolomite (Open File 1990-26).

Rocks of the Horsethief Creek Group, Beaverfoot and Mount Forster formations are folded and overthrust by rocks of the upper portion of the Dutch Creek Formation and the lower members of the Mount Nelson Formation. The sedimentary rocks have undergone regional metamorphism to at least greenschist facies.

The Paradise mine orebody is within the upper dolomite member of the Mount Nelson Formation, immediately below the Windermere unconformity near the core of an east-verging anticline which is transected to the west by a north-trending fault (Open File 1990-26). Differing thicknesses of the Windermere Supergroup on either side of the fault indicate that it was active during Hadrynian extension. The host dolomite is light grey and fine grained with abundant black chert layers which preferentially replace cryptalgal structures and thin, carbonaceous black shale interbeds.

The orebody consists of a series of replacement mantos near the upper contact of the dolomite with the overlying sandstone of the Toby Formation. The ore in the upper levels of the mine was strongly oxidized and consisted mainly of lead carbonate (cerussite) with minor residual pyrite and sphalerite. At depth, the mineralization changed to mainly fracture controlled pyrite-galena-cerussite-sphalerite veins. Samples from the Paradise mine consist of massive panidiomorphic galena, sphalerite, pyrite, sucrosic cerussite and banded dolomite, galena, sphalerite and pyrite (Open File 1990-26).

Between 1901 and 1953, the mine produced about 22.9 million grams of silver, 7.2 million kilograms of lead, 3.6 million kilograms of zinc, 9999 kilograms of cadmium and 995 grams of gold from a total of 66,760 tonnes milled.

The Shamrock (Lot 4344) adjoins the Paradise Crown grant to the north, but no in-situ mineralization was detected in early exploration.

Bibliography

EMPR AR 1899-666; 1900-804; 1901-1013; 1902-134; 1903-99,102,104; 1904-113; 1905-143; 1906-135,248; 1907-90,213; 1908-89,249; 1909-100; 1915-88; 1916-187,426,516; 1917-144,177; 1918-151,185; 1919-113,145; 1920-109,138; 1921-124; 1922-183; 1923-199; 1924-180; 1925-221,231; 1926-239; 1927-264; 1928-275; 1929-284,293; 1930-112,237; 1943-75; 1944-74; 1946-174; 1948-152; *1949-196; 1950-156; 1951-40,190; 1952-43,200; 1953-151; 1955-A48,70; 1956-A49; 1957-A45; 1958-A45; 1960-84; 1964-135
EMPR ASS RPT 9842
EMPR BC METAL MM00573
EMPR EXPL 1980-117
EMPR FIELDWORK 1989, pp. 29-37
EMPR GEM 1974-83
EMPR GEOLOGY *1975, pp. G7,G11
EMPR GEOS MAP 1995-1

EMPR INDEX 3-208

EMPR LMP (Paradise, Fiche No. 61149-61153)

EMPR OF 1990-26, pp. 25,30, Figs. 17a,17b; 1998-10

EMPR PF (Starr, C.C. (1928): Report of Preliminary Examination of the Paradise Mine, 11 p.; Longitudinal Projection of the Paradise Mine (Scale 1"=100'); 82KSE General File - Geology map by P. Billingsley, 1958; News clipping, 1952; Location sketch map of claims)

EMR MIN BULL MR 166; 223 B.C. 50

EMR MP CORPFILE (Tri Basin Resources Ltd.)

EMR MP RESFILE (Paradise Mines)

GSC EC GEOL 8, p. 320

GSC MAP 2070; 12-1957; 1326A

GSC MEM 148, p. 46; 369, p. 113

CANMET MD 2727

GCNL #208, 1980; #125, 1981

N MINER April 25, 1974

Pope, A.J. (1989): The Tectonics and Mineralization of the Toby- Horsethief Creek Area, Purcell Mountains, Southeast British Columbia, Canada, unpublished Ph.D. Thesis, University of London, England

Date Coded:	1985/07/24	Coded By:	BC Geological Survey (BCGS)	Field Check:	N
Date Revised:	1995/09/13	Revised By:	Gilles J. Arseneau(GJA)	Field Check:	Y