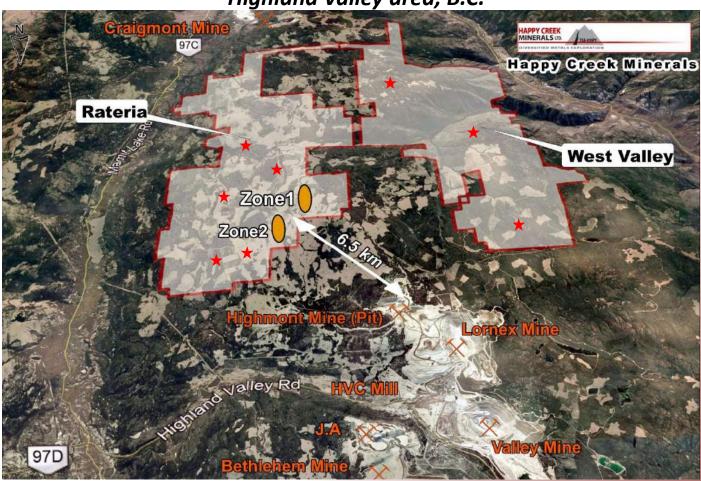




# The Rateria and West Valley Property

Exploring for copper in Canada's best porphyry copper district Highland Valley area, B.C.



**Facing South** 



#### **CAUTIONARY STATEMENT**

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Under NI43-101 (2001), the reader is cautioned that results or information from an adjacent property does not infer or indicate similar results or information will or does occur on the subject property. Historical information from the subject or adjacent property cannot not be relied upon as the Company's QP, a term which was created and defined under NI-43-101 has not prepared nor verified the historical information.





#### MANAGEMENT

#### David Blann, P.Eng, President, CEO, Director

Mr. Blann has engaged in precious and base metal exploration, development and production stage projects for 30 years with a background in mining engineering technology and geological engineering. He has experience as Director and VP Exploration for several Jr. public companies, and is the founder of the Company in 2005.

#### Richard Lee, CMA, Chief Financial Officer

Mr. Lee has spent the past 30 years in public corporate accounting practice with and for publicly listed TSX companies, and has a wealth of financial, accounting and business experience. Mr. Lee has been involved with numerous startup companies in Canada and those registered with the SEC in the United States.

#### Walter Segsworth, Director, Chair

Walter Segsworth has over 40 years of experience in mining in Canada and overseas and has served as a senior officer of several mining companies including Westmin Resources, where he was President and CEO, and Homestake Mining Company, where he was President and COO. Mr. Segsworth is currently lead independent director of Pan American Silver and a director of Sabina Gold & Silver Corporation. Mr. Segsworth is past Chairman of both the Mining Associations of British Columbia (BC) and Canada and was named B.C.'s Mining Person of the year in 1996.

#### Rodger Gray, Director

Mr. Gray has over 20 years of experience as a stockbroker and officer of an IDA member firm. Mr. Gray is currently with Wellington-Altus Securities in Toronto, and was until recently, the President and Chief Executive Officer of Toll Cross Securities Inc., a Toronto-based, full-service broker dealer specializing in the junior resource sector. Mr. Gray has previously acted as a Director and Vice-President investment banking, institutional equities, with First Associates Investments Inc. and prior thereto as President of St. James Securities Inc. Mr. Gray is a graduate of Laurentian University.

#### Paul Berndt, Director

Mr. Berndt is a resource development executive with extensive experience in taking projects to production, in particular, tungsten projects. He has a background in mineral process engineering and over 45 years' experience. His expertise includes public company management roles, project development and process engineering as well as stakeholder relations. He has managed many small to medium-sized projects from conception to production, with attention to safety and sound environmental practices.

#### Michael Cathro, P. Geo., Director

Mr. Cathro's career includes exploration with major and junior resource companies and 17 years with the B.C. Ministry of Energy and Mines in technical and management roles. Mr. Cathro has served as VP Exploration or Director of several Jr. resource companies.

#### Sassan Liaghat, PhD, Project Manager/Senior Geologist

With a background in technical research, MDRU at UBC, Mr. Liaghat has experience as an exploration geologist with several companies including NovaGold Resources and the HDI Group. Mr. Liaghat performs project field management roles and manages the Company's geological database and GIS systems.

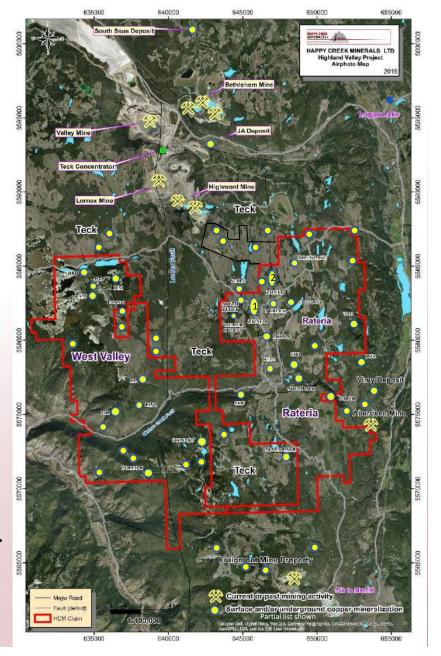


### **LOCATION**



### 100% Owned Rateria & West Valley Property

- In Canada's best porphyry copper district
- Adjoins the Highland Valley Copper mine property
  - Canada's largest copper mine- 1% of global copper
  - Approximately 140,000 tonnes/day mill throughput
  - 50 years of continuous operation
- Past-producing Craigmont copper-iron skarn mine to the south.
- Excellent infrastructure, year-round exploration
- First to assemble this 244 sq km land package.
- Low cost exploration in a highly productive geological setting.





### **HISTORY**

### 1970 Highland Valley Mineral Claims

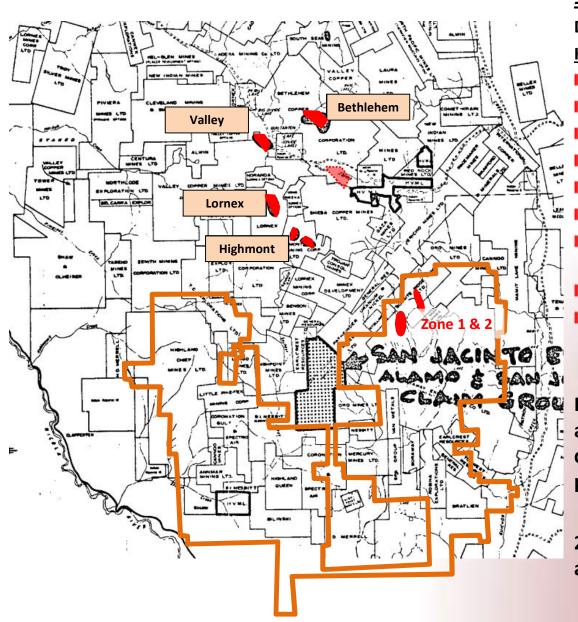
Discovery time of the current mines

Historical exploration was affected by:

- Multiple claim owners
- Fragmented claim shapes
- Generally small claim size
- Extensive glacial till cover (few outcrops)
- Densely tree-covered (no GPS location)
- More limited/difficult road access
- Percussion holes very shallow- many did not get through glacial till.
- Soil geochemistry poor in thick glacial till
- Older induced polarization geophysics
  - low-power, less sensitive instruments
  - Poor penetration in thick glacial till
  - Low sulphide system produces weak anomalies

In 2001, the copper price dropped to around \$0.60/lb and many claims were dropped- several claims re-staked by prospectors.

2004-2005, Happy Creek (private) begins acquiring property- now 244 sq km.



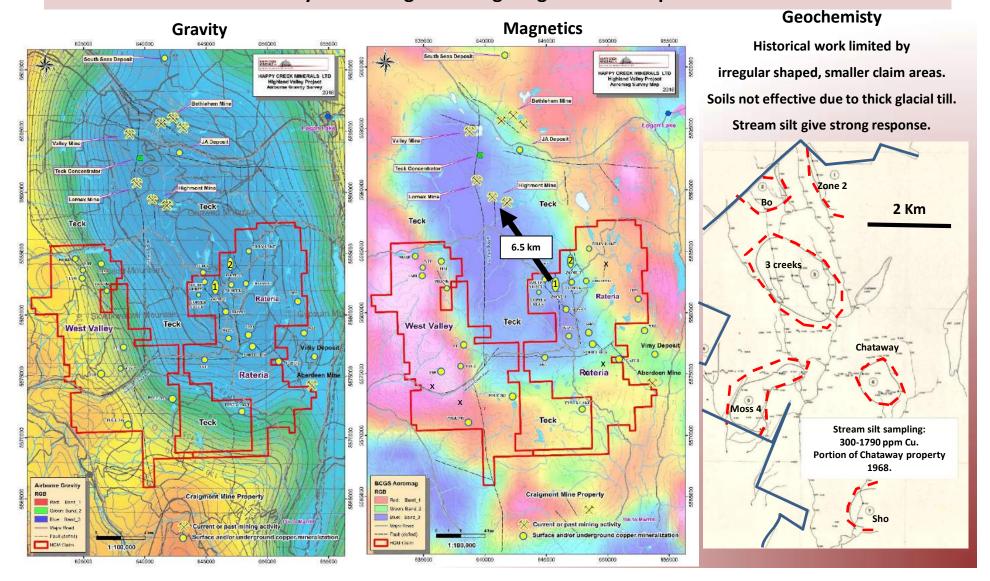


#### FEATURES OF THE HIGHLAND VALLEY DISTRICT

Geological knowledge of porphyry copper deposits has increased.

Recent examples show world class discoveries do happen in previously explored areas.

They can be larger and higher grade than expected.





#### **HIGHLAND VALLEY GEOLOGY**

The Guichon Batholith has generated several billion tonnes of reserves and resources within 5 large porphyry copper deposits.

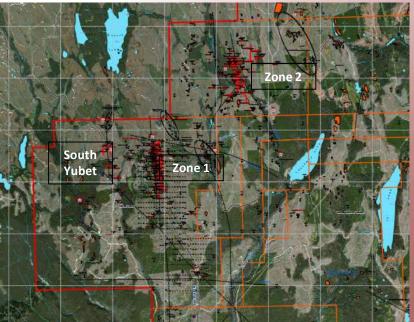
Hosts rocks are mainly Bethsaida, Skeena and Bethlehem phases which also occur on Happy Creek's property.

The former Craigmont copper mine to the south is a skarn.

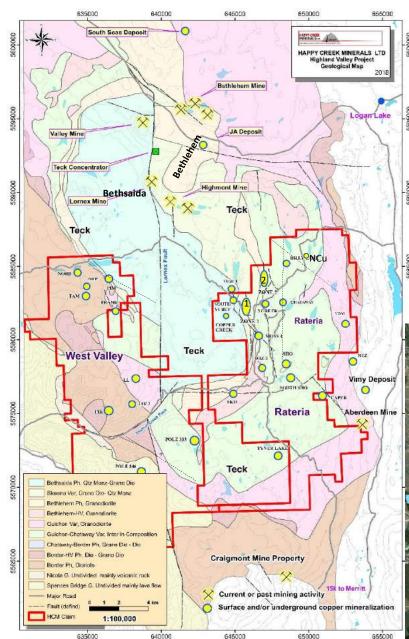
Batholith-hosted calc-alkaline porphyry systems are relatively deeply formed and can produce among the largest deposits having variable styles and depth of formation.

Zone 1 and 2 were found by recognizing geological relationships and drilling modern induced polarization geophysical targets with less than 20 metres of glacial till. Not the only way to find deposits.

Happy Creek has around 25 known copper prospects that warrant more detailed investigation.



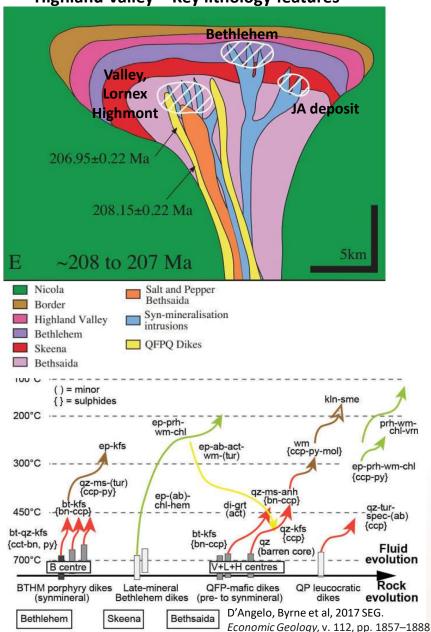
Recent logging has improved access over vast areas.



# HAPPY CREEK MINERALS LTD.



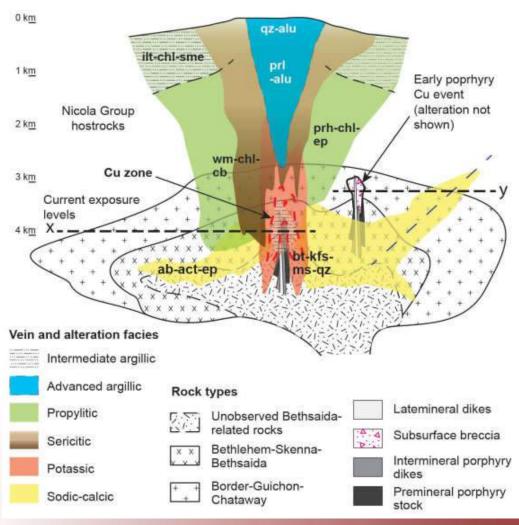
### Highland Valley – Key lithology features



#### HIGHLAND VALLEY GEOLOGY

### **Highland Valley recent research (2017)**

- Improves geological understanding for this district.



Byrne, K., Lesage, G., Gleeson, S.A. and Lee, R.G. (2017): Geoscience BC, Report 2017-1, p. 213-222

#### **HAPPY CREEK ZONE 1 AND SOUTH YUBET** MINERALS LTD. DIVERSIFIED METALS EXPLORATION Yubet prospect \* 644600 (Teck)<sub>644800</sub> 645000 645200 645400 645600 645800 646000 646200 646400 5582800 South Yubet boundary Happy Creek Minerals Ltd. 1.35% Cu, 12 g/t Ag /7.5m 1.69% Cu, 30 g/t Ag/7.5m Highland Valley Project Rateria Property, Zone 1 & Yubet Projection of Copper Mineralization in Surface South Yubet Zone Zone 1 R06-02 R08-01 R11-09 R11-12 Zone 1 hosted in Skeena phase cut by several Fp dikes. Argillic-phyllic 0.82%Cu, 4.7 g/t Ag /5.0m DDH chalcocite dominant near surface and more quartz-muscovite K Granodiorite outcrop feldspar with bornite-chalcocite Access Road and moly at depth. ALTERATION ZONES Ser Gouge Rock alteration extends well Ser-Epi-Chl beyond known mineralized Ser-Qtz-K-spar zones: Clues to find more L/R COL Mainly Ser 5581800 PLAN SPECS: Qtz-Mus-Epi-Ser REF. PT. E, N. 645900 m 5582000 m EXTENTS 2879 m 2474 m Ser-Chl-Hem Full Plan - Traces Chl-Epi-K-feld-Ser 25 50 Meters Ser-Kaol R11-31 Weak Ser 1:5,000 644800 645800 646000 644600 645000 645200 645400 645600 646200 646400

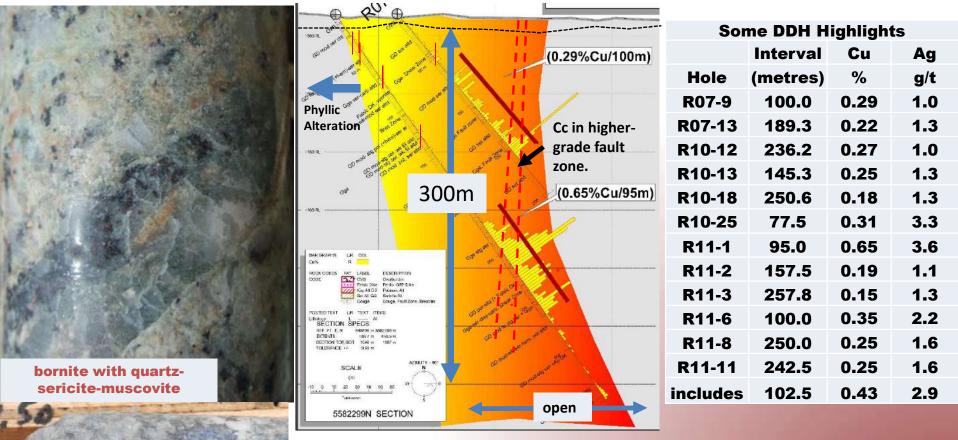
Chalcocite Qtz-ms-ser-kaol





Low pyrite, high-grade chalcocite-bornite minerals.

Metallurgy: high recovery, clean concentrate with 39.6% copper 398.6 g/t silver.



Zone 1 drill-defined for 1.2km X 50-150m wide X 350m depth. South end is cut by E-W fault. Potential for more at depth. >1km vertical mineralized zone at Valley deposit to the north.

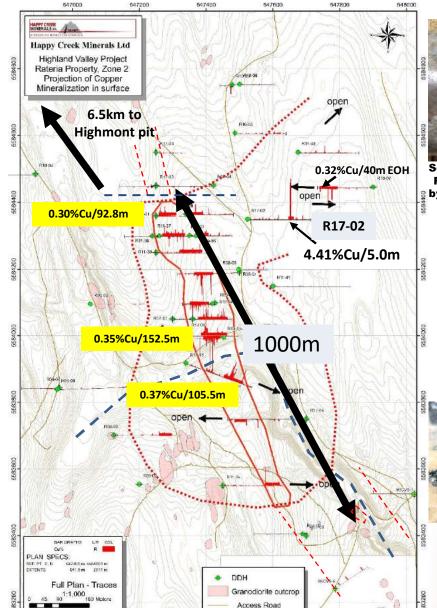
#### **HAPPY CREEK** MINERALS LTD.



#### **ZONE 2 DISCOVERY**

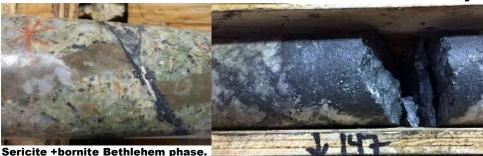
### Copper-gold-moly-rhenium

Selected intervals shown to illustrate mineralization styles



847600

647200



by fracture with qtz-bornite veinlet.

Felspar phyric dike cut and offset R17-02 Mainly chalcocite: Portion of 5.0m 4.41% Cu, 20.0 g/t Ag, 0.21 g/t Au, 0.031% Mo, 6.86 g/t Re



R17-05 chalcocite-bornite gtz-ser -kaol Portion of 2.5m 0.89% Cu, 0.38 g/t Au, 0.003% Mo, 0.54 g/t Re



**Bornite in quartz** sericite/muscovite veinlet and selective replacement of chlorite altered mafics.



R11-36 K-spar-qtz-sericite bornite veins. Portion of 2.5m with 1.11% Cu, 0.46 g/t Au, 0.031% Mo, 0.80 g/t Re





ZONE 2 DDH Highlights						
Zone 2	Interval	Cu	Ag	Мо	Au	Re
Hole	(m)	%	g/t	%	g/t	g/t
R08-01	113.0	0.33	1.48	0.002	0.05	N/A
R08-05	126.0	0.46	1.71	0.008	0.10	N/A
R09-06	92.4	0.12	1.23	0.011		0.76
includes	20.2	0.18	0.80	0.048	0.04	3.45
R09-07	48.0	0.30	1.60	0.002	0.07	0.26
R12-01	92.81	0.30	1.50	0.005	0.15	0.02
includes	12.5	0.63	3.2	0.001	0.66	0.01
R12-02	152.5	0.35	1.70	0.004	0.06	0.57
includes	32.5	0.91	4.0	0.011	0.12	1.83
R17-02	5.0	4.41	20.0	0.031	0.21	6.86
R17-05	105.5	0.37	1.90	0.005	0.14	0.63
R17-08	82.5	0.29	1.25	0.003	0.06	0.17
and	66.0	0.35	1.64	0.002	0.02	0.23

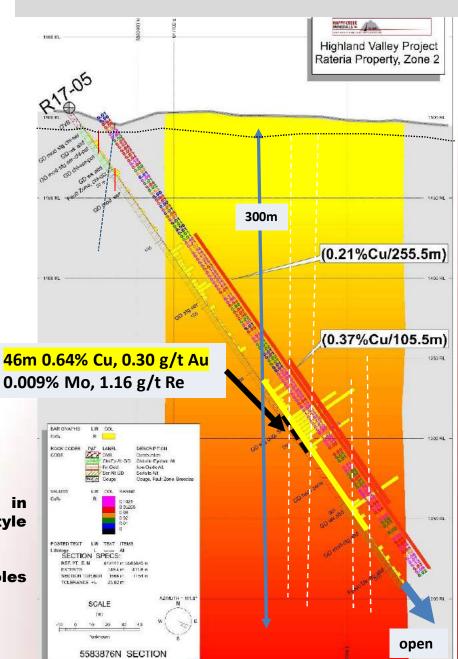
Up to 16.8 g/t Rhenium (Re) with 0.138% Mo/2.5m

Presence of gold and high rhenium enrichment in molybdenite is similar to B.C. <u>copper-gold</u> porphyry style copper deposits. Different than other HV deposits?

Zone 2 contains encouraging grade with drill holes ending in mineralization.

Potential for a large mineral system.

### **ZONE 2 DISCOVERY**



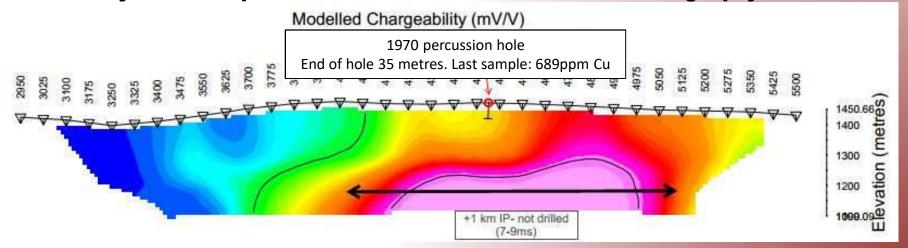


### **OTHER PROSPECTS**

Sho prospect: Historical work developed a sizeable mineralized zone but work stopped in 1972. Happy Creek follow-up includes geophysical survey and mapping to generate a drill target.



### Chataway claims acquired in 2017. New inversions of historical geophysical data.



We are continuing to generate many new drill targets.

#### **HAPPY CREEK WEST VALLEY** MINERALS LTD. DIVERSIFIED METALS EXPLORATION The Lornex fault extends south from the giant Lornex mine Lornex and Valley deposits to the north. Teck Bethlehem Highland Valley Project West Valley Property NORD Guichon Variety **Exploration Map** Historical intermittent, cursory surface work. Large gaps without any exploration. Area is mostly covered by glacial till. Strong copper in stream sediments. Rateria **Bethsaida Phase** Feldspar porphyry, aplite dikes occur at several Teck copper prospects- favorable conditions for mineral Phases systems to occur. Nicola Group Lower magnetics (yellow-blue) reflect underlying, younger intrusive phases or hydrothermal destruction of magnetite. Legend Potential for new discoveries. DDH (2010) Skeena Variety Ore Showing Fault (defind) Rock Cu (ppm) 0.0 - 250.0 Pole383 250.1 - 500.0 500.1 - 1000.0 Border-Highland Varieties Teck 1000.1 - 37500.0 Cu Trench Spences Bridge Group Cu (ppm) ♦ 38.5 - 100.0 Pole346 100.1 - 300.0 300.1 - 497.1 HCM Claim HV GT TMI Value High: 58156 Low: 54575.7 Fir: quartz veins-chalcopyrite PIM -new showing: Bethsaida phase quartz-1:70,000 ser/musc with Qtz-bo/mal veins Biotite-k-feld + sericite

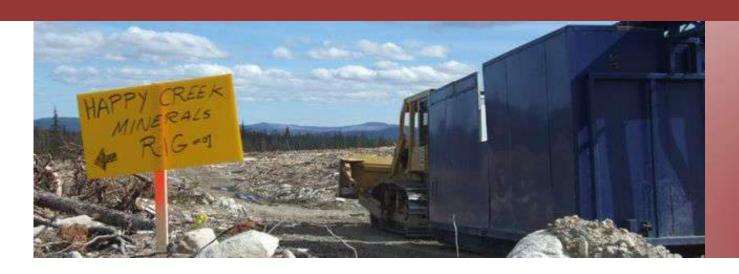




- Rateria and West Valley: 244 Sq Km in Canada's best porphyry copper district:
- 50 years of continuous mining with 5 deposits achieving commercial production
- Zone 1 and Zone 2 are significant new copper prospect discoveries
- Zone 2 has positive gold & rhenium values- something new in the district
- Many prospects have not seen any modern or recent work done
- Potential for multiple new discoveries

Ideal conditions are in place to search for quality copper deposits.

# A solid copper exploration asset in a low-risk jurisdiction.





#### CONTACT

April 30, 2019

Shares outstanding: 93,665,976

Warrants: 547,991 @ avg. \$0.30

Options: 5,600,000 @ avg. \$0.21

**Year High: \$0.20** 

**Year Low: \$0.11** 

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