



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

### Location/Identification

**MINFILE Number:** 082FSW046 **National Mineral Inventory Number:** 082F3 Au2

**Name(s):** **KOOTENAY BELLE**  
YOSEMITE (L.3654), POSADENA, RIO TINTO, SULTANA, YOSEMITE, YOSEMITE FRACTION, BATT  
FRACTION, WOLF, ARGYLE

**Status:** Past Producer **Mining Division:** Nelson

**Mining Method:** Underground **Electoral District:** Nelson-Creston

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

**BCGS Map:** 082F015

**NTS Map:** 082F03E **UTM Zone:** 11 (NAD 83)

**Latitude:** 49 08 23 N **Northing:** 5442996

**Longitude:** 117 07 39 W **Easting:** 490700

**Elevation:** 1288 metres

**Location Accuracy:** Within 500M

**Comments:** Location of 2 level adit.

### Mineral Occurrence

**Commodities:** Gold, Silver, Lead, Zinc, Tungsten, Silica

**Minerals** **Significant:** Pyrite, Quartz, Sphalerite, Galena, Scheelite, Wolframite  
**Associated:** Quartz  
**Alteration:** Limonite  
**Alteration Type:** Oxidation  
**Mineralization Age:** Unknown

**Deposit** **Character:** Vein, Disseminated  
**Classification:** Hydrothermal, Epigenetic, Industrial Min.  
**Type:** I01: Au-quartz veins, I02: Intrusion-related Au pyrrhotite veins  
**Dimension:** 40x0x0 metres  
**Comments:** The ore shoots are 20 to 40 metres long.

### Host Rock

**Dominant Host Rock:** Sedimentary

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Lower Cambrian	Undefined Group	Quartzite Range	-----
Unknown	-----	-----	Unnamed/Unknown Informal

Isotopic Age	Dating Method	Material Dated
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**Lithology:** Quartzite, Argillite, Argillaceous Quartzite, Quartz Porphyry

**Comments:** The Quartzite Range Formation is correlative with rocks of the Hamill Group.

### Geological Setting

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

**Terrane:** Ancestral North America

### Inventory

### Summary Production

		Metric	Imperial
	<b>Mined:</b>	305,610 tonnes	336,877 tons
	<b>Milled:</b>	252,310 tonnes	278,124 tons
<b>Recovery</b>	Gold	3,507,079 grams	112,755 ounces
	Silver	1,306,232 grams	41,996 ounces
	Zinc	59,335 kilograms	130,811 pounds
	Lead	52,517 kilograms	115,780 pounds

### Capsule Geology

This property, consisting of the Posadena, Rio Tinto, Sultana, Yosemite, Yosemite Fraction and Batt Fraction Crown-granted claims, is located on the south side of Sheep Creek about 0.4 of a kilometre above the junction with Waldie Creek.

The nucleus of the property was located in about 1899 but no work was reported until leasers began operations in about 1904; subsequent production was treated at a small customs mill. The Kootenay Belle and Motherlode (082FSW041) properties were bonded to J.L. Warner & associates in 1908; the Rogers Syndicate purchased the property in 1910. Intermittent small scale operations were carried on by the owners or by leasers until 1928.

Kootenay Belle Gold Mines Limited was incorporated in February 1933 to take over the property. A 50-ton mill was put into operation in November 1934 and operated until June 1943 when the mine was closed and the equipment removed.

Leasers R. Thompson & associates worked the property from 1944 through 1948. From 1961 through 1964 the property was leased from M. Arishenkoff of Shoreacres and intermittent shipments were made from the mine dumps, the material being in demand as a silica flux.

Around 1982, the property was acquired by Amore Resources Inc. from Crow Equities. They carried out geological mapping, sampling, geochemical surveys, re-established access to the mine and rebuilt surface roads.

During 2008 through 2016, Yellowstone Resources Ltd. examined the area as the Sheep Creek property. In late 2016, Margaux Resources Ltd. optioned the property and in 2017 examined the area.

The Sheep Creek Mining Camp consists of auriferous sulphide mineralization within a regional system of quartz veins controlled by faults. The camp hosts four distinct fault/fracture systems. All productive veins are associated with faults trending northeast and dipping southeast. The veins are particularly productive where they cross the axis of the two regional, northerly trending anticlines which dominate the geology of the camp. In addition there are a few northwest trending strike slip faults, north trending normal faults and flat faults, on which the hanging wall has been thrust westwards.

Ore occurs in shoots and is almost without exception confined to parts of fault zones in which one or both walls are quartzite. Other parts of the veins are either too narrow or low grade to be economic. The ore shoots are found at the intersection of northeast faults with quartzite stratigraphy, particularly the Upper Nugget and Upper Navada Members of the Lower Cambrian Quartzite Range Formation (correlative with rocks of the Hamill Group). The underlying Motherlode quartzite is, without obvious reason, almost completely barren of economic gold mineralization. The veins contain a quartz gangue containing pyrite with lesser amounts of pyrrhotite, chalcopyrite, galena, sphalerite and rare visible gold. Precious metal grades are exceedingly variable and zones of high grade appear to be distributed randomly. Such zones or ore shoots are rarely greater than a few tens of metres in size.

Throughout the camp, economic mineralization is found within a vertical range of less than 500 metres in any given vein and from north to south in the camp this vertical range occurs at progressively lower elevations. At the north end of the camp near Reno Mountain the economic zone lies at about 1675 to 2150 metres elevation and at the south end near Mount Waldie the zone is entirely below 915 metres above sea level. Above the economic zone the veins may occur but are generally too narrow and below the zone the veins usually persist but are commonly wider and of lower grade. Higher grades of greater than 150 grams per tonne are restricted generally to the top of the zone.

The Kootenay Belle deposit lies south of Sheep Creek within quartzites, argillites and argillaceous quartzites of the Navada and Nugget Members of the Quartzite Range Formation. The sediments strike 0 to 15 degrees with a dip of 50 to 75 degrees east and they lie on the west limb of the eastern anticline. Production from the deposit was from the #1 and #2 fissure which contained two ore shoots each. The fissures each dipped 64 to 76 degrees south and intersected along strike. The ore shoots were in the order of 20 to 40 metres long and about 30 centimetres wide. The veins contained quartz and crushed country rock mineralized with pyrite and some galena and sphalerite. A quartz-porphyry sill intrudes along the contact

of the Lower Cambrian Reno and Laib formations and is exposed at surface between the 2 and 3 level adits. Wolframite and scheelite are reported locally in the vein quartz. The quartz-porphyry intrusive extends the length of the Sheep Creek gold camp from Reno Mountain to Mount Waldie. Its influence on the gold mineralization is undetermined.

Between 1904 and 1967, the Kootenay Belle mine produced a total of 305,610 tonnes of ore. From this ore 3,507,079 grams of gold, 1,306,232 grams of silver, 52,517 kilograms of lead and 59,335 kilograms of zinc were recovered.

Locke Goldsmith drilled 8 holes (1115 metres) in 1988 and conducted a geochemical survey in 1992.

### ***Bibliography***

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600458, 600460, 753050, 753051, 896433

**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