



MINFILE Detail Report  
BC Geological Survey  
Ministry of Energy, Mines and Petroleum Resources

### Location/Identification

**MINFILE Number:** 082FSW146 **National Mineral Inventory Number:** 082F4 Pb

**Name(s):** MAYFLOWER (L.799)  
OLLA PORIDA, ROSSLAND

**Status:** Past Producer **Mining Division:** Nelson, Trail Creek

**Mining Method:** Underground **Electoral District:** Kootenay West

**Regions:** **Resource District:** Selkirk Natural Resource District

**BCGS Map:** 082F002 **UTM Zone:** 11 (NAD 83)

**NTS Map:** 082F04W **Northings:** 5434369

**Latitude:** 49 03 34 N **Easting:** 441881

**Longitude:** 117 47 44 W

**Elevation:** 1287 metres

**Location Accuracy:** Within 500M

**Comments:** Located approximately 1.5 kilometres south of Rossland on the east side of Gopher Creek.

### Mineral Occurrence

**Commodities:** Silver, Gold, Lead, Zinc, Cadmium

**Minerals** **Significant:** Sphalerite, Galena, Arsenopyrite, Boulangerite, Tetrahedrite, Pyrrhotite, Ruby Silver, Pyrite, Magnetite, Pyrrargyrite

**Associated:** Quartz, Carbonate

**Alteration:** Sericite, Epidote, Hornblende

**Alteration Type:** Sericitic, Epidote

**Mineralization Age:** Unknown

**Deposit** **Character:** Vein, Disseminated, Shear, Massive

**Classification:** Hydrothermal, Epigenetic

**Type:** I05: Polymetallic veins Ag-Pb-Zn+/-Au

**Strike/Dip:** 110/80N

**Comments:** Main mineralized vein.

### Host Rock

**Dominant Host Rock:** Plutonic

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Lower Jurassic	Rossland	Elise	-----
Lower Jurassic	-----	-----	Rossland Monzonite

Isotopic Age	Dating Method	Material Dated
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190 Ma	Uranium/Lead	Zircon

**Lithology:** Augite Porphyry Sill, Augite Porphyry, Monzonite, Biotite Hornblende Augite Monzonite, Lamprophyre Dike, Dioritic Porphyry, Breccia

**Comments:** Monzonite dated March 1991 (Andrew, K.P.E., personal communication, March 1991). Augite porphyry is also known as Rossland sill.

### Geological Setting

**Tectonic Belt:** Omineca **Physiographic Area:** Selkirk Mountains

**Terrane:** Quesnel, Kootenay

## Inventory

No inventory data

## Summary Production

		Metric		Imperial	
	<b>Mined:</b>	884	tonnes	974	tons
	<b>Milled:</b>	617	tonnes	680	tons
<b>Recovery</b>	Silver	376,780	grams	12,114	ounces
	Gold	4,136	grams	133	ounces
	Zinc	49,390	kilograms	108,886	pounds
	Lead	25,785	kilograms	56,846	pounds
	Cadmium	139	kilograms	306	pounds

## Capsule Geology

The old Mayflower mine workings are hosted by the Lower Jurassic Rossland Group (Elise Formation) augite porphyry, known as the Ross- land sill. The porphyry is dark green with phenocrysts of dark augite which are partly altered to hornblende. The rock is commonly brecciated with preferential epidote alteration. The sill is intrud- ed by the Early Jurassic Rossland monzonite which is comprised of a biotite-hornblende-augite monzonite. The sill lies within the zone of thermal metamorphism. Diorite porphyry and lamprophyre dykes crosscut these older rocks striking 015 degrees and dipping 50 to 60 degrees eastward. A sample from a crosscutting lamprophyre dyke on the Mayflower claim gave a potassium-argon date from biotite as 49.4 plus or minus 1.4 million years (Bulletin 74, page 54).

The mine is hosted by the Bluebird-Mayflower shear zone which strikes 120 to 130 degrees and dips from 50 to 65 degrees to the northeast, and is traceable for 600 metres. The Mayflower zone, located about 200 metres east of the Blue Bird zone (082FSW145) on the same structure, is similar in most respects to the Blue Bird zone but differs in its higher gold to silver ratio. Exploration has been carried out to a depth of 60 metres at which level the mineralization is still present. Limited drilling between the Blue Bird and Mayflower zones, to a depth of 45 metres, has confirmed continuity of the mineralized structure, but grades have been low. At the western extent of the shear zone, near the Hattie Brown shaft (082FSW359), the structure is cut by a 12.2 metre wide monzonite dyke of the Middle Eocene Coryell Intrusions. Surface work and drilling has suggested that the structure continues to the west of the dyke and is mineralized.

The main vein strikes 110 degrees and dips 70 to 80 degrees north. The earliest work was on the South vein; later develop- ment work proceeded on the North and Main veins which all strike east-west and dip steeply north. The main portal, at elevation 877 metres intersects 5 main ore shoots of 56 metres in length. Mineral- ization consists of sulphides replacing wallrock along well-defined fracture and faults and infilling fractures. The ore shoots end abruptly against dykes or cross structures.

The ore is composed of fine-grained, disseminated or rudely banded massive sulphides in a gangue consisting of thoroughly serici- tized rock with minor carbonate and quartz. The mineralization is of the South Belt-type which contains pyrite, pyrrhotite, arseno- pyrite, sphalerite, galena, and boulangerite (Bulletin 74, pages 39-40). Microscopic examination of the ore suggests that pyrrhotite was the earliest mineral to form, followed by and partly replaced by pyrite and arsenopyrite. Tetrahedrite is generally, closely associ- ated with the galena. Silver assays of ore from the Mayflower prop- erty suggests that the tetrahedrite contains perhaps 10 per cent silver (Thorpe, 1967). Ruby silver, probably pyrargyrite is reported to occur in the ore as well as magnetite which is associated with the arsenopyrite.

A total of 876 tonnes of ore was mined from the workings between 1907 to 1910, 1929, 1935, 1937, 1948 and 1949. Recovered from this ore were 4,136 grams of gold, 376,780 grams of silver, 25,785 kilograms of lead, 49,390 kilograms of zinc and 139 kilograms of cadmium.

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<b>Date Coded:</b>	1985/07/24	<b>Coded By:</b>	BC Geological Survey (BCGS)	<b>Field Check:</b>	N
<b>Date Revised:</b>	2020/08/04	<b>Revised By:</b>	Karl A. Flower (KAF)	<b>Field Check:</b>	N