Location/Identification

MINFILE Number: 082FSW145

Name(s): **BLUE BIRD (L.1053)**
COPPER QUEEN (L.1210), BLUEBIRD, ROSSLAND

Status: Past Producer
Mining Method Underground
Regions:
BCGS Map: 082F001
NTS Map: 082F04W
Latitude: 49 03 36 N
Longitude: 117 48 02 W
Elevation: 1177 metres
Location Accuracy: Within 500M

Mining Division: Trail Creek
Electoral District: Kootenay West
Resource District: Selkirk Natural Resource District

UTM Zone: 11 (NAD 83)
Northing: 5434434
Easting: 441516

Comments: Located 1.5 kilometres south of Rossland, on the west side of Gopher Creek.

Mineral Occurrence

Commodities: Silver, Lead, Zinc, Gold, Copper, Antimony

Minerals
Significant: Galena, Sphalerite, Arsenopyrite, Tetrahedrite, Pyrrhotite, Chalcopyrite, Boulangerite, Stibnite, Pyrite
Associated: Quartz, Carbonate
Mineralization Age: Unknown

Deposit
Character: Vein, Shear
Classification: Hydrothermal, Epigenetic, Industrial Min.
Type: I05: Polymetallic veins Ag-Pb-Zn+/-Au
Shape: Irregular **Modifier:** Faulted
Strike/Dip: 110/85S

Comments: Main mineralized vein.

Host Rock

Dominant Host Rock: Metasedimentary

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

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

Lithology: Siltstone, Hornfels Siltstone, Argillite, Hornfels, Monzonite, Biotite Hornblende Augite Monzonite

Comments: The Rossland monzonite was dated March 1991 (Andrew, K.P.E., personal communication, March 1991).

Geological Setting

Tectonic Belt: Omineca
Physiographic Area: Selkirk Mountains
Terrane: Quesnel, Kootenay

Metamorphic Type: Contact
Grade: Hornfels

Inventory

Ore Zone: DRILLHOLE
Category: Assay/analysis
Year: 1990
Report On:
NI 43-101: N

Sample Type: Drill Core

Commodity	Grade
Gold	11.3100 grams per tonne

Comments: From a 3.8-metre drill interval.

Reference: George Cross News Letter No.10, January 15, 1991.

Summary Production

		Metric		Imperial	
	Mined:	7,239	tonnes	7,979	tons
	Milled:	1,211	tonnes	1,334	tons
Recovery	Silver	3,910,823	grams	125,736	ounces
	Gold	12,857	grams	413	ounces
	Zinc	207,496	kilograms	457,450	pounds
	Lead	181,088	kilograms	399,231	pounds
	Copper	864	kilograms	1,905	pounds

Capsule Geology

The Blue Bird mine workings are hosted by the Lower Jurassic Rossland Group (Elise Formation) siltstone, argillite, hornfelsed siltstone and hornfels. The showings are located within the zone of thermal metamorphism associated with the Early Jurassic Rossland monzonite intrusion. The grey to black siltstone and argillite grades to hornfels. Ammonites of Early Jurassic age were reported to occur in siltstone on Ivanhoe Ridge.

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 Blue Bird zone consists of a series of lenses cut by numerous cross-faults and dykes. The ore bodies have a tendency to pinch and swell. As of 1988, underground development and drilling had tested the zone to a depth of 110 metres at which depth the structure and mineralization appear to be present. Limited drilling between the Blue Bird and Mayflower zone (082FSW146) to the east, 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.

Mineralization at the Blue Bird consists of quartz veins hosting pyrite, sphalerite, galena, arsenopyrite, stibnite, chalcopyrite, pyrrhotite, and locally, boulangerite. The stibnite occurs as radiating, white metallic needle-like crystals. The vein system is considered as part of the South Belt-type of mineralization (Bull- etin 74, page 39 to 40). The principal gangue mineral is quartz, however, carbonate veinlets also host pyrite, sphalerite, and galena mineralization. Tetrahedrite is generally very closely associated with the galena. The vein system strikes between 110 to 115 degrees, dipping steeply south. The veins are on strike with the main veins on the Mayflower claim and are considered as the westerly extension. Boulangerite appears to replace arsenopyrite, pyrite, and sphalerite in the ore from the Blue Bird mine. Small arsenopyrite crystals and plates of pyrrhotite are included in sphalerite and some have been inherited as inclusions in the boulangerite.

The main access to the vein is by adit No. 2 which was driven at an elevation of 844 metres just above and west of Gopher Creek. The vein is well mineralized 61 metres below this level and 244 metres west of the portal. The host rock is mainly hornfelsic siltstone which dips at moderate angles to the west and is cut by northerly trending dykes. Average grades based on production statistics are 3.87 grams per tonne gold, 653.8 grams per tonne silver, 3.5 per cent lead, 4.2 per cent zinc, and minor copper. Approximately 6503 tonnes of ore were mined from the Blue Bird zone between 1908 to 1914, 1935, 1951 to 1952, and 1972 to 1978. Recovery of commodities from this ore includes: 12,857 grams gold, 3,910,823 grams silver, 181,088 kilograms lead, 207,496 kilograms zinc, and 864 kilograms copper.

In 1990, drill hole 90-3 intersected 3.8 metres grading 11.31 grams per tonne gold (George Cross News Letter No.10, January 15, 1991).

Refer to the Le Roi deposit (082FSW093) for a summary of the Rossland mining camp.

Bibliography

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Placer Dome File

EMPR PFD 3217, 3218, 3219, 3220, 3221, 3222, 3223, 3224, 3225, 903366, 752388, 752389, 752390, 887228, 822470, 822474, 822475, 823127, 822572, 822573, 822931, 822934, 822935, 600422, 600423, 600424, 600425, 600427, 600428, 600429, 600430, 600431, 600433, 674434

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