



Location/Identification

MINFILE Number: 104N 069 **National Mineral Inventory Number:** 104N11 Sn1, Cu1

Name(s): SILVER DIAMOND
BUB, HEY HAY

Status: Showing **Mining Division:** Atlin

Regions: British Columbia **Electoral District:** Stikine

BCGS Map: 104N063 **Resource District:** Skeena Stikine Natural Resource District

NTS Map: 104N11W **UTM Zone:** 08 (NAD 83)

Latitude: 59 39 59 N **Northing:** 6615289

Longitude: 133 26 30 W **Easting:** 587789

Elevation: 1511 metres

Location Accuracy: Within 500M

Comments: Skarn-type zones of massive pyrite and pyrrhotite, located on the west side of Boulder Creek about 4 kilometres north of the west end of Atlin Lake, about 19 kilometres northeast of the community of Atlin (Assessment Report 2672).

Mineral Occurrence

Commodities: Tin, Tungsten, Silver, Zinc, Copper, Lead, Molybdenum

Minerals **Significant:** Cassiterite, Scheelite, Galena, Sphalerite, Chalcopyrite, Tetrahedrite, Molybdenite

Significant Comments: Occurrence consists of massive lenses of pyrite and pyrrhotite.

Associated: Pyrite, Pyrrhotite, Fluorite

Alteration: Talc, Actinolite

Alteration Comments: Talc-altered ultramafic rocks.

Alteration Type: Serpentin'zn

Mineralization Age: Unknown

Deposit **Character:** Massive, Disseminated, Podiform

Classification: Skarn

Type: K02: Pb-Zn skarn, K05: W skarn, K07: Mo skarn, K06: Sn skarn

Comments: Irregular skarn zone.

Host Rock

Dominant Host Rock: Metaplutonic

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Upper Paleozoic	Cache Creek Complex	Nakina	-----
Upper Paleozoic	-----	-----	Ultramafic Intrusions
Upper Cretaceous	-----	-----	Surprise Lake Batholith

Isotopic Age	Dating Method	Material Dated
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Lithology: Peridotite, Greenstone, Chert, Limestone, Quartz Monzonite, Hornfels, Skarn

Comments: Hosted in Upper Mississippian to Permian ultramafic rocks (Cache Creek Complex) very near the contact with the Surprise Lake batholith.

Geological Setting

Tectonic Belt: Intermontane **Physiographic Area:** Teslin Plateau

Terrane: Plutonic Rocks, Cache Creek

Metamorphic Type: Contact

Grade: Hornfels

Inventory

Ore Zone: SAMPLE

Year: 2020

Category: Assay/analysis

Report On: N

NI 43-101: N

Sample Type: Rock

Commodity	Grade
Silver	12.5 grams per tonne
Copper	0.086 per cent
Molybdenum	0.002 per cent
Lead	0.029 per cent
Tin	0.016 per cent
Tungsten	0.02 per cent
Zinc	0.032 per cent

Comments: Rock sample 1893476

Reference: Assessment Report 39374.

Ore Zone: SAMPLE

Year: 1962

Category: Assay/analysis

Report On: N

NI 43-101: N

Sample Type: Rock

Commodity	Grade
Silver	390.0000 grams per tonne
Copper	0.3500 per cent
Tin	2.5000 per cent
Tungsten	1.0000 per cent
Zinc	5.3000 per cent

Comments: Sample taken by Mr. L.G. White; affiliation unknown.

Reference: Assessment Report 2672.

Capsule Geology

The Silver Diamond occurrence is located on the west side of Boulder Creek about 4 kilometres north of the west end of Atlin Lake. It is about 19 kilometres northeast of the community of Atlin.

The showing is hosted primarily in variably talc-altered peridotite. These rocks are Upper Mississippian to Permian in age and may be coeval with the mafic volcanic rocks (greenstone) of the Nakina Formation of the Lower Cache Creek Complex. The volcanic rocks, which outcrop to the northwest of the occurrence, contain narrow, interbedded bodies of chert and limestone. The Late Cretaceous Surprise Lake batholith (Surprise Lake Plutonic Suite) outcrops just to the east of the occurrence and is composed of varitextured quartz monzonites often referred to as alaskite.

Mineralization consists of skarn-type zones of massive pyrite and pyrrhotite with lesser amounts of cassiterite, scheelite, fluorite, galena, sphalerite, chalcopyrite and tetrahedrite. A minor zone of mineralized with molybdenite occurs just northeast of the main zones. Assays done from 1962 to 1964 yielded values up to 2.5 per cent tin, 1.0 per cent tungsten, 390 grams per tonne silver, 0.35 per cent copper, and 5.3 per cent zinc (Assessment Report 2672).

Disseminated pyrrhotite, chalcopyrite and pyrite also occur in the volcanics on strike with a quartz vein crosscutting the andesite adjacent to a limestone bed. The volcanics have been hornfelsed and altered to actinolite adjacent to the quartz vein (Assessment Report 16820).

In 1903, tungsten and tin occurrences were discovered in the area by placer miners and this occurrence was first worked in 1963 and 1964. Cursory

exploration programs followed in 1970, and 1979 to 1980.

In 2002, Stirrup Creek Gold Ltd. conducted exploration on the Black Diamond (104N 053) and Silver Diamond areas. A total of 28 rock chip, 142 soil and 7 silt samples were taken in addition to geological mapping and 4.1 kilometres of ground magnetometer surveying.

Between July 2007 and March 2008, Adanac Molybdenum Corporation conducted a major diamond drill-program on the Adanac/Ruby Creek "porphyry molybdenum" property, near Atlin (Assessment Report 30306).

In 2016, two holes were drilled by Global Drilling Solutions on behalf of Zinex Mining Corporation on the Ruby Creek Property, targeting native gold (Assessment Report 36658). In 2017, Global conducted geochemical sampling, drilling and ground geophysics on this property (Assessment Report 37171). In 2018 Global carried out further drilling, prospection, augering and geochemical sampling on this property. It's mentioned that the Ruby Creek property remains of high interest for not only gold/molybdenum but also for silver and copper based on the exploration work during 2017/2018 (Assessment Report 38256).

In 2020, Stuhini Exploration conducted mapping, prospection, ground geophysics and geochemical sampling on the Ruby Creek property. Rock sample 1893476 returned 2.33 grams per tonne gold, 0.002 per cent molybdenum, 0.086 per cent copper, 0.029 per cent lead, 0.032 per cent zinc, 12.5 grams per tonne silver, greater than 0.02 per cent tungsten and 0.016 per cent tin (Assessment Report 39374).

In 2021, an airborne SkyTEM survey was conducted by Stuhini on this property, which revealed a number of regional trends across the property (Assessment Report 39553).

Bibliography

EMPR AR 1964-8

EMPR ASS RPT *2672, 16820, *26895, 30306, 36658, 37171, 38256, *39374, 39553

EMPR BULL 94

EMPR EXPL 1979-302

EMPR FIELDWORK *1991, p. 241

EMPR GEM 1969-36; 1970-30

EMPR MAP 52 (10 pages of notes)

EMPR OF 1989-15; 1989-24; 1991-17; 1992-16; 1996-11; 1998-8-M, pp. 1-74

EMPR PFD 20067, 600038, 600039, 680805, 680806, 680807, 680809, 680810, 680811, 680812, 680813, 680814, 680815, 680816, 680817, 680818, 680819, 680820, 680821

EMR MP CORPFILE (Coin Canyon Mine)

GSC MEM 307

GSC OF 864

GSC P 74-47

Date Coded: 1985/07/24

Coded By: BC Geological Survey (BCGS)

Field Check: N

Date Revised: 2021/10/19

Revised By: George Owsiacki (GO)

Field Check: N