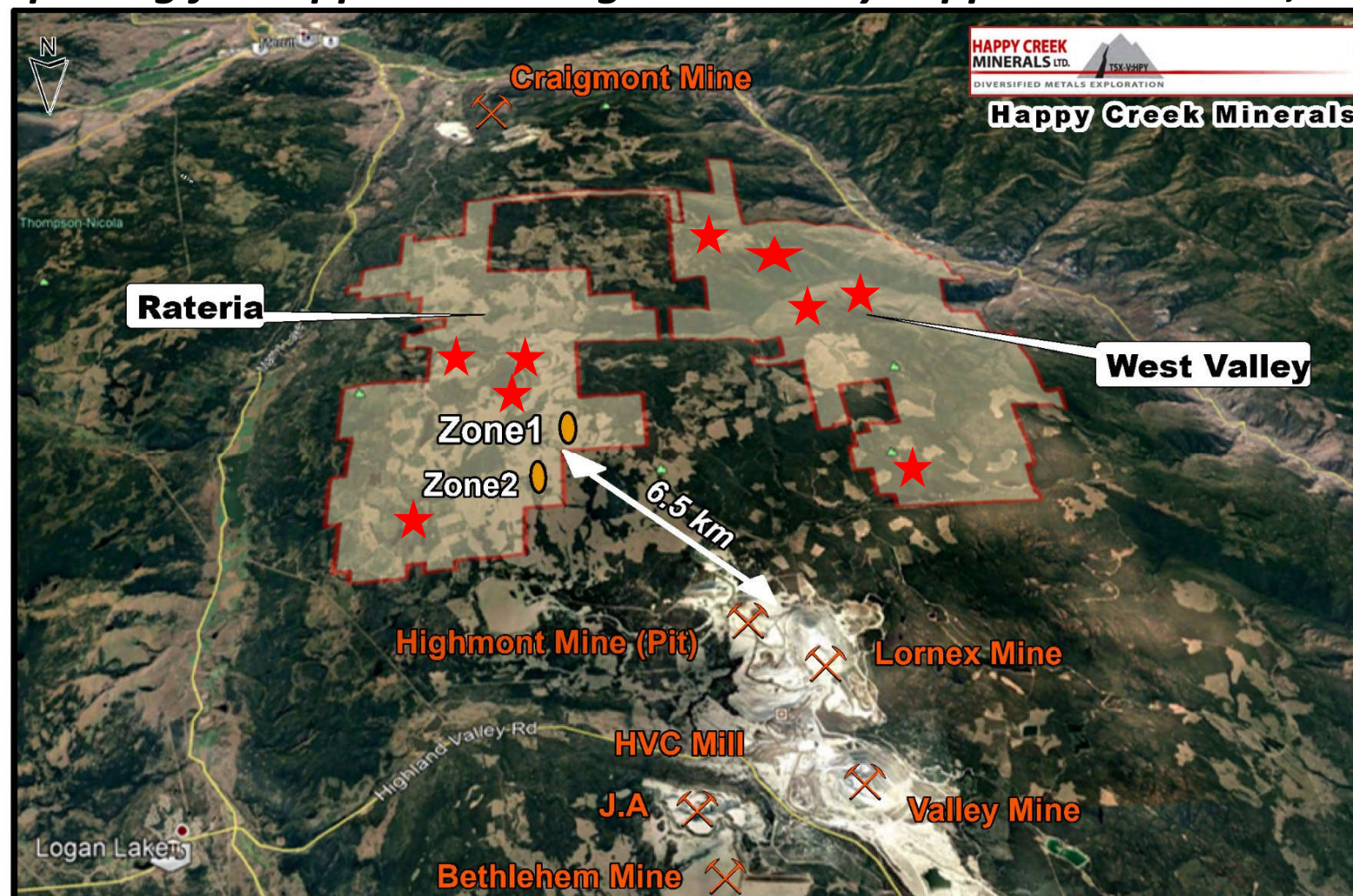


# The Rateria and West Valley Property

*Exploring for copper in the Highland Valley copper district B.C., Canada*



Facing South

## CAUTIONARY STATEMENT

*Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this presentation. The information provided is believed to be reliable however no assurance as to its accuracy, completeness or timeliness is represented herein.*

*This presentation may contain statements and projections such as plans, forecasts, prices, resources, profits, value, scale, and others that are forward looking and subject to risks and uncertainties more fully described in the Company's Prospectus, Financial Statements and Public Filings located on SEDAR. \$ are U.S. currency unless otherwise noted. "Diversified Metals Exploration" and the Company's logo and images are trademarks and copyright of Happy Creek Minerals Ltd. All Rights Reserved. David E. Blann, P.Eng., Director, is a Qualified Person under NI-43-101 has approved the technical content of this presentation.*

*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.*

**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**

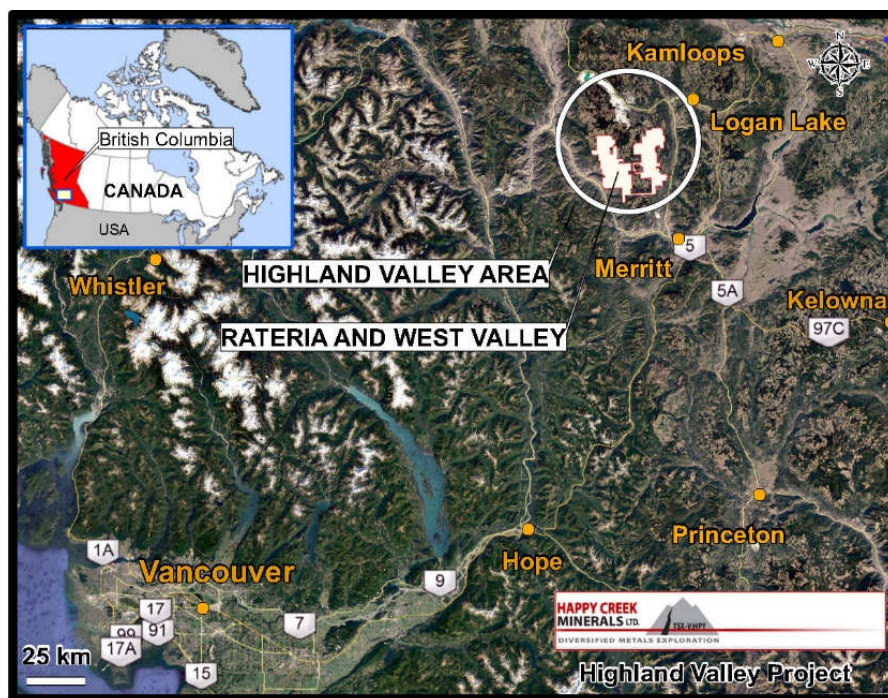
Mr. Cathro's career includes exploration with major and junior resource companies and 17 years with the B.C. Ministry of Energy and Mines in technical and management roles. Mr. Cathro has served as VP Exploration or Director of several Jr. resource companies.

**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.

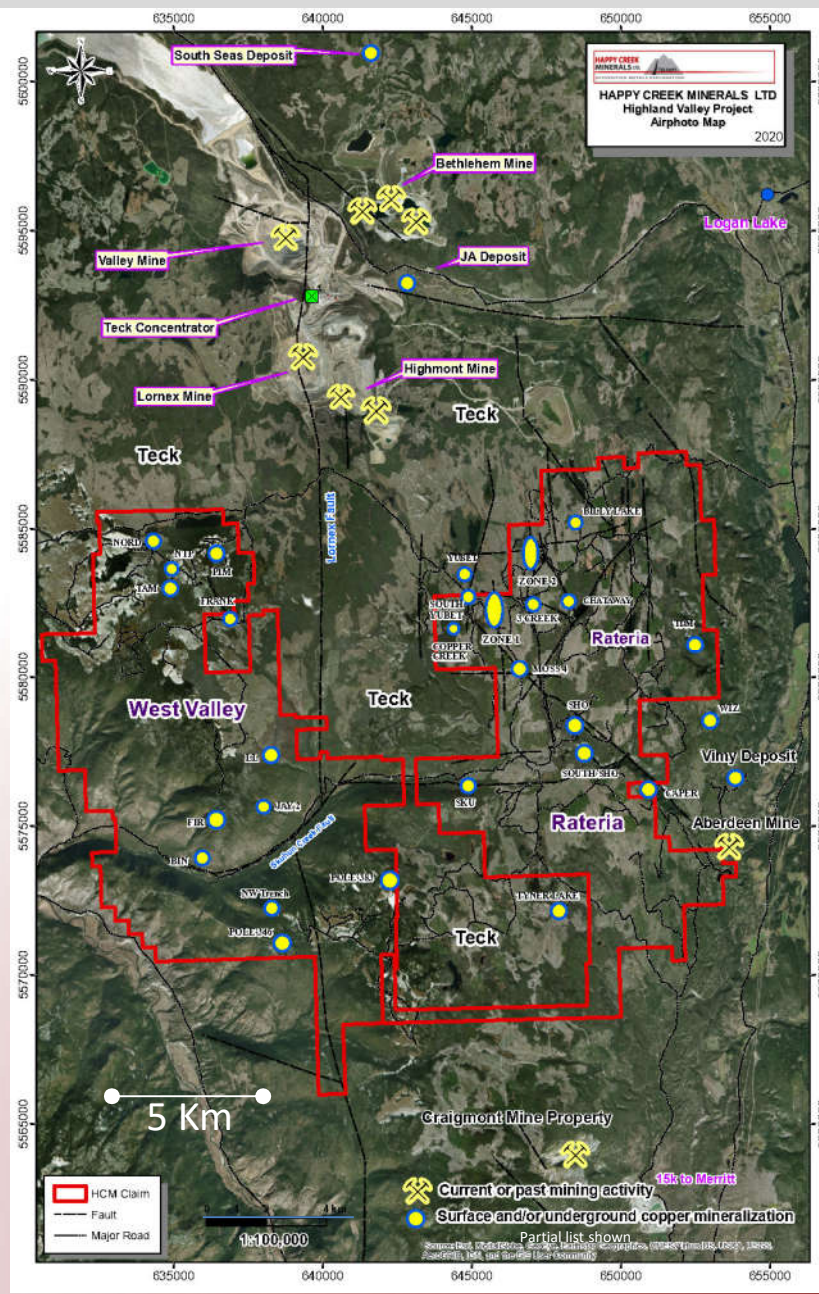


## LOCATION



### 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.





## 1970 Highland Valley Mineral Claims

Discovery time of the current mines

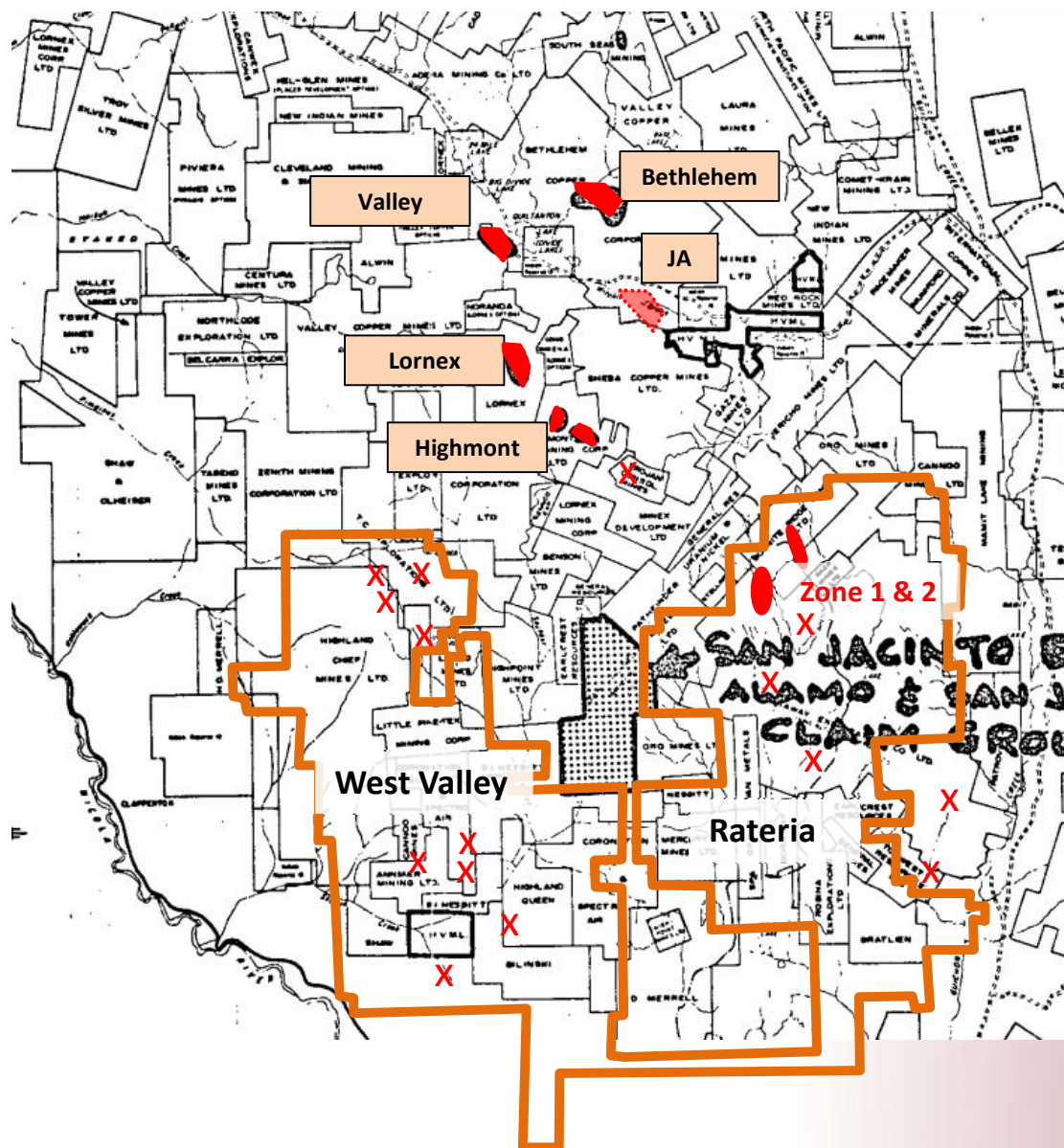
Historical exploration was affected by:

- 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 pyrite system produces weak anomalies

Just 1.0% sulphide (0.5% chalcopyrite+ 0.5% bornite) = 0.49% Cu

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

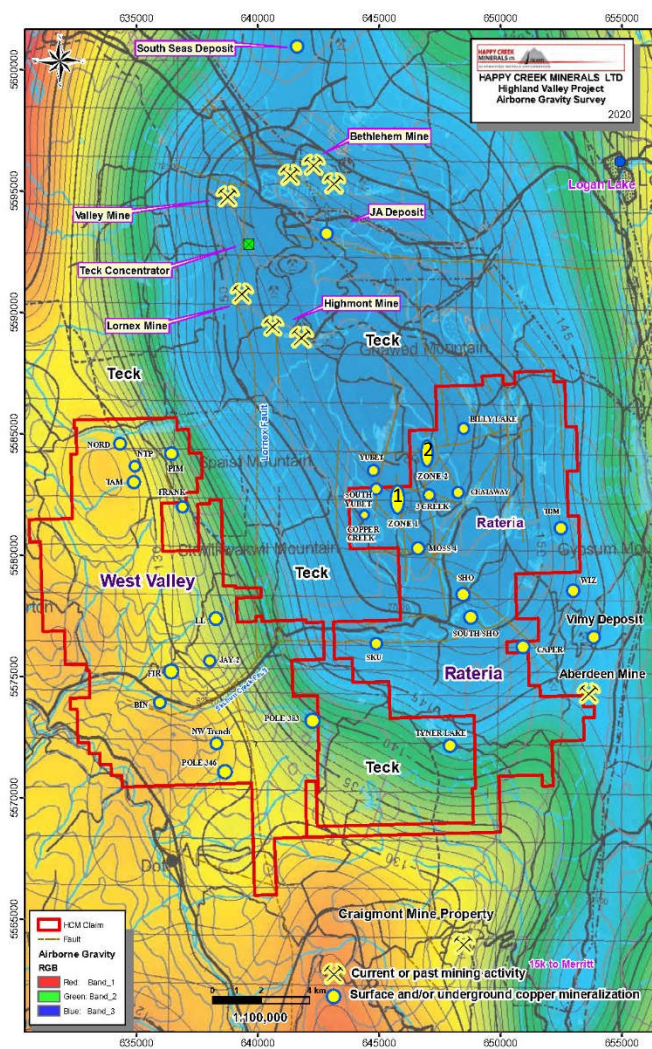
2004-2005, Happy Creek (private) begins acquiring property- now 244 sq km.



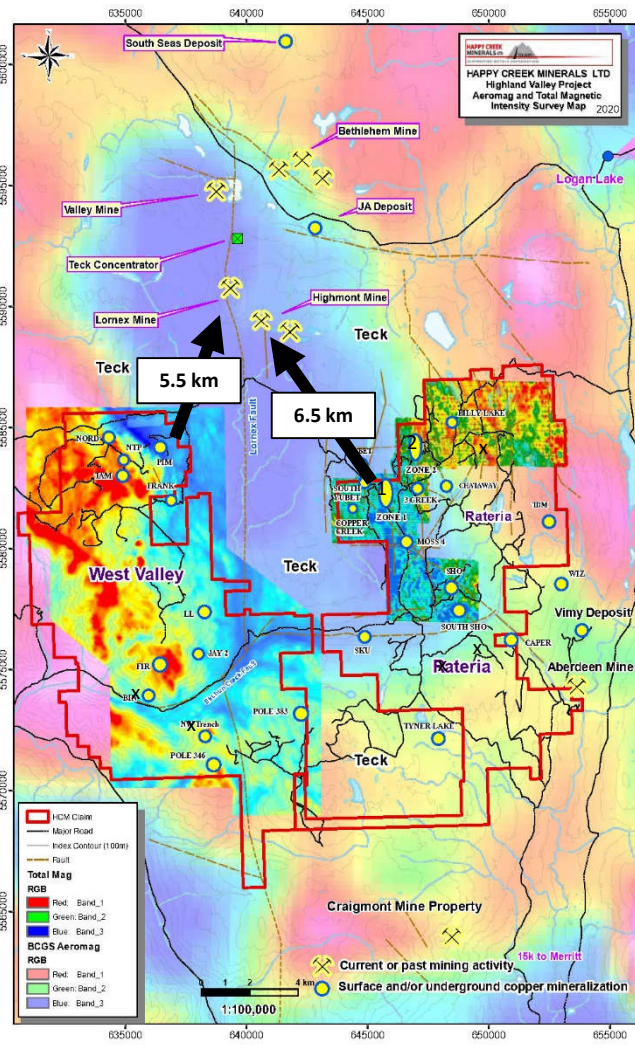


World class discoveries do happen in previously explored areas.  
They can be larger and higher grade than expected.

## Gravity

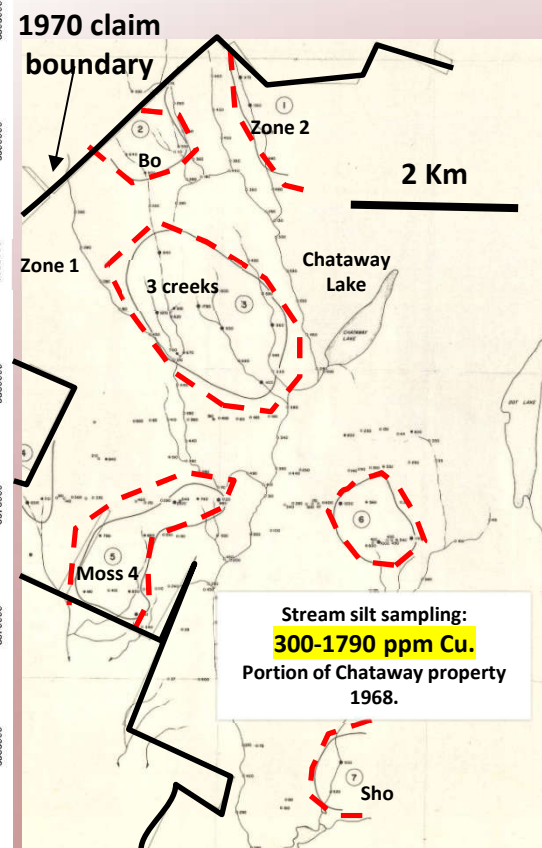


## Magnetics



## Geochemistry

Traditional soil sampling not very effective  
due to thick glacial till.  
Stream silt samples give strong response.





## HIGHLAND VALLEY GEOLOGY

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

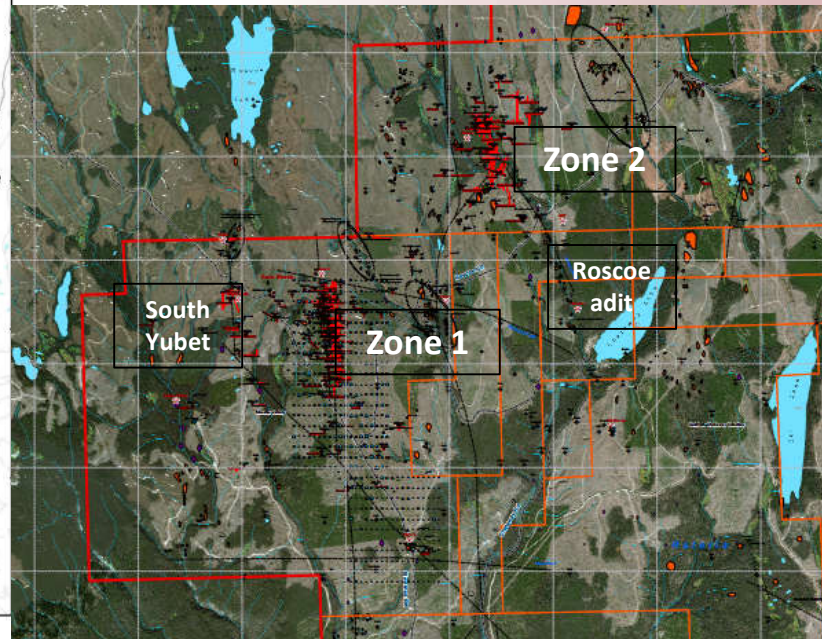
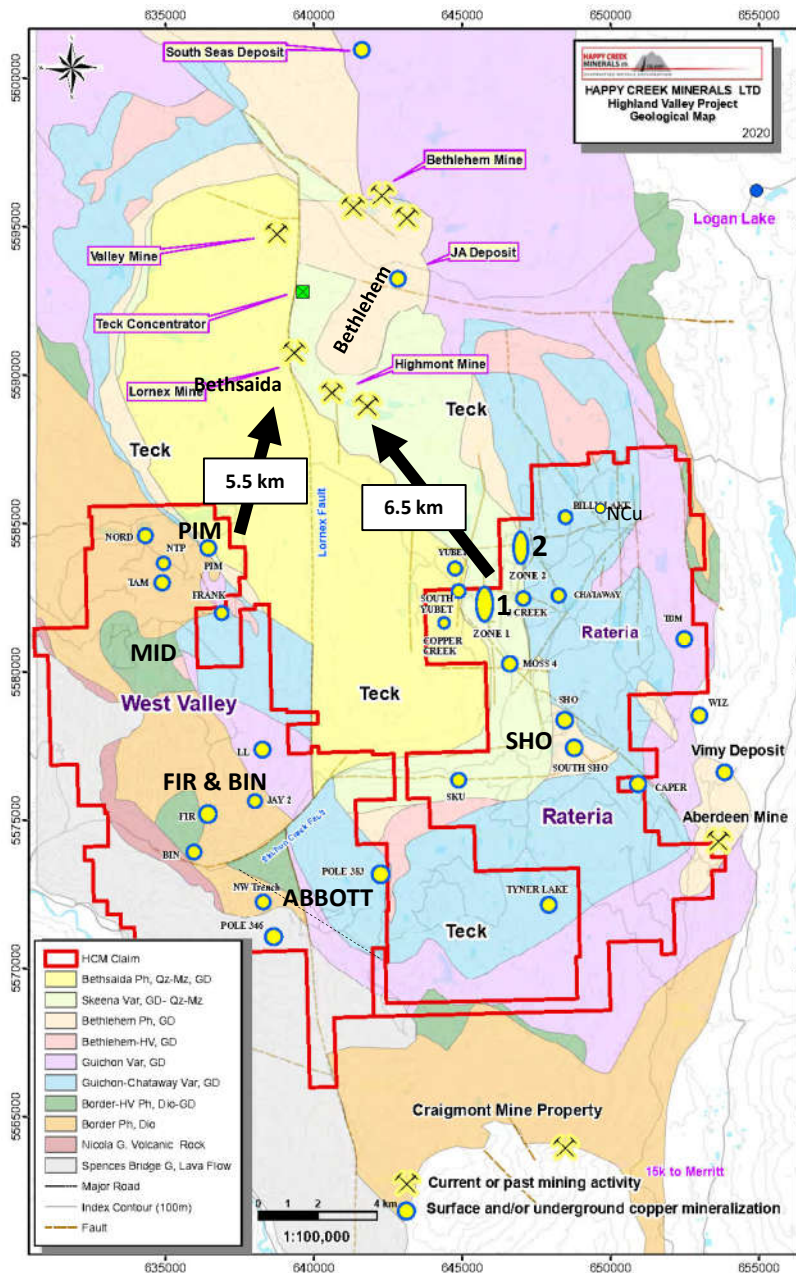
Hosts rocks are mainly Bethsaida, Skeena and Bethlehem phases which also occur on Happy Creek's property.

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.

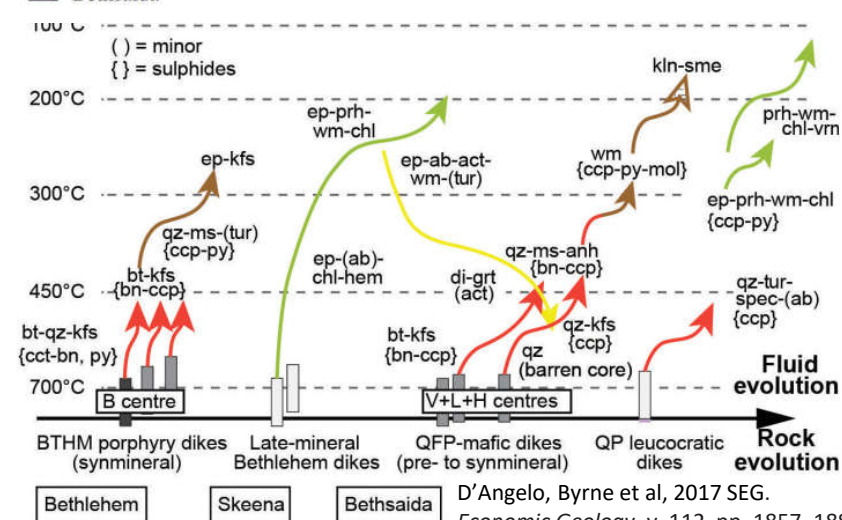
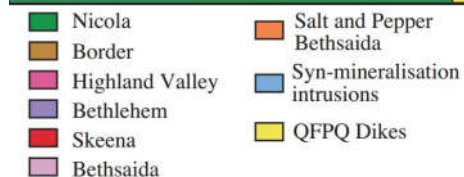
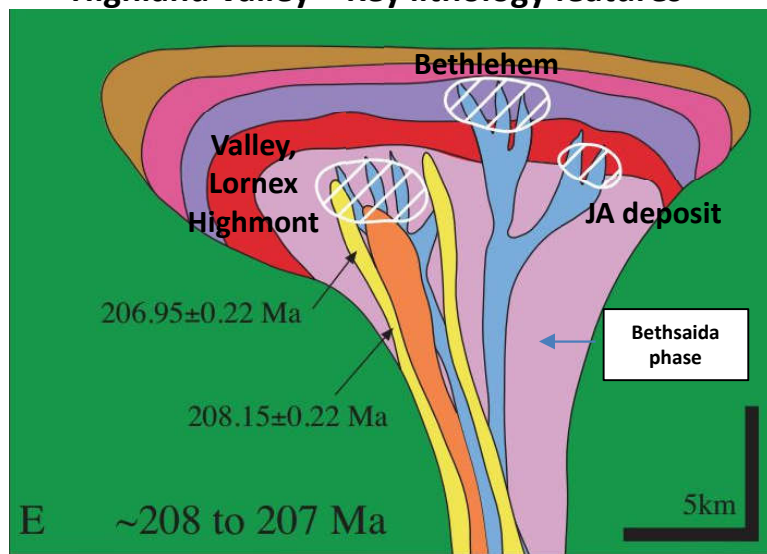
Zone 1 and 2 were found by recognizing geological relationships and drilling modern induced polarization geophysical targets with less than 20 metres of glacial till.

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



**Recent logging  
has improved  
access and  
operating  
conditions.**

## Highland Valley – Key lithology features



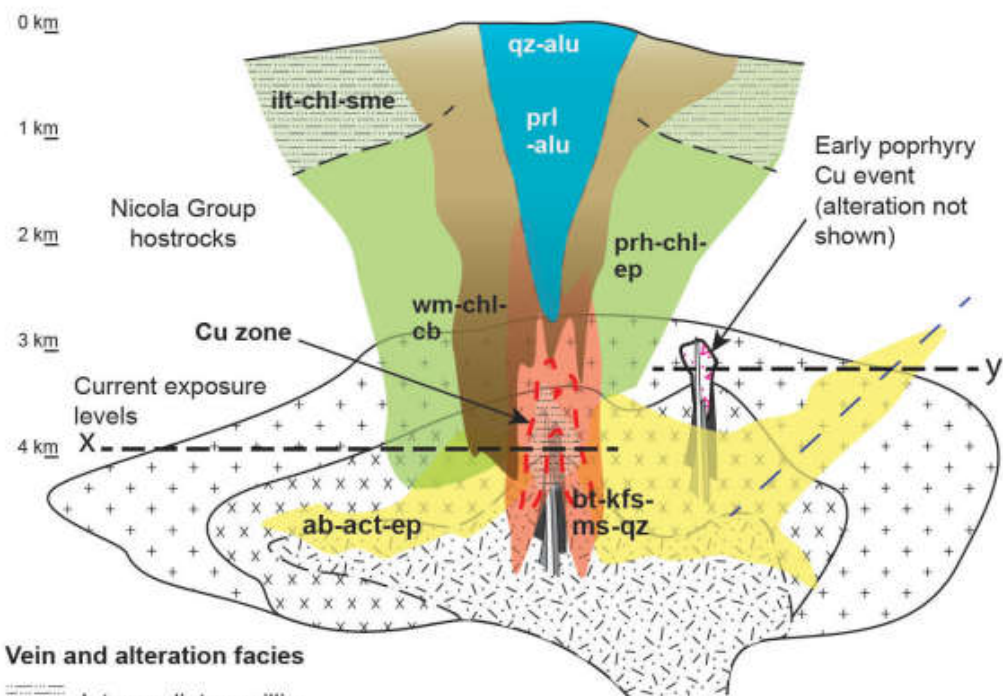
D'Angelo, Byrne et al, 2017 SEG.  
*Economic Geology*, v. 112, pp. 1857–1888

## HIGHLAND VALLEY GEOLOGY

### Highland Valley recent research (2017)

Improving geological understanding of this district.

Assists interpretation and vectors toward copper centers.



### Vein and alteration facies



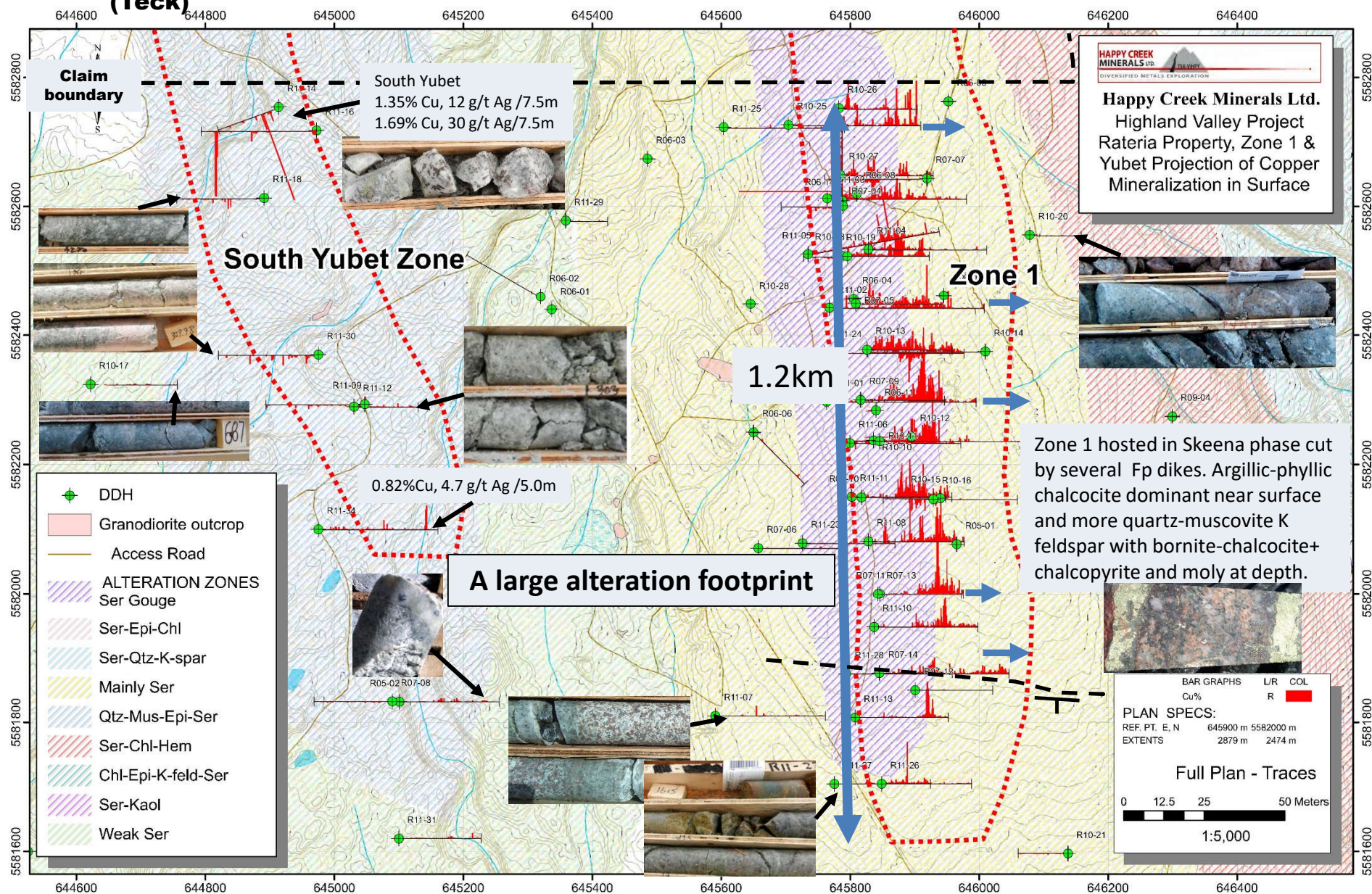
### Rock types



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

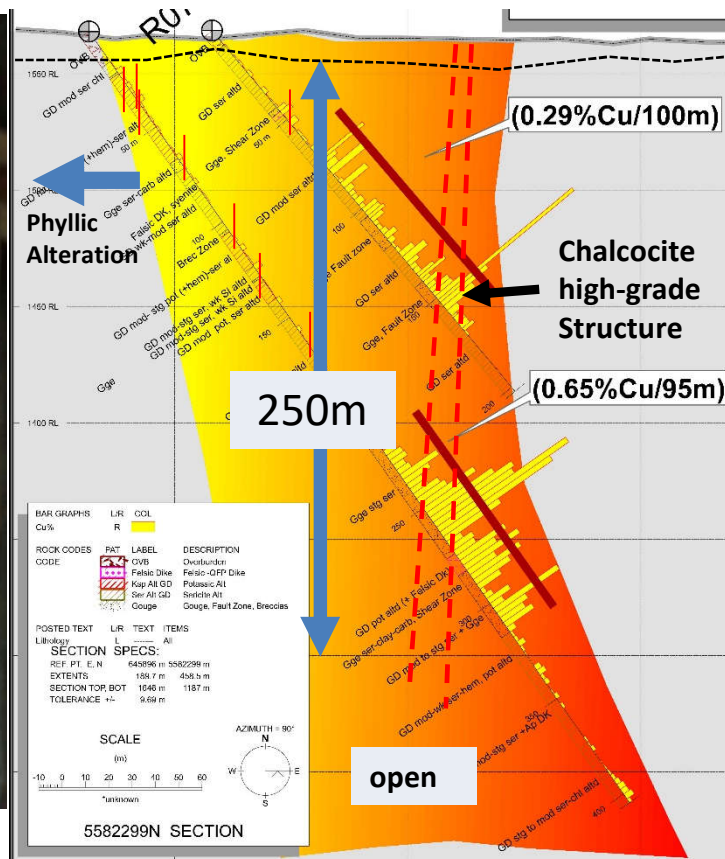


## Yubet prospect (Teck) ★





**Low pyrite, high-grade chalcocite-bornite minerals.  
Metallurgical testing: high recovery, clean concentrate - 39.6% copper 398.6 g/t silver.**

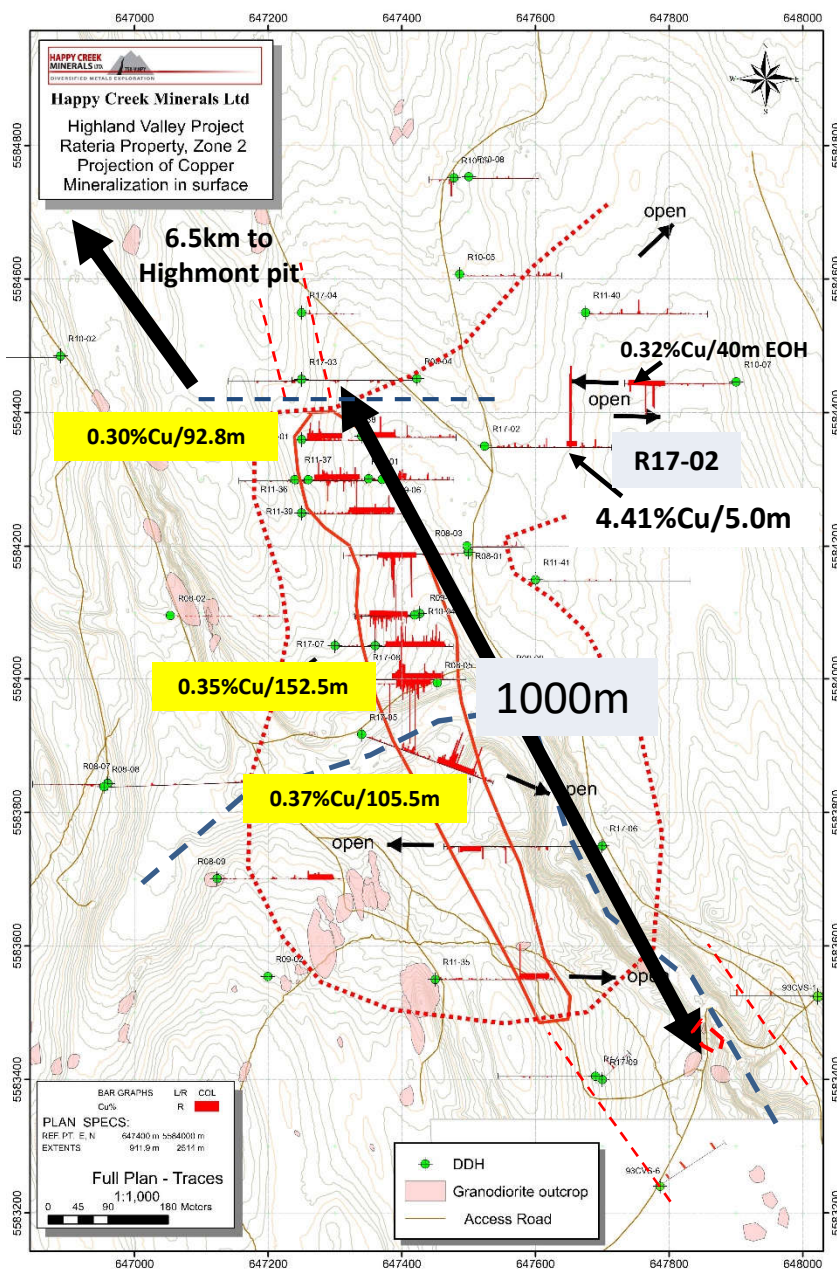


Some DDH Highlights			
Hole	Interval (metres)	Cu %	Ag g/t
R07-9	100.0	0.29	1.0
R07-13	189.3	0.22	1.3
R10-12	236.2	0.27	1.0
R10-13	145.3	0.25	1.3
R10-18	250.6	0.18	1.3
R10-25	77.5	0.31	3.3
R11-1	95.0	0.65	3.6
R11-2	157.5	0.19	1.1
R11-3	257.8	0.15	1.3
R11-6	100.0	0.35	2.2
R11-8	250.0	0.25	1.6
R11-11	242.5	0.25	1.6
includes	102.5	0.43	2.9

**Zone 1 drill-defined for 1.2km X 50-150m wide X 350m depth.  
Potential for the potassic (centre) copper zone nearby.**

**Mineralized zone at Valley deposit extends for over 1km vertical depth.**





## ZONE 2 DISCOVERY

### Copper-gold-moly-rhenium

Selected intervals shown to illustrate mineralization styles.

Table next slide



Sericite altered Bethlehem phase.  
Felspar phryic dike cut and offset  
by quartz-bornite veinlet.



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 qtz-ser-clay  
Portion of 2.5m 0.89% Cu, 0.38 g/t Au, 0.003% Mo, 0.54 g/t Re



Bornite in quartz  
green mica, sericite-  
muscovite veinlet and  
selective replacement  
of chlorite altered  
mafs.



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	Mo	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

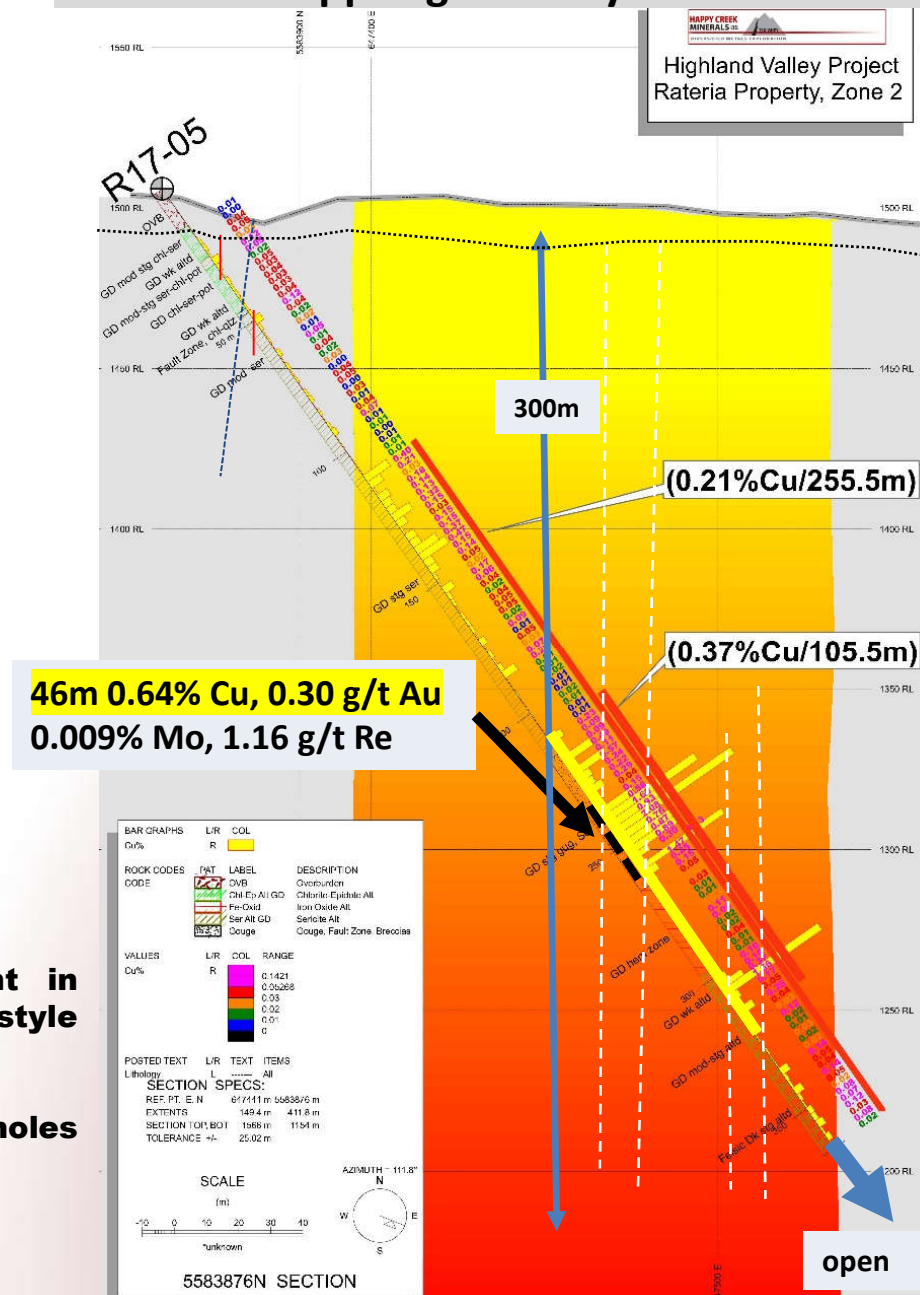
## Up to 16.8 g/t Rhenium (Re) with 0.138% Mo/2.5m

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

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

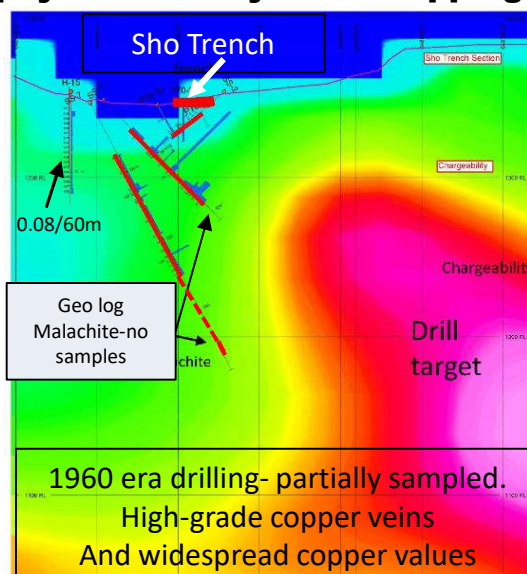
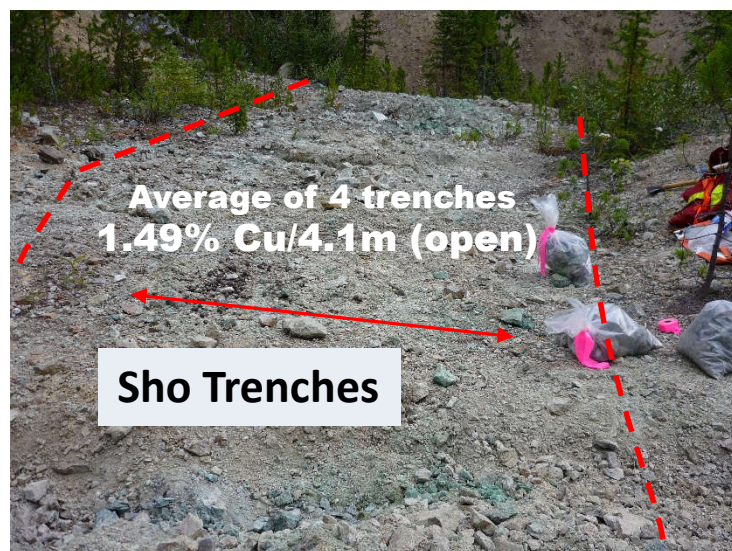
**Potential for a large mineral system.**

**ZONE 2 DISCOVERY**  
**Copper-gold-moly-rhenium**

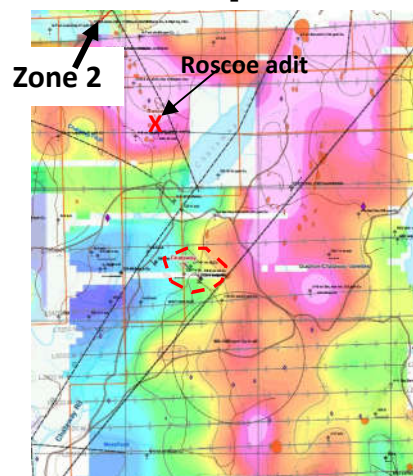




**Sho prospect: Historical work developed a sizeable area of mineralization, but work stopped in 1972. Happy Creek follow-up includes geophysical surveys and mapping – now a 1.5 km long target.**

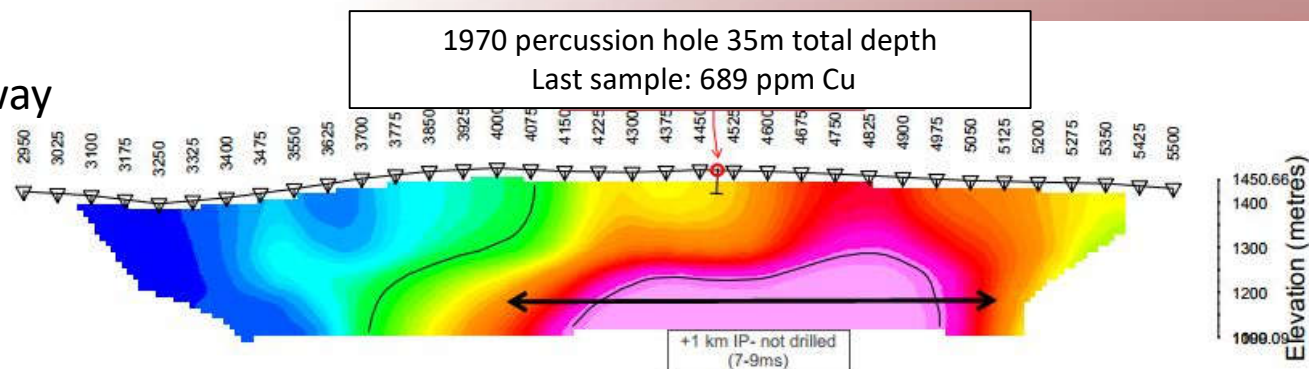


**2017 acquired Chataway claims adjoining Rateria. 2019 re-processing of 1993 IP survey**



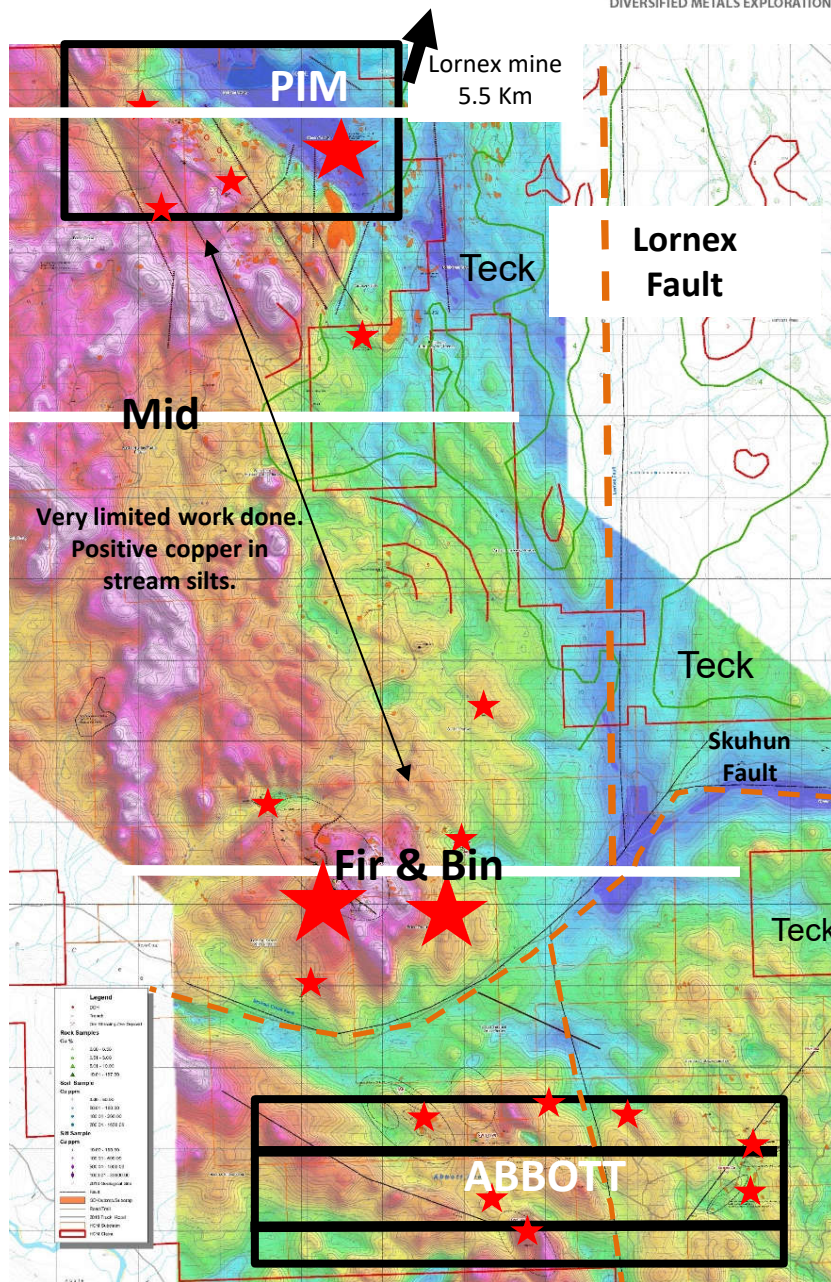
Chataway  
Claims  
7 km

Producing new target ideas for follow-up or drill testing



**Happy Creek continues to generate and prioritize/rank new targets**



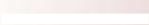


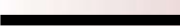
## WEST VALLEY

- **The Lornex fault extends south from the giant Lornex and Valley deposits to the north.**
- **Historically intermittent, cursory work.**
- **Patchwork irregular shaped claims.**
- **Large gaps without any exploration.**
- **Under-appreciated?**
- **Area is largely covered by glacial till. Strong copper in stream sediments.**
- **More felsic, younger age and porphyry dikes occur in proximity with ★copper showings.**
- **At surface, lower magnetic response (green-blue color) reflect younger intrusive phases and / or hydrothermal destruction of magnetite.**

 2019 Geology & IP Geophysics at Abbott and PIM

+2019 Inversion model of airborne magnetic survey

 Magnetic inversion sections presented

 IP chargeability sections presented

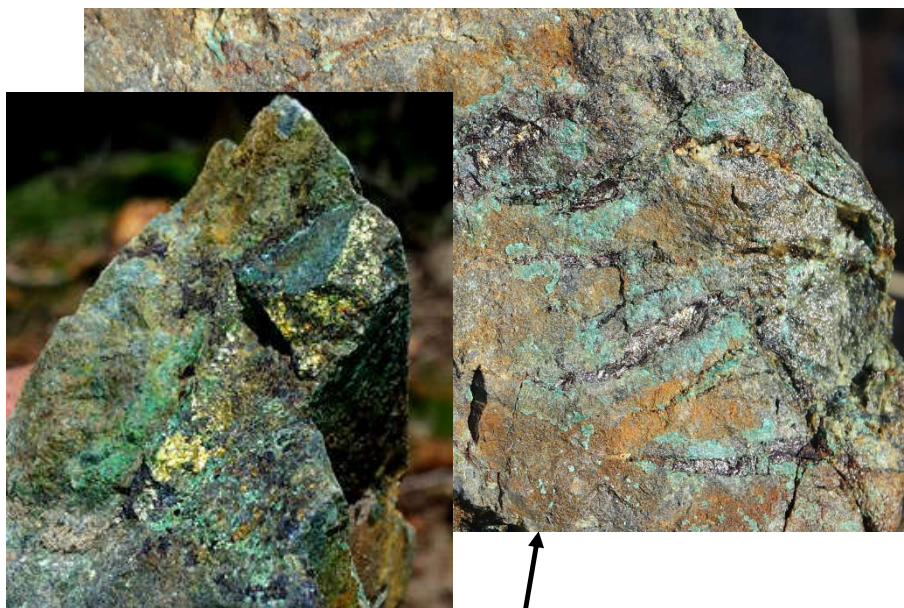


New: Pole 346 Nicola volcanic breccia and  
sediments: chl-ep-(alb) magnetite-quartz veins-cp  
Traced for 1 km at surface- potentially 2km

## WEST VALLEY- ABBOTT AREA Line 71200N (south end)

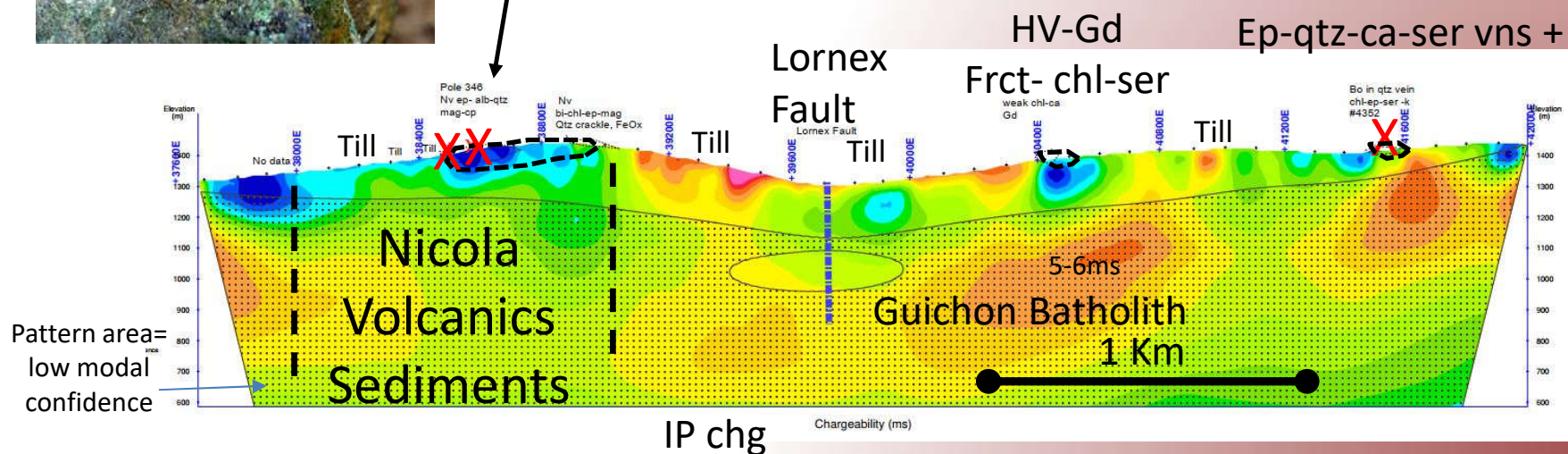
Qtz vein

Mixed HV phase Gd  
Ep-qtz-ca-ser vns + bo



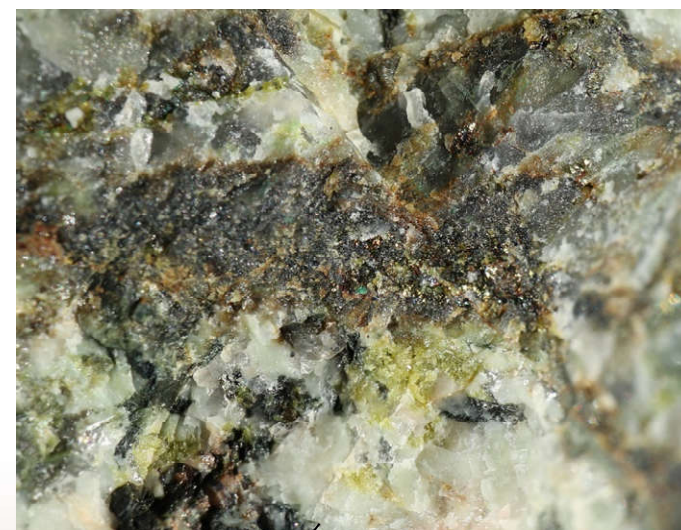
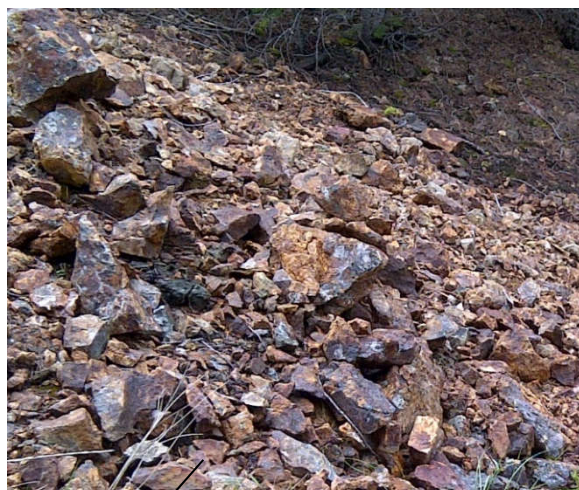
HV-Gd

Ep-qtz-ca-ser vns + bo





# WEST VALLEY- ABBOTT AREA Line 72000N (north end)



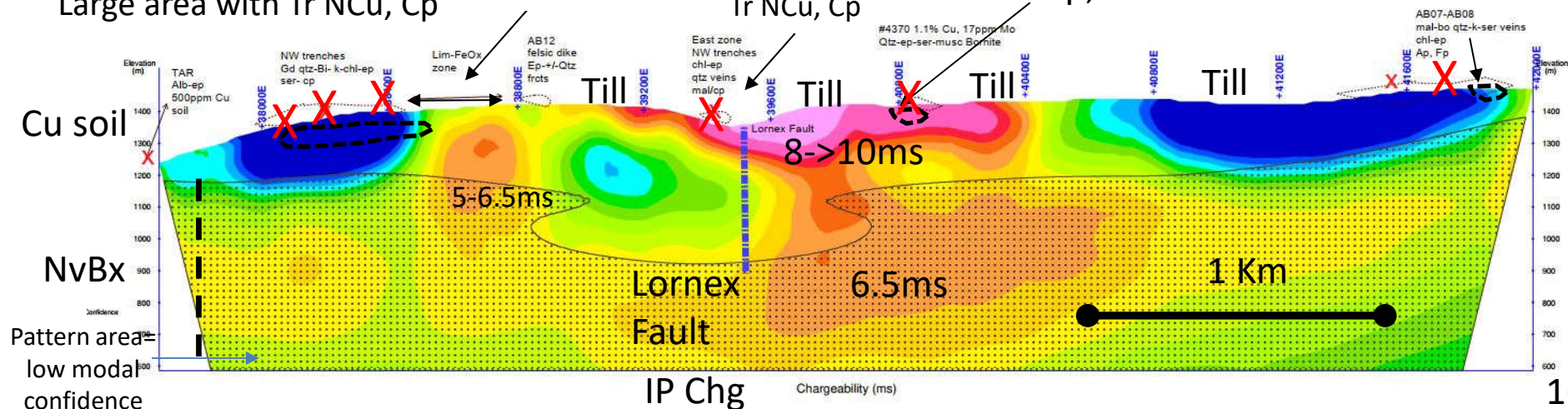
NW Trenches BP/HV Gd, Ap  
Bi-K, Chl-Ep, Qtz-Ser  
Large area with Tr NCu, Cp

Lim-FeOx/Py

E trench BP/HV Gd  
K-Chl-Ep, Qtz-Ser  
Tr NCu, Cp

New: Chat-Bethl? Gd  
K-Chl-Ep, Qtz-Ser  
Cp, Bo

New: Trail Cu  
Chat-Sk? Gd  
K-Chl-Ep, Qtz-Ser  
Cp, Bo

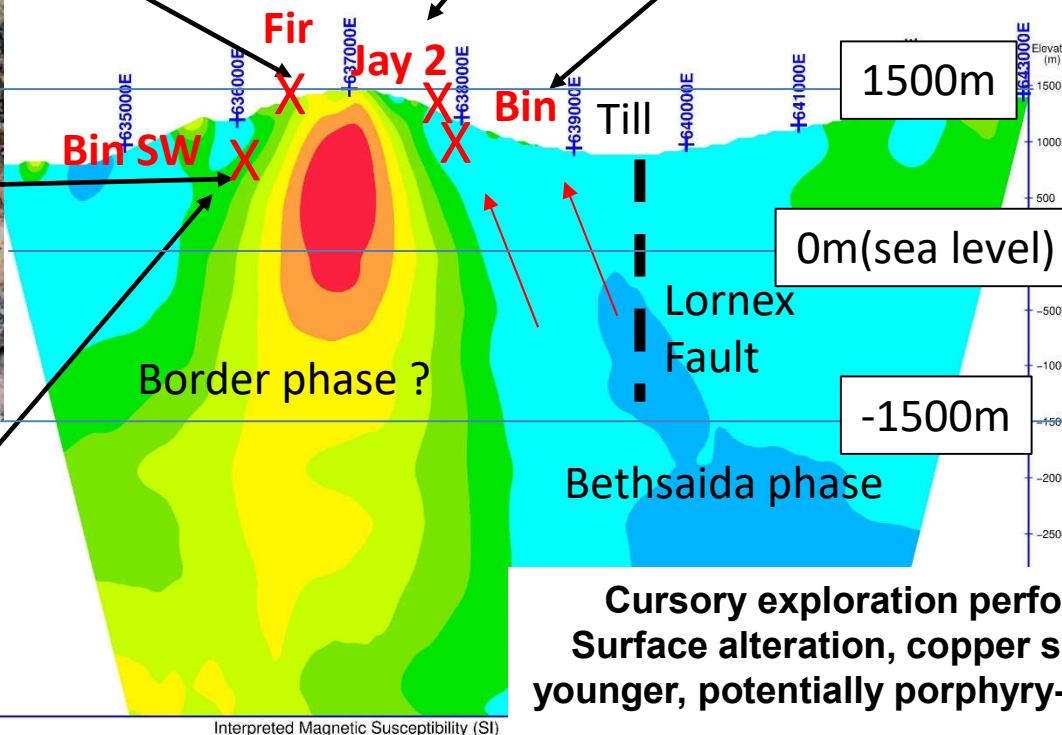




# WEST VALLEY- FIR & BIN PROSPECT Line 75300N Magnetics model section



Bi-Chl-Ep-K- Ser  
Qtz-Cp-Bo-Mo- Re



Cursory exploration performed to date.  
Surface alteration, copper showings above  
younger, potentially porphyry-generating rocks



## WEST VALLEY- "MID" SECTION Line 81000N Magnetic model section

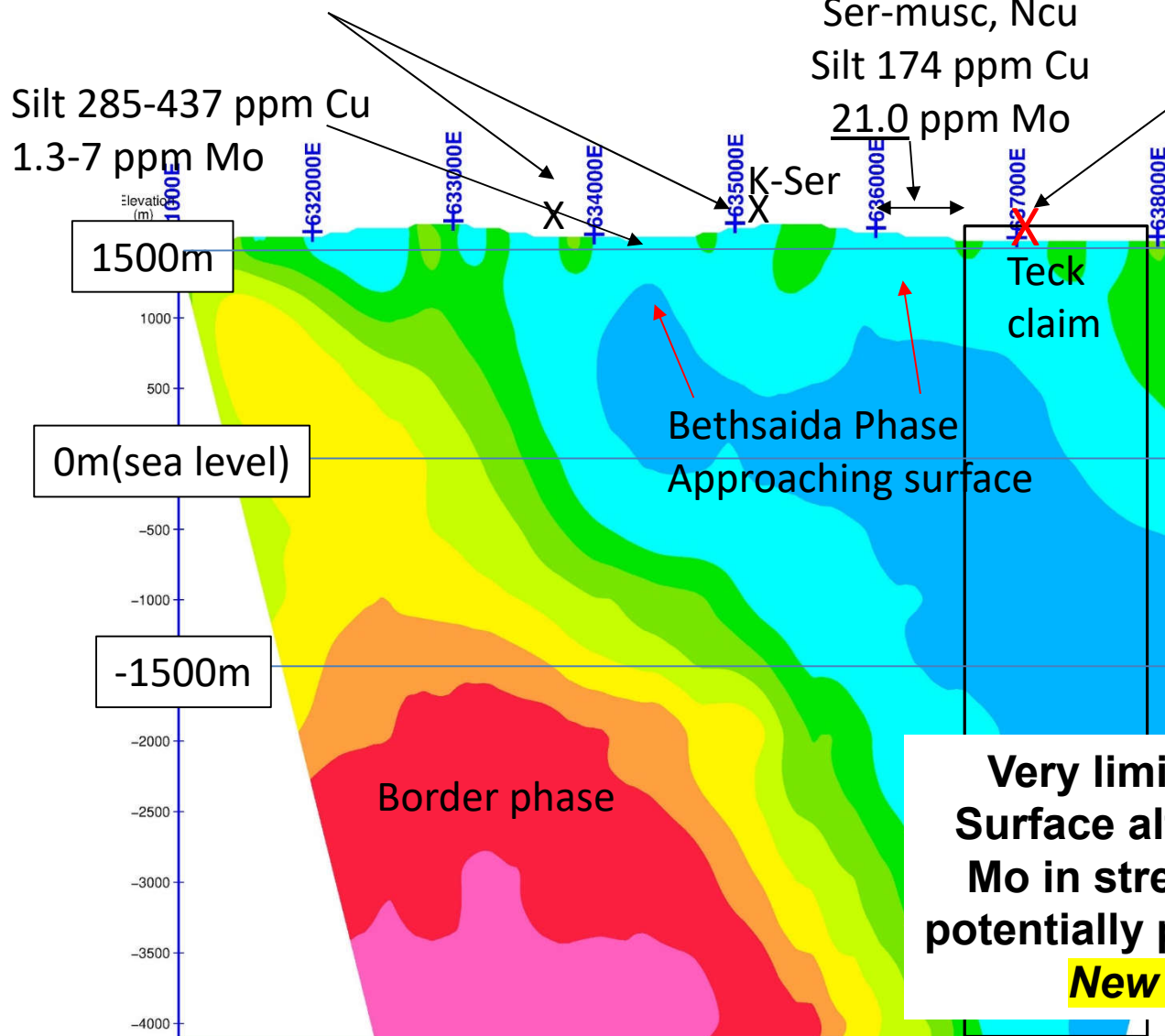
First-pass geology: Mixed HV phase  
Ep-Ser veins common, muscovite

Orange rubble in road  
(Similar to Zone 1)  
Ser-musc, Ncu

Frank prospect: Bethl-Skeena  
K-Ser+bo

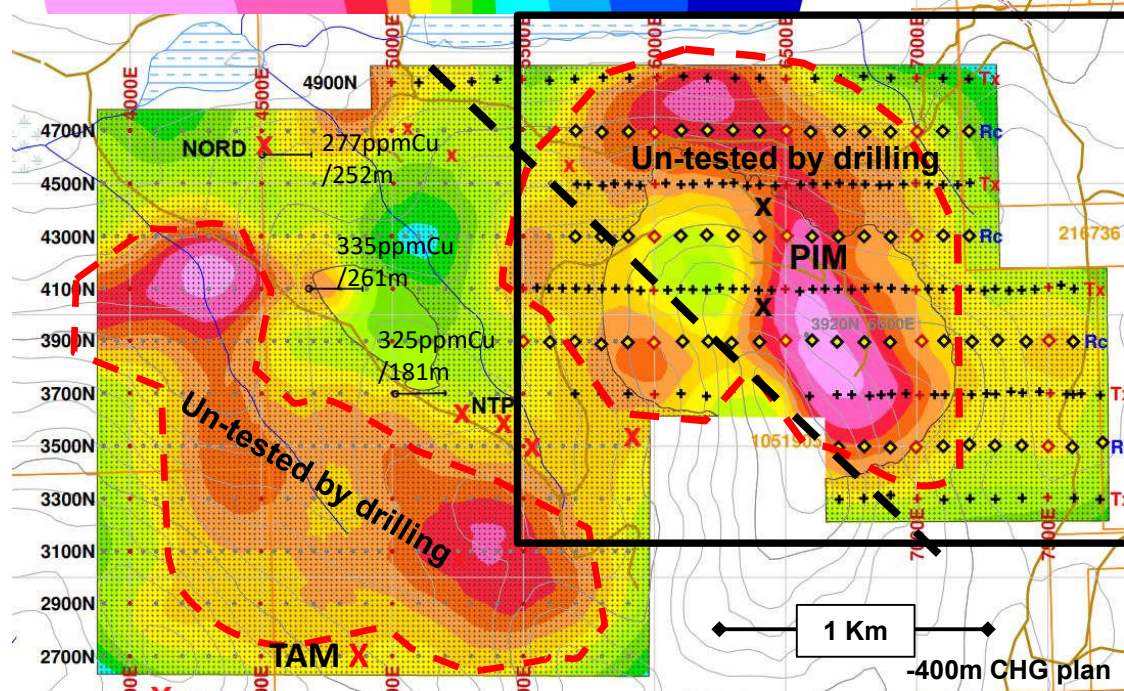
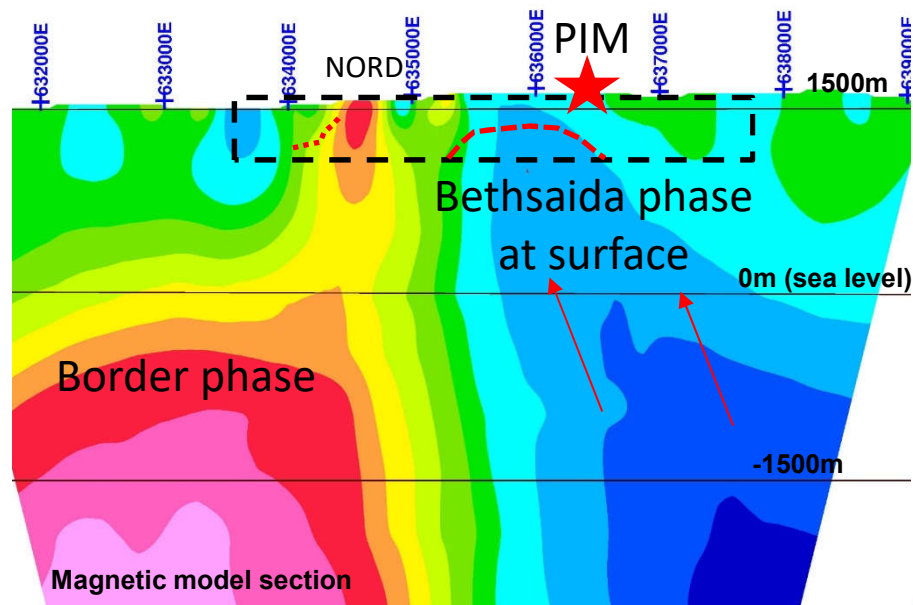
Silt 285-437 ppm Cu  
1.3-7 ppm Mo

Silt 174 ppm Cu  
21.0 ppm Mo

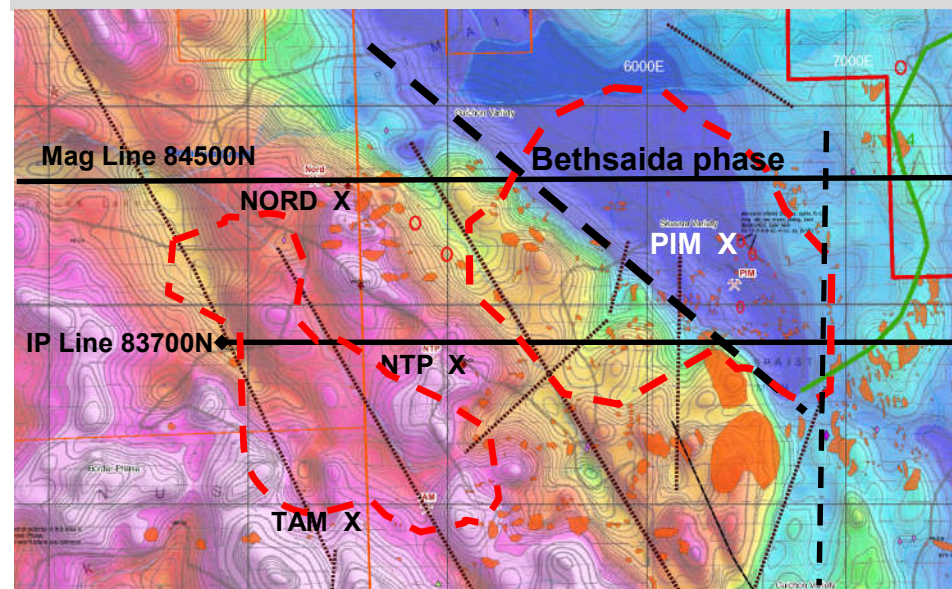


**Very limited exploration to date.  
Surface alteration, positive copper,  
Mo in stream silts above younger,  
potentially porphyry-generating rocks**  
***New area of opportunity***





## WEST VALLEY- PIM PROSPECT



Work done in 2019 located new copper showings at the PIM prospect followed by an IP survey to expand on a previous survey and cover this area.

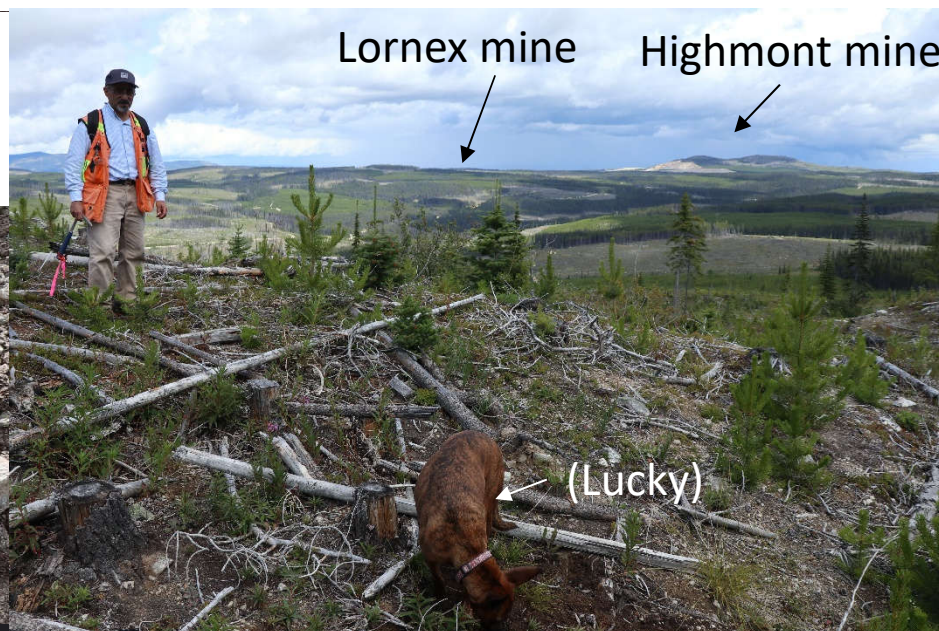
Bethsaida-Skeena phase a magnetic low, positive IP, rock and soil anomaly at surface.

PIM is thought to have potential for a new Highland Valley copper deposit and further work is planned to define drill sites.

Currently, little is known about the area around the positive IP anomaly near the TAM prospect. Previous drilling at NTP and Nord prospects returned long intervals of low-grade copper values.



## WEST VALLEY- PIM PROSPECT NEW Copper showings





- **Rateria and West Valley**: First time this 244 Sq Km contiguous property is assembled
  - in Canada's best porphyry copper district: 5 deposits achieving commercial production
  - Deposit targets range from >150mt to over 1 billion tonnes.
- Zone 1 and 2 are significant new copper prospects with resource potential: under-explored
  - Zone 2 has positive gold & high rhenium enrichment in molybdenite- something different !
- Modern exploration tools assist geological understanding and confidence in targeting
- West Valley area historically under-appreciated for copper potential: that is changing.
  - Potential for multiple new discoveries- new target generation progressing well



Ideal conditions are in place to find new copper deposits  
**A 100% owned, quality copper exploration asset**



**January 11, 2020**

**Shares outstanding: 105,029,712**

**Warrants: 641,820 @ avg. \$0.17**

**Options: 4,250,000 @ avg. \$0.21**

**Year High: \$0.17**

**Year Low: \$0.075**

## **Happy Creek Minerals Ltd.**

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**Website: [www.happycreekminerals.com](http://www.happycreekminerals.com)**

**David Blann, P.Eng. President, CEO**

**Phone: (1) 604-662-8310**

**Toll Free: 1-877-662-8310**