

### Location/Identification

<b>MINFILE Number:</b>	082ESE113	<b>National Mineral Inventory Number:</b>	082E2 Pb3
<b>Name(s):</b>	<b>IMPERIAL</b> EMLINE (L.1081S), BADGER, STEEVES GROUP, EMMALINE		
<b>Status:</b>	Past Producer	<b>Mining Division:</b>	Greenwood
<b>Mining Method</b>	Underground	<b>Electoral District:</b>	Boundary-Similkameen
<b>Regions:</b>		<b>Resource District:</b>	Selkirk Natural Resource District
<b>BCGS Map:</b>	082E016		
<b>NTS Map:</b>	082E02W	<b>UTM Zone:</b>	11 (NAD 83)
<b>Latitude:</b>	49 06 24 N	<b>Northing:</b>	5441191
<b>Longitude:</b>	118 58 28 W	<b>Easting:</b>	355897
<b>Elevation:</b>	1873 metres		
<b>Location Accuracy:</b>	Within 100M		
<b>Comments:</b>	Adit on Imperial (Assessment Reporte 1766)		

### Mineral Occurrence

<b>Commodities:</b>	Silver, Lead, Zinc, Gold, Copper		
<b>Minerals</b>	<b>Significant:</b>	Sphalerite, Galena, Pyrrhotite, Chalcopyrite, Pyrargyrite, Stephanite	
	<b>Associated:</b>	Carbonate	
	<b>Alteration:</b>	Mariposite, Chlorite, Sericite	
	<b>Alteration Type:</b>	Silicific'n, Quartz-Carb.	
	<b>Mineralization Age:</b>	Triassic-Jurassic	
<b>Deposit</b>	<b>Character:</b>	Vein, Shear	
	<b>Classification:</b>	Unknown	
	<b>Type:</b>	I05: Polymetallic veins Ag-Pb-Zn+/-Au	

### Host Rock

<b>Dominant Host Rock:</b>	Metasedimentary		
<b>Stratigraphic Age</b>	<b>Group</b>	<b>Formation</b>	<b>Igneous/Metamorphic/Other</b>
Upper Paleozoic	Anarchist	Unnamed/Unknown Formation	-----
Upper Paleozoic	Knob Hill	Unnamed/Unknown Formation	-----
<b>Isotopic Age</b>	<b>Dating Method</b>	<b>Material Dated</b>	
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<b>Lithology:</b>	Greenstone, Ultramafic		

### Geological Setting

<b>Tectonic Belt:</b>	Omineca	<b>Physiographic Area:</b>	Okanagan Highland
<b>Terrane:</b>	Quesnel, Plutonic Rocks		

### Inventory

No inventory data

### Summary Production

		Metric		Imperial	
	Mined:	763	tonnes	841	tons
	Milled:	0	tonnes	0	tons
Recovery	Silver	288,604	grams	9,279	ounces
	Gold	2,083	grams	67	ounces
	Zinc	11,978	kilograms	26,407	pounds
	Lead	9,149	kilograms	20,170	pounds
	Copper	121	kilograms	267	pounds

### ***Capsule Geology***

Mineralization at the Imperial is primarily hosted within carbonatized and silicified ultramafic bodies which intrude upper Paleozoic age greenstones and meta-sediments of the Knob Hill Group or similar aged Anarchist Group. Ultramafic rocks have been altered to magnesium-iron rich carbonates with mineralization being offset and apparently controlled by faulting of probable Tertiary age. Mineralization also occurs within sheared and sericitic greenstones of the Knob Hill Group but this type of mineralization is not extensive.

Mineralization in the carbonate appears as shallow dipping, heavy sulphide pods and lenses ("black leads") and to a lesser extent as quartz-sulphide veins and banded sulphides over a strike length in excess of 80 meters and to a depth of up to 67 meters with an east-west dimension of at least 100 meters. Mineralization in the greenstones occurs as banded and disseminated sulphides.

Typical grades in black leads are between 0.34 and 3.43 grams per tonne gold, 34.29 to 342.86 grams per tonne silver and 1 to 7 per cent combined lead-zinc. Similar grades are encountered in banded sulphides. Quartz-sulphide veins yielded grades of up to 19.34 grams per tonne gold with low grade silver and base metals values generally less than 2 per cent (Assessment Report 20826).

A diamond drilling program conducted in the immediate vicinity of the Imperial workings by Rock Creek Resources limited in 1990 extended the limits of known zinc-lead-silver mineralization and accompanying low-grade gold mineralization to an area some 120 meters northeast of the underground workings and the Imperial pit, located on the Kelly 1 mineral claim in 1990. Mineralization was encountered in all 22 diamond drill holes.

Three types of mineralization are present in drill core and at the Imperial workings area:

- a) pyrite + sphalerite + galena +/- pyrrhotite +/- stefanite mineralization occurs within brecciated dark grey to black, sooty looking heavy sulphide bearing pods, lenses and vein-like structures ("black leads") which are hosted within intensely silicified, sheared, mariposite and chlorite altered carbonates;
- b) quartz-sulphide (pyrite + sphalerite +/- galena +/- stefanite) fracture filling veins hosted within greenstones and carbonates, which at surface have been noted to occur adjacent to northeast trending faults and cross-cut black lead mineralization and;
- c) banded sulphides (pyrite + sphalerite +/- galena) in silicified carbonate and greenstone associated with sericitic alteration and quartz-sulphide veins.

The black leads occur as discontinuous lenses and vein-like heavy sulphide bodies ranging from 5 to 150 centimetres and more in thickness dipping shallowly (2 to 40 degrees) to the east and generally northerly striking. The black leads typically contain between 5 and 20 per cent very fine grained sulphides as a dark grey to black sooty matrix with medium to coarse grained pyrite, sphalerite and galena and occasional pyrrhotite.

In 1925 and 1926, extensive exploration work was done on the Imperial group of claims adjacent to the south of the Riverside. The explorers found that the same and/or similar geological, structural and mineralogical features are continuing through both Riverside and Imperial groups of claims.

A number of shafts, tunnels, raises and crosscuts were excavated during these and following years when property was leased to Hecla Mining Co. of Idaho. In 1927, about 33 tons of concentrate was reported shipped from Imperial. Various individuals worked the property in 1930s as well as the Imperial Leasing syndicate in 1935.

Production is recorded for eight years starting in 1914 and ending in 1949. From a total of 763 tonnes mined commodities recovered include silver, 288,604 grams; gold, 2,083 grams; zinc, 11,978 kilograms; lead, 9,149 kilograms and ; copper, 121 kilograms.

The area of the Imperial workings has been periodically examined from the early 1950s to the early 1990s. Several open cuts, shallow shafts and pits were dug during the early 1950s in an attempt to extend the known mineralization to the north, south and east.

During the late 1970s and early 1980s a large 10 meter deep open pit was developed some 80 meters south of the Imperial adits (Kelly Pit). There are no available records of any material being shipped from this pit development.

Assessment work over the Imperial workings and the adjacent Bee and Sun claims during the 1980s has consisted of prospecting, geological mapping and soil sampling (Assessment Reports 9907, 11069, 11118, 11427); underground sampling and mapping (unpublished report, Arizco Resources Ltd., Pringle, 1984); a 1986 magnetometer survey (Assessment Report 15607); geological, geochemical and geophysical surveys (unpublished report by for Silver Falls Resources by Larabie, 1987); and trenching (unpublished report for Silver Falls Resources by Van Huizen, 1988). The 1986, 1987 and early 1988 work on the property was done by Silver Falls Resources Ltd, the 1990 joint venture partner with Rock Creek Resources Ltd. A fall 1988 field program was completed on behalf of Rock Creek Resources Ltd and included pit development and trenching, grid geochemical surveys, geological mapping and prospecting and a trial Max-Min 1 geophysical survey. During 2008 through 2012, Grizzly Discoveries Inc. completed programs of geochemical sampling, geological mapping and ground geophysical surveys on the area as the Greenwood property.

### ***Bibliography***

EMPR AEROMAG MAP 8497G

EMPR AR 1913-154; 1914-511; 1925-198; 1926-211; 1927-234; 1928-251;

1934-D9; 1935-A25; 1936-D55; 1947-153; 1949-149; 1952-139;

1953-109

EMPR ASS RPT 1766, 2882, 9907, 11069, 11118, 11427, 12089, 15607, \*20826

EMPR MR MAP 6 (1932)

EMPR OF 1990-25

EMPR P 1986-2

EMPR PF (B.C. Department of Mines (1935): Plan Map of Imperial Mine - Underground Workings; Silver Falls Resources (1987-06-08):

Statement of Material Facts #83/87)

EMPR PRELIM MAP 59

GSC MAP 828; 45-20A; 6-1957; 10-1967; 1500A; 1736A

GSC OF 481; 637; 1969

GSC P 67-42; 79-29

Dufresne, M. (2013-11-10): Technical Report for the Greenwood Gold Project

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EMPR PFD 1271, 1272, 1274, 1275, 904608, 904609, 905880, 750030, 750031, 824786, 824787, 824789, 823555, 824788, 672603, 672604, 672605, 672607, 672608, 672609, 672610, 895246

<b>Date Coded:</b>	1985/07/24	<b>Coded By:</b>	BC Geological Survey (BCGS)	<b>Field Check:</b>	N
<b>Date Revised:</b>	2020/07/22	<b>Revised By:</b>	Karl A. Flower (KAF)	<b>Field Check:</b>	N