Location/Identification

MINFILE Number: 093M 067
National Mineral Inventory Number: 093M4 W1
Name(s): **RED ROSE**
WOLFRAMITE (L. 3045), TUNGSTEN (L. 3044), TUNGSTEN (L. 3041-3043)

Status: Past Producer
Mining Method Underground
Regions: British Columbia
BCGS Map: 093M012
NTS Map: 093M04E
Latitude: 55 08 20 N
Longitude: 127 36 06 W
Elevation: 1678 metres
Location Accuracy: Within 500M
Mining Division: Omineca
Electoral District: Stikine
Resource District: Skeena Stikine Natural Resource District
UTM Zone: 09 (NAD 83)
Northing: 6111140
Easting: 589137
Comments: Level 600 shaft, on the northwest slope of the Rocher Deboule Range about 11 kilometres south of Hazelton.

Mineral Occurrence

Commodities: Tungsten, Copper, Gold, Silver, Molybdenum, Uranium

Minerals
Significant: Scheelite, Chalcopyrite, Molybdenite, Ferberite, Uraninite
Associated: Quartz, Feldspar, Biotite, Hornblende, Ankerite, Tourmaline, Apatite, Pyrrhotite
Mineralization Age: Unknown

Deposit
Character: Vein, Shear
Classification: Hydrothermal, Epigenetic
Type: I12: W veins
Shape: Regular
Modifier: Sheared
Dimension: 335x120x3 metres
Strike/Dip: 145/65W
Comments: Red Rose shear.

Host Rock

Dominant Host Rock: Plutonic

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Jurassic-Cretaceous	Bowser Lake	------	------
Upper Cretaceous	------	------	Bulkley Intrusions

Isotopic Age	Dating Method	Material Dated
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72 Ma	Potassium/Argon	Biotite

Lithology: Diorite Dike, Granodiorite, Diorite, Siltstone, Argillite
Comments: The Rocher Deboule stock age date is from Geological Survey of Canada Open File 720.

Geological Setting

Tectonic Belt: Intermontane
Physiographic Area: Hazelton Ranges
Terrane: Stikine, Plutonic Rocks

Metamorphic Type: Contact
Grade: Hornfels

Inventory

Ore Zone: RED ROSE **Year:** 1960

Category: Indicated **Report On:** Y

Quantity: 13,606 tonnes **NI 43-101:** N

Commodity	Grade
Copper	0.3000 per cent
Tungsten	1.1800 per cent

Comments: Probable reserves above the 335-metre level.

Reference: Bulletin 43, page 59.

Summary Production

		Metric		Imperial	
	Mined:	113,373	tonnes	124,972	tons
	Milled:	110,828	tonnes	122,166	tons
Recovery	Silver	26,806	grams	862	ounces
	Gold	19,299	grams	620	ounces
	Tungsten	977,451	kilograms	2,154,911	pounds
	Copper	26,452	kilograms	58,317	pounds

Capsule Geology

The Red Rose mine is located on the northwest slope of the Rocher Deboule Range, 11 kilometres south of Hazelton.

Siltstone and argillite of the Middle Jurassic to Lower Cretaceous Bowser Lake Group are intruded by the Late Cretaceous Rocher Deboule granodiorite stock of the Bulkley Plutonic Suite. The sediments are hornfelsed by emplacement of the stock and are intruded by northeast trending diorite dikes which are older than the stock. Bedding in the sediments strikes 015 degrees and dips 30 to 50 degrees west. The Chicago Creek fault, striking 010 degrees and dipping 70 degrees west, cuts all rocks and is a normal fault with a dip slip of 600 to 900 metres.

The Red Rose vein-occupied shear is a small, 145 degree striking, 65 degree west dipping fault, mainly hosted in a diorite dike. The vein is 1.2 to 2.8 metres wide, 60 to 120 metres along strike, and at least 335 metres downdip. It is pegmatitic and contains largely quartz with lesser amounts of feldspar, biotite, hornblende, ankerite, tourmaline, apatite, scheelite, ferberite, chalcopyrite, pyrrhotite, molybdenite and uraninite. Extensive lenses of chalcopyrite occur in the hanging wall shear. The biggest concentrations of radioactive material are erratically distributed with molybdenite in the wallrocks.

The vein has been developed and mined above the 1100-level and little is known below this level. Between 1942 and 1954, 103,424 tonnes produced 1,002,839 kilograms of tungsten. It is estimated that there are 13,600 tonnes of ore at a grade of approximately 1.9 per cent WO3 above the 1100-level (Bulletin 43). A 75-centimetre sample taken in 1914 assayed 28.8 grams per tonne gold, 110 grams per tonne silver and 3.9 per cent copper (Minister of Mines Annual Report 1914). A radioactive sample from the mine assayed 0.35 per cent equivalent uranium (Geological Survey of Canada Economic Geology 16).

Probable reserves above the 335-metre level are 13,606 tonnes grading 1.18 per cent tungsten (1.5 per cent WO3; conversion to tungsten used a factor of 1.2611).

Work History

In 1912, showings containing encouraging assays in gold, silver and copper were discovered on the south side of the ridge by C. Peterson and C. Ek. The showings were staked as the Red Rose group, comprising the Red Rose, Yellowhammer, Prosperity, Juniper, and Summit claims. In the fall of 1914, the property was acquired under option by a syndicate headed by T.J. Vaughan-Rhys and some activity continued until the fall of 1916. Development work was done in four adits totalling over 245 metres of drifts and crosscuts between elevations of 1570 and 1736 metres, including a lower crosscut which was driven 137 metres feet without reaching the vein.

In about 1923, tungsten-bearing minerals were discovered in a quartz vein on the ridge about 213 metres above the uppermost gold-silver workings. The property was under option in 1923 to W.S. Sargent of Hazelton, however, no further activity was reported until 1939 when The Consolidated Mining and Smelting Company of Canada, Limited acquired an option to purchase the property from Mrs. B. Sargent of New Hazelton. The property comprised 15 claims; Tungsten 1-8, Wolframite Fr., Scheelite, Gordie, Dee, Jay, Tat and Eta Frs. (Crown grant Lots 3041-3045, 6250-6259). The company carried out diamond drilling in 1940 and underground development began in the 300-level adit in June 1941. A 25 ton-per-day mill was installed, and connected to the mine by 1.6 kilometres of aerial tramway. Milling operations were carried out from early in 1942 until October 1943

when the mine closed.

Western Uranium Cobalt Mines Limited leased the property from Consolidated Mining & Smelting in 1951; the company name was changed in 1952 to Western Tungsten Copper Mines Limited. Milling began in December 1951 and continued until December 15, 1954 when the mine closed. Mill capacity was increased to 100 tons-per-day in 1952 and to 140 tons-per-day in 1953. Development work on the Tungsten showings to December 1954 totalled approximately 3657 metres of crosscuts, drifts, subdrifts and raises on twelve levels and sublevels from four adits, the 800 (1725 metres elevation), 600 (1804 metres elevation, 300 (1870 metres elevation) and 200 (1900 metres elevation), and an inclined shaft from 600 to 1100 levels.

Reserves at time of closing were not known in detail. The 1100-level was not mined. The vein on the 1000-level was about half-mined and on the 800 and 900-levels about three-quarters mined. Above this, there was thought to be very little left. There is probably about 4600 tons of ore of average grade above the 1100-level (Bulletin 43, page 59). Grades are estimated at 1.5 per cent tungstic oxide (WO3) and 0.3 per cent copper (Bulletin 43, page 59).

Farwest Tungsten Copper Mines Limited was incorporated in August 1955 to acquire all the assets of Western Tungsten. All the machinery and equipment on the property was subsequently sold.

In 2006, Crucible Resources Ltd. completed an option on the Brunswick (093M 066) and Jupiter (093M 065) from D. Warkentin. Two days were spent on the property in 2006. The first day consisted of a visit to the Slater (#532105) claim, while the second day was spent exploring along Red Rose Creek, including the Red Rose tailings and the Brunswick prospect. This work covered parts of both the Armagosa (093M 068) and Brunswick claims. In these investigations, some historical workings were identified, including the Brunswick adits, and the Red Rose tailings. In total, four rock or chip samples were collected. In addition, one tailings sample was collected along Red Rose Creek and one stream sediment and three soil geochemical samples were collected in and around Slater Creek.

In 2015, operators Kyler Hardy, Tim Johnson and Crucible Resources Ltd. conducted a limited ground exploration program of prospecting, rock, soil and stream sediment geochemical sampling in the Red Rose Creek area, Slater Creek area and Sultana/Boulder creeks areas. A total of eight rock samples, twelve soil and silt geochemical samples, and three tailings samples were collected

In 2016, operators Kyler Hardy, Tim Johnson and Crucible Resources Ltd. conducted prospecting and rock sampling in the Brunswick mine area as well as in-fill soil and talus samples to the north and east of the old Sultana workings, and the Red Rose Creek area.

In February of 2017, the owners of the Porphyry Creek property agreed to option the claims to Lansdowne Holdings, a private company seeking a Canadian Securities Exchange listing. The work completed in the same year consisted of prospecting and soil sampling in the Sultana area and the Ridge Target in the Red Rose area of the property. The purpose of the work was to systematically follow up on geophysical anomalies identified by an airborne geophysical survey completed in July of 2010.

In 2018, Lansdown Holdings completed a minor program of prospecting and soil and rock sampling on the area.

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Date Coded:	1985/07/24	**Coded By:**	BC Geological Survey (BCGS)	**Field Check:**	N
Date Revised:	2020/08/21	**Revised By:**	Karl A. Flower (KAF)	**Field Check:**	N