



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

Location/Identification

MINFILE Number: 082FNW212 **National Mineral Inventory Number:** 082F14 Au3

Name(s): L.H. (L.5738)
L.H. GROUP, C.B. (L.5740), BABY RUTH (L.2229), CAMDEN (L.5739), ST. JOE (L.6908), SUMMIT (L.6909),
BASIN FR. (L.6910), HARLEM (L.6911), LH, REX FR. (L.2706), CONGO NO. 2 (L.5734), BRISTOL (L.5735),
COMMANDER (L.5736), RIDGE, ICE TUNNEL

Status: Past Producer **Mining Division:** Slocan

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

Regions: British Columbia **Resource District:** Selkirk Natural Resource District

BCGS Map: 082F084

NTS Map: 082F14W **UTM Zone:** 11 (NAD 83)

Latitude: 49 53 33 N **Northing:** 5526734

Longitude: 117 20 26 W **Easting:** 475539

Elevation: 0 metres

Location Accuracy: Within 500M

Comments: The L.H. occurrence (Paper 1989-5, Map 3).

Mineral Occurrence

Commodities: Gold, Silver, Copper, Arsenic

Minerals **Significant:** Arsenopyrite, Gold, Pyrite, Pyrrhotite, Chalcopyrite, Arsenic

Significant Comments: Higher gold values are associated with silicification and arsenopyrite.

Associated: Quartz, Calcite

Associated Comments: Calcite is minor.

Alteration: Silica, Sericite

Alteration Type: Silicific'n, Sericitic

Mineralization Age: Unknown

Deposit **Character:** Vein, Shear

Classification: Hydrothermal, Epigenetic, Mesothermal

Type: L01: Subvolcanic Cu-Ag-Au (As-Sb), I01: Au-quartz veins

Shape: Tabular

Dimension: 91x6x0 metres **Strike/Dip:** 270/55N

Comments: Most production was from the No. 2 adit where the fissure zone is 6.1 to 13.7 metres wide over about 91 metres length. The fissure zone strikes 270 degrees and dips 55 degrees to the north.

Host Rock

Dominant Host Rock: Metasedimentary

Stratigraphic Age	Group	Formation	Igneous/Metamorphic/Other
Lower Jurassic	Rossland	Elise	-----
Middle Jurassic	-----	-----	Nelson Intrusions
Middle Jurassic	-----	-----	Unnamed/Unknown Informal

Isotopic Age	Dating Method	Material Dated
-----	-----	-----
169 +/- 3 Ma	Zircon	Zircon
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Lithology: Quartzite, Aplite Dike, Arenite, Augite Porphyry, Greenstone, Argillite, Quartz Latite Porphyry, Feldspar Porphyry, Biotite Hornblende Diorite, Granite

Comments: Zircon age date (Carr et al., 1987).

Geological Setting

Tectonic Belt: Omineca

Physiographic Area: Selkirk Mountains

Terrane: Quesnel

Metamorphic Type: Regional, Contact

Relationship: Pre-mineralization, Syn-mineralization

Grade: Greenschist, Hornfels

Inventory

Ore Zone: UPPER

Year: 2015

Category: Assay/analysis

Report On: N

NI 43-101: N

Sample Type: Drill Core

Commodity	Grade
Gold	175.00 grams per tonne

Comments: Diamond drilling yielded intercepts including 1.29 and 0.71 grams per tonne gold over 21.00 and 19.00 metres, respectively, in hole LH15-30; 13.58 grams per tonne gold over 16.90 metres, including 175.00 grams per tonne gold over 1.00 metre in hole LH15-31; 3.81 grams per tonne gold over 57.37 metres in hole LH15-32; 10.20 grams per tonne gold over 5.47 metres in hole LH15-36; 7.08 grams per tonne gold over 9.34 metres in hole L15-37; 20.66 grams per tonne gold over 11.00 metres, including 132.00 grams per tonne gold over 1.00 metre in hole L15-38 and 5.92 grams per tonne gold over 36.00 metres in hole LH15-40

Reference: Walker, R.T. (2016-03-09): NI 43-101 Technical Report - LH Property

Ore Zone: DRILLHOLE

Year: 2014

Category: Assay/analysis

Report On: N

NI 43-101: N

Sample Type: Drill Core

Commodity	Grade
Gold	11.40 grams per tonne

Comments: diamond drill holes were collard at two separate location on the west side of Fingland Creek to test previously identified magnetic anomalies. Diamond drill yielded intercepts including 0.30 gram per tonne gold over 90.53 metres, including 11.40 grams per tonne gold over 1.00 metre in hole LH-14-26 and 0.28 gram per tonne gold over 113.00 metres, including 3.94 grams per tonne gold over 1.00 metre in hole LH-14-27

Reference: Walker, R.T. (2016-03-09): NI 43-101 Technical Report - LH Property

Ore Zone: RIDGE

Year: 2012

Category: Assay/analysis

Report On: N

NI 43-101: N

Sample Type: Drill Core

Commodity	Grade
Gold	14.70 grams per tonne

Comments: over 1.00 metre and 0.44 gram per tonne gold over 39.00 metres in hole LH-12-25

Reference: Walker, R.T. (2016-03-09): NI 43-101 Technical Report - LH Property

Ore Zone: L.H. **Year:** 1988
Category: Indicated **Report On:** Y
Quantity: 299,375 tonnes **NI 43-101:** N

Commodity	Grade
Gold	17.1400 grams per tonne

Comments:
Reference: GCNL June 29, 1988.

Ore Zone: TUNNEL **Year:** 1981
Category: Assay/analysis **Report On:** N
NI 43-101: N

Sample Type: Chip

Commodity	Grade
Gold	20.74 grams per tonne

Comments: from a 1.0 metre shear (Sample B) on the Ice Tunnel zone
Reference: Walker, R.T. (2016-03-09): NI 43-101 Technical Report - LH Property

Ore Zone: VEIN **Year:** 1981
Category: Assay/analysis **Report On:** N
NI 43-101: N

Sample Type: Rock

Commodity	Grade
Gold	11.14 grams per tonne

Comments: samples (A) from two 1.0 to 1.5-metre wide quartz veins with pyrrhotite and arsenopyrite assayed 11.14 and 7.27 grams per tonne gold at two locations 50 metres apart
Reference: Walker, R.T. (2016-03-09): NI 43-101 Technical Report - LH Property

Ore Zone: L.H. **Year:** 1945
Category: Unclassified **Report On:** Y
Quantity: 54,430 tonnes **NI 43-101:** N

Commodity	Grade
Gold	8.5700 grams per tonne

Comments: Internal reference is Consolidated Quebec Gold Mining and Metals Corporation Annual Report; January 31, 1946.
Reference: National Mineral Inventory 082F14 Au3.

Summary Production

		Metric	Imperial
Mined:		196 tonnes	216 tons
Milled:		0 tonnes	0 tons
Recovery	Gold	3,452 grams	111 ounces
	Silver	1,928 grams	62 ounces

Capsule Geology

The L.H. occurrence is located at 1645 metres elevation on Fingland (Vevey of L.H.) Creek, on the east side of Slocan Lake. Silverton, British Columbia lies 6.25 kilometres to the north.

The L.H. occurrence is covered by the L.H. claim group consisting of seven Crown-granted claims and fractions including the Baby Ruth (Lot 2229), L.H. (Lot 5738), Camden (Lot 5739), C.B. (Lot 5740), St. Joe (Lot 6908), Summit (Lot 6909), Basin Fr. (Lot 6910) and Harlem (Lot 6911).

The occurrence has a long history of ownership and development but little production. The claim was first located in 1895 by R.G. McConnell. In 1896, the L.H. claim was owned by J.M. Brenedum and Associates. In 1899, the Baby Ruth claim was Crown granted to E.J. Kendall and A.R. Fingland. The Camden and C.B. claims were Crown granted to Fingland and associates in 1902. Considerable development work was carried out from 1903 to 1904 by Fingland and Brand. The L.H. claim was Crown granted in 1905 to Fingland and Brand. Subsequent Crown granting was given to the St. Joe, Summit, Basin Fraction and Harlem claims. In 1911, British Columbia Copper Company acquired an option on the property but after a careful and systematic sampling program was carried out the option, was allowed to lapse. The owners resumed development work until 1925. Pacific Mines, Petroleum and Development Company Limited carried out some work on the property in 1936. The property was leased to A.H.W. Crossley and associates in 1938. A short bucket tramline was built from the No. 2 adit to the road and a shipment of 196 tonnes of ore was shipped in the following year, under the newly incorporated Fingland Mine Limited. Consolidated Quebec Gold Mining and Metals Corporation optioned the property in 1945. The subsidiary, Kenville Gold Mines Limited, carried out 610 metres of diamond drilling from the No. 3 level to define further mineralization. A 1946 Annual Report by Consolidated Quebec reports a resource of 54,430 tonnes of 8.57 grams per tonne gold. Anderado Resources Inc. acquired the property in 1980; their name was changed to Andaurex Resources Inc. Induced polarization and geochemical surveys and geological mapping were carried out. Additional geological mapping, geochemical and geophysical surveys and sampling were carried out under an option to Hudson Bay Oil and Gas Company Limited in 1981. Noranda conducted geophysics and geochemical surveys and diamond drilling between 1985 and 1987. Goldpac Investments Ltd. drilled the property in 1988. The George Cross Newsletter (June 29, 1988) reports an indicated resource of 299,375 tonnes of 17.14 grams per tonne gold (MR 223). Goldpac changed their name to Brimstone Gold Corp. in May 1994. Andaurex held the property in 1992, when their name changed to Andaurex Capital Resources Inc.

Mine workings include three adits totalling 518 metres. Most work was carried out on the Nos. 2 and 3 levels, which are 27 vertical metres apart and connected by a raise.

The L.H. occurrence is located within a roof pendant of Lower Jurassic Rossland Group metavolcanics and Early Jurassic subvolcanic equivalents. Lithologies comprising the Rossland Group at the L.H. occurrence include augite porphyry, greenstone, quartzite, arenite, sandstone and argillite. These rocks have been tentatively correlated with the Elise Formation and are strongly contact metamorphosed at the L.H. occurrence. Subvolcanic equivalents include quartz latite porphyry and feldspar porphyry. Altered aplite dikes crosscut Rossland Group rocks at the L.H. occurrence; quartz, calcite and sericite form the major constituents. These hostrocks are enclosed by medium grained biotite hornblende diorite and fine-grained granite of the Middle Jurassic Nelson batholith. Two major fracture orientations are present in hostrocks. The first follows a prominent joint plane, striking 075 to 080 degrees and dipping 50 degrees to vertical. The other strikes 025 degrees and dips 65 degrees southeast.

Mineralization follows a zone of fracturing and faulting. The zone width is 6.1 to 13.7 metres, striking nearly west and dipping north at about 55 degrees. Ore consists of native gold, arsenopyrite, pyrite and pyrrhotite with minor chalcopyrite and native arsenic. A maximum width of 13.7 metres mineralization was intersected on the No. 2 level, with the best grades on the centre and western-half of the drift over 91 metres length. A narrow sericite-altered dike occupies the fissure for most of its length on the No. 2 level. The No. 1 level parallels the hangingwall of the ore zone. Hostrocks are silicified and the limits of mineralization within this zone are poorly defined. Disseminated mineralization is hosted in quartz lens-filling fractures 30 to 60 centimetres wide. Quartz also forms many small stringers or more commonly impregnates the wallrocks and varying proportions of ore mineralization. Higher grades are generally associated with more intense silicification and arsenopyrite. Minor calcite has also been reported.

From the 196 tonnes of ore mined in 1939, 1928 grams silver and 3452 grams gold were recovered.

The Ridge Zone is located approximately 600 metres south of the L.H. workings on the St. Joe (L.6908) Crown grant and comprises an area of variable, strong to extensive alteration of host strata along the ridge comprising the west margin of the upper Fingland Creek basin. Mapping of the Ridge Zone identified a series of alteration zones developed within pyroclastic host rocks correlated to the Rossland Group volcanics. Alteration intensity gradually increases from relatively unaltered tuffs and agglomerates present on the east side of the ridge westward up and beyond the ridge crest to the west. Alteration is distinguished by an increase in biotite, chlorite and hornblende alteration, with local potassic alteration and sericitization. On the west side of the ridge, strongly to extensively altered volcanics are characterized by zones of well-developed biotite hornfels and pyroxene and epidote calc-silicates (chlorite schists). In addition, the steep, resistant, approximately north-south trending ridge is cored by pervasively silicified volcanics over a wide central zone. Accompanying the zone of pervasive silicification is elevated sulphide content associated with anomalous gold values. Smaller discrete silicified zones occur locally. Subsequent drilling confirmed a second style of gold mineralization occurring as a stockwork zone of silicified, calc-silicate altered and hornfelsed volcanics. This mineralization is characterized predominantly by pyrrhotite with highly subordinate arsenopyrite \pm pyrite \pm minor chalcopyrite.

The Ice Tunnel or Tunnel zone consists of a small set of underground workings immediately west of Fingland Creek and slightly above the road,

occurring at the same elevation as the Level 3 workings of the LH Underground Workings. Mineralization consists of structurally controlled, mesothermal quartz veins traced over 70 metres along the length of the veins, varying from 0.6 to 7 metres in width. Native gold mineralization appears to be associated with arsenopyrite, pyrite, pyrrhotite and chalcopyrite.

In 1981, samples from the Ice Tunnel zone are reported to have yielded up to 20.74 grams per tonne gold from a 1.0 metre shear (Sample B), while samples (A) from two 1.0 to 1.5-metre wide quartz veins with pyrrhotite and arsenopyrite assayed 11.14 and 7.27 grams per tonne gold at two locations 50 metres apart (Walker, R.T. (2016-03-09): NI 43-101 Technical Report - LH Property).

The LH property was acquired by International Bethlehem in 2003.

In 2008, rock sampling was completed in the LH mine area of the North Silver claim, from which assays up to 76 grams per tonne gold, 28 per cent arsenic and 2.5 grams per tonne silver were recovered (Assessment Report 31364).

In 2012, diamond drilling on the Ridge zone yielded intercepts including 14.70 grams per tonne gold over 1.00 metre and 0.44 gram per tonne gold over 39.00 metres in hole LH-12-25 (Walker, R.T. (2016-03-09): NI 43-101 Technical Report - LH Property).

In 2014, Magnum Goldcorp Inc. completed a program of geochemical database compilation, limited road rehabilitation, four diamond drill holes, totalling 707 metres, and ground self potential, induced polarization and magnetometer surveys. The diamond drill holes were collared at two separate locations on the west side of Fingland Creek to test previously identified magnetic anomalies. Diamond drill yielded intercepts including 0.30 gram per tonne gold over 90.53 metres, including 11.40 grams per tonne gold over 1.00 metre in hole LH-14-26 and 0.28 gram per tonne gold over 113.00 metres, including 3.94 grams per tonne gold over 1.00 metre in hole LH-14-27 (Walker, R.T. (2016-03-09): NI 43-101 Technical Report - LH Property).

In 2015, Magnum Goldcorp Inc. completed a program of rock sampling and 11 diamond drill holes, totalling 672.50 metres, which were collared on a small cliff immediately above the portal for the Level 1 (uppermost) workings. Diamond drilling yielded intercepts including 1.29 and 0.71 grams per tonne gold over 21.00 and 19.00 metres, respectively, in hole LH15-30; 13.58 grams per tonne gold over 16.90 metres, including 175.00 grams per tonne gold over 1.00 metre in hole LH15-31; 3.81 grams per tonne gold over 57.37 metres in hole LH15-32; 10.20 grams per tonne gold over 5.47 metres in hole LH15-36; 7.08 grams per tonne gold over 9.34 metres in hole LH15-37; 20.66 grams per tonne gold over 11.00 metres, including 132.00 grams per tonne gold over 1.00 metre in hole LH15-38 and 5.92 grams per tonne gold over 36.00 metres in hole LH15-40 (Walker, R.T. (2016-03-09): NI 43-101 Technical Report - LH Property).

Bibliography

EMPR AR 1896-69; 1899-688,842; 1902-149,297; 1903-137; 1904-173,202;

1905-252; 1911-176; 1913-125,142; *1915-122,127-129; 1917-158;

1925-246; 1933-206; 1935-E31; 1936-E49; 1939-38,79; 1945-105

EMPR ASS RPT 14138, *15747, 16665, *16738, *31364

EMPR BC METAL MM01269

EMPR EXPL 1985-A37; 1986-A59

EMPR FIELDWORK 1987, pp. 31-48,535-541; 1989, pp. 251-255, 1990, pp.

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EMPR OF 1988-11; 1990-18

EMPR P *1989-5

EMPR PF (Starr, C.C. (1925): Report of Examination of L.H. Mine,

3 p.; Starr, C.C. (1930): Report on the L.H. Mine, 4 p.; Details

of the L.H. Mine (Map - Scale 1"=30'), 1930; Plan and Projection

of the L.H. Mine (Scale - 1"=30'))

EMR MP CORPFILE (The British Columbia Copper Company, Limited (AR

1913); Consolidated Quebec Gold Mining & Metals Corporation;

Andaurex Resources Inc.)

EMR MR 223 B.C. 39

GSC ANN RPT 1897A, pp. 10-26

GSC EC GEOL 4, p. 75 (1927)

GSC MAP 272A

GSC MEM 173, Map 272A; *184, pp. 66,67,68; 308, p. 171

GSC SUM RPT 1917B, p. 33

CMH 1989-90, p. 42

GCNL #70, 1981; #14, 1982; #109, 1985; #239, 1986; #101, 1987;

June 29, 1988

N MINER Nov.20, 1980; Jan.28, 1982

PR REL Andaurex Industries Inc., Mar.19, 2003
PR REL International Bethlehem, Feb.4, 2013
Placer Dome File
*Walker, R.T. (2016-03-09): NI 43-101 Technical Report - LH Property

EMPR PFD 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 4605, 903033, 903197, 903422, 2292, 750142, 750143, 884849, 886760, 823768, 822951, 861929, 861959, 521189

Date Coded:	1985/07/24	Coded By:	BC Geological Survey (BCGS)	Field Check:	N
Date Revised:	2020/08/22	Revised By:	Karl A. Flower (KAF)	Field Check:	N