

**HAPPY CREEK  
MINERALS LTD.**



**DIVERSIFIED METALS EXPLORATION**

# Highland Valley Project Focus on Copper – a Critical Metal for the Energy Transition

*April 2024*



# Forward Looking Statement

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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.

This presentation may contain statements and projections such as plans, forecasts, prices, objectives, targets, 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.

Resources reported herein conform to NI43-101 with a report filed on SEDAR and can also be viewed on the Company's website. Readers are cautioned that the quantity and grade of reported Inferred resource estimations are conceptual in nature, and there has been insufficient exploration to define these Inferred Resources as an Indicated or Measured Resource. It is uncertain if further exploration will result in upgrading them to an Indicated or Measured Resource category. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

1 The Qualified Person has not completed sufficient work to verify the historic information on the Property or adjacent properties, particularly in regard to historical drill results. However, the Qualified Person believes that drilling and analytical results were completed to industry standard practices. The information provides an indication of the exploration potential of the Property but may not be representative of expected results.

2 Grab and chip samples are selective by nature and the values reported may not be representative of the entire mineralized zone.

3 Results or information from an adjacent property does not infer or indicate similar results or information will or does occur on the subject property.

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David Blann, P.Eng., Director, is a Qualified Person as defined under NI-43-101 has approved the technical content of this presentation.



# Happy Creek's Strategy

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- Large, underexplored, 100%-owned properties
- Low-risk, proven mining jurisdiction with clear permitting path and great infrastructure
- Low-cost, year-round surface exploration
- Multiple targets for large and high-grade deposits
- Focused, disciplined and responsible approach
- Commitment to environmental stewardship and maintaining community support



# Happy Creek Team

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## Many decades successful experience:

- ✓ Discovery and project development
- ✓ BC geology
- ✓ Copper, tungsten and other deposits
- ✓ Permitting
- ✓ Mine operations
- ✓ Community and Indigenous relations
- ✓ Financing and capital markets
- ✓ Public company governance

Walter Segsworth, FEC, Chair

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Mike Cathro, President, CEO, Director

Rodger Gray, Director

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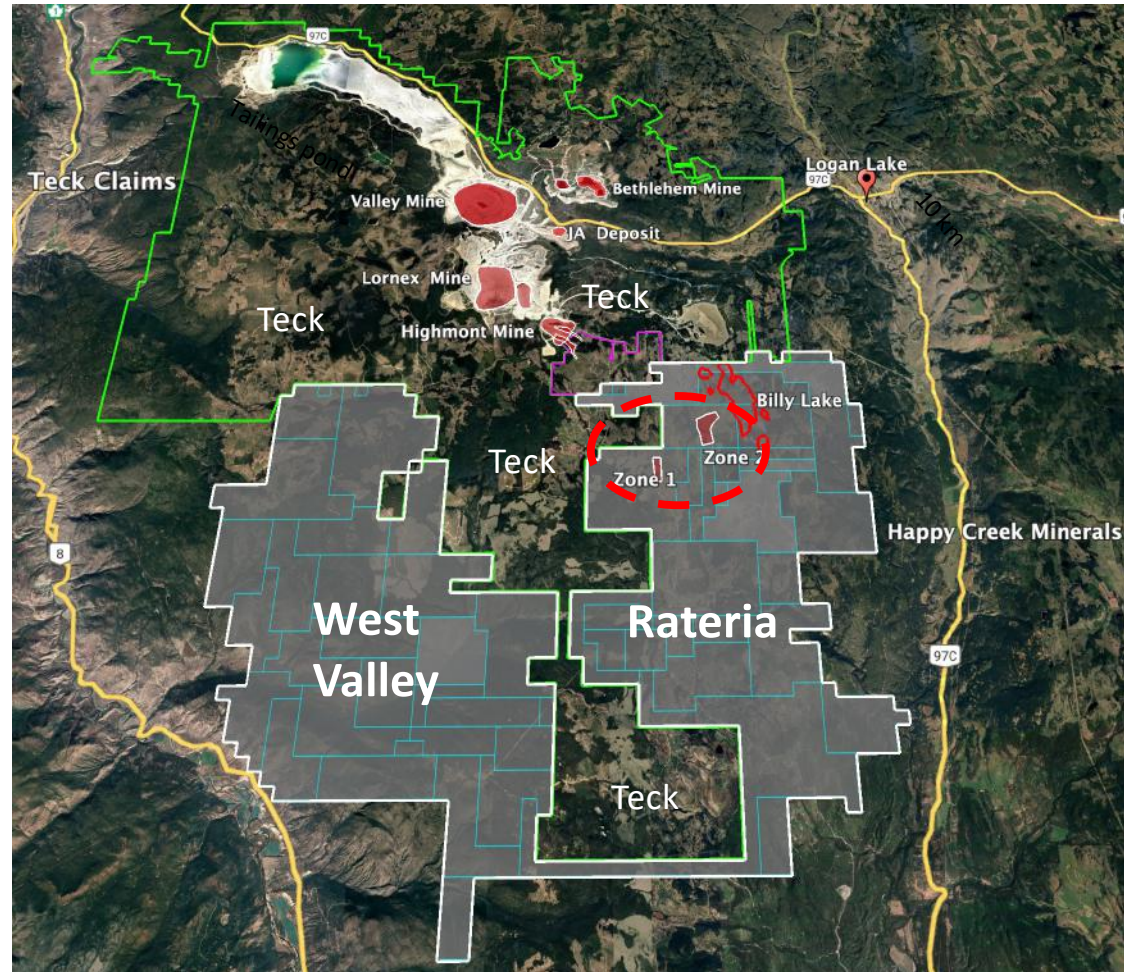


# The Highland Valley Copper District

60 years of mining from seven pits, in four main porphyry centres



- Teck's Highland Valley Copper (HVC) mine is the largest base-metal mine in Canada with approximately 2 billion tonnes of production to date<sup>3</sup>
- Low grade but highly profitable in part due to:
  - Efficient operation
  - Low strip ratio & very large throughput
  - Excellent recoveries
  - Clean high-grade concentrate
- Extension of mine plan to 2040 is under environmental review and feasibility study
- Happy Creek's 240 km project includes the West Valley and Rateria claim groups adjoining HVC<sup>3</sup>

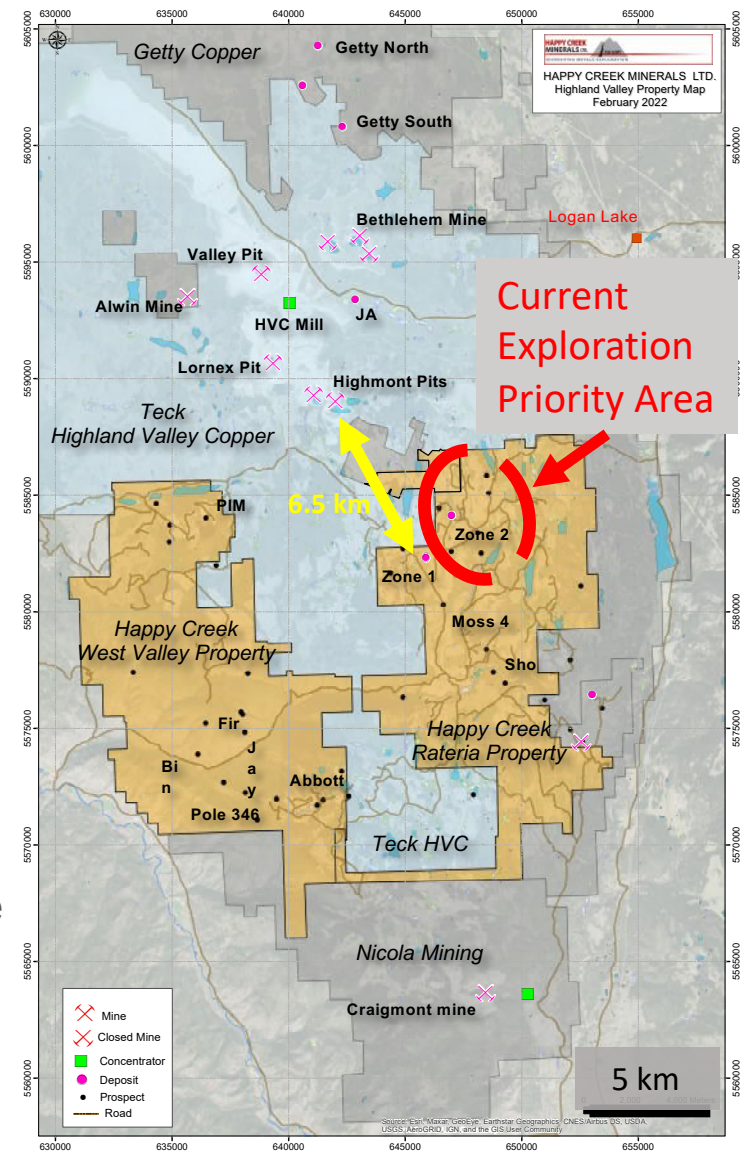


# Happy Creek's Highland Valley Project

## In Canada's Most Prolific Copper Mining District



- 100% ownership of very large (240 sq km) property
- Adjoins Highland Valley Copper and Craigmont mines
- Historical exploration was hampered by tenure and till
- Claim consolidation by Happy Creek took >18 years
- Excellent infrastructure with easy access to Vancouver (3.5 hrs) and Merritt (30 mins)
- Supportive nearby communities
- Dry, rolling upland plateau, and an extensive logging road network allow for year-round exploration
- Great mineralogy – Z1 and Z2 mainly bornite and chalcocite
- Happy Creek's strategy is to systematically refine and test the pipeline of targets, starting with targets in northern Rateria block



# HV Project Work History and Data

(>\$10 million value)

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- Operated by:
  - Happy Creek (since 2005), Hudbay, Asarco, Placer, Teck, etc
- Drilling: 402 holes totaling ~55,000 m
  - Incl. 37,265 m in 136 ddh by HPY since 2007
- Geochem (HPY work only)
  - 2787 soils, 559 silts, 328 (Happy Creek portion only)
- Geophysics (mainly HPY)
  - IP, Magnetics, Radiometrics, Lidar, AMT
- Mineralogy and Metallurgy (Zone 1)



# Zone 1 Discovery (Cu-Ag-Mo)

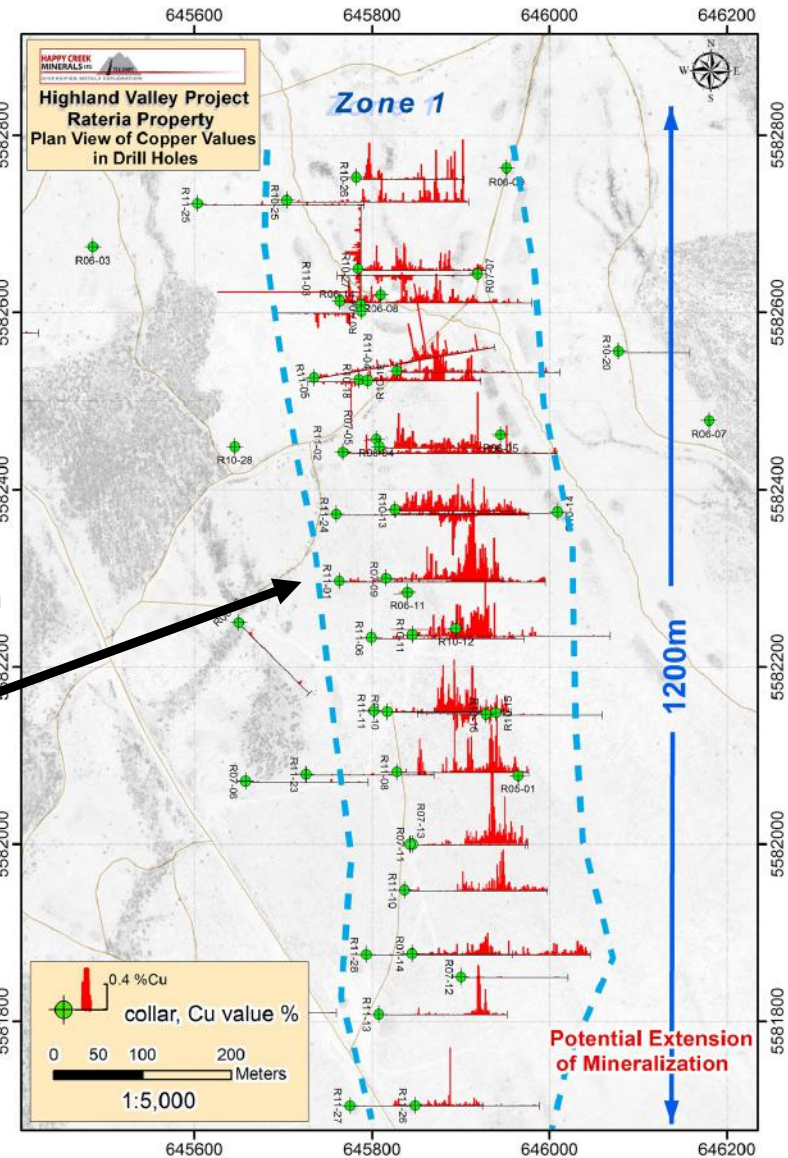
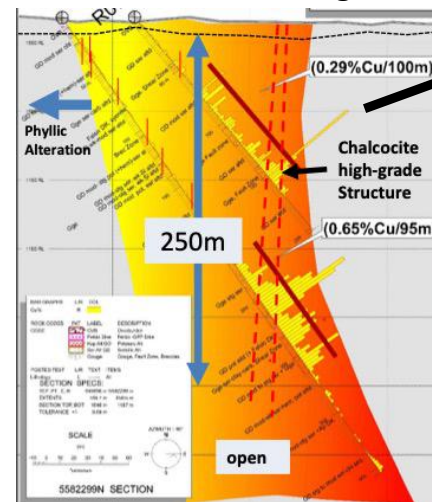
Discovered by follow-up of nearby historical trenches and shallow drilling with good alteration and hints of copper



- Happy Creek IP anomaly led to drilling discovery beneath 15m of glacial till
- Skeena phase granodiorite cut by dikes
- Drill defined: 1200 m long by 50-150 m wide and 350 m deep
- Open to depth and south with minimal drilling on flanks
- Mainly chalcocite-bornite with chalcopyrite on fringes
- Preliminary met testing show potential for high recoveries, clean concentrate with 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
<b>includes</b>	<b>102.5</b>	<b>0.43</b>	<b>2.9</b>

Cross-Section Looking North





# Zone 2 Discovery (Cu-Au-Mo-Ag-Re)

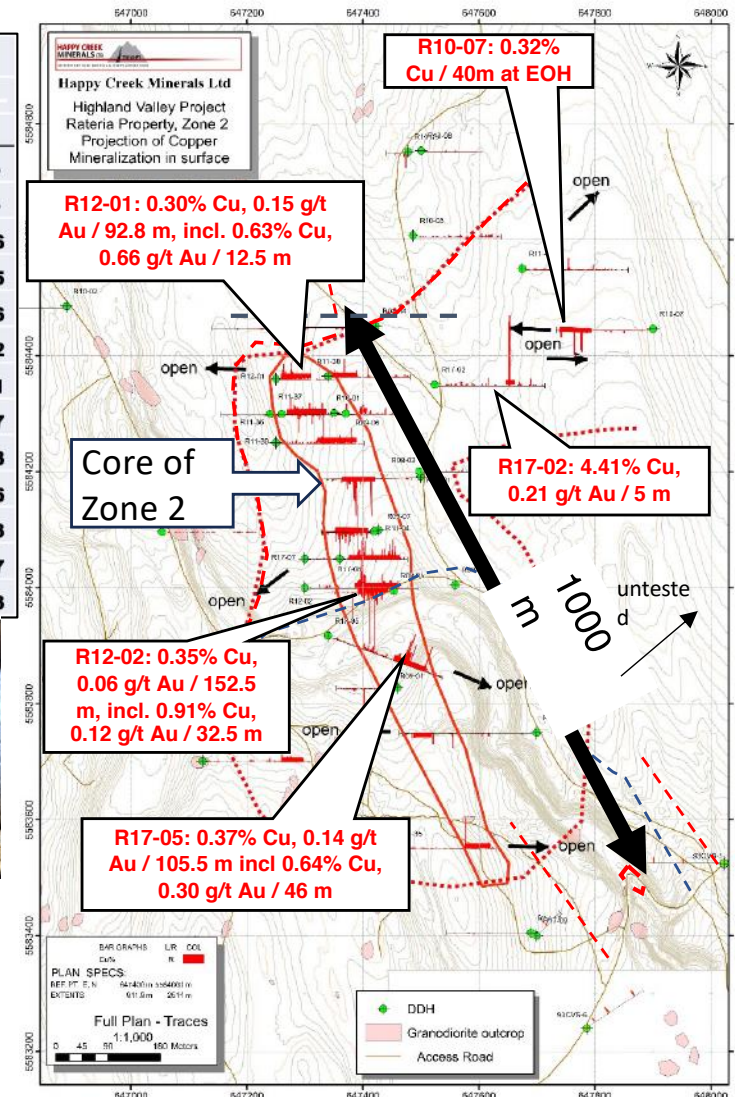
Discovered by follow-up prospecting in a recent clearcut, close to a Happy Creek IP anomaly, with nearby limited historical drilling that showed positive alteration and hints of copper.

- Blind discovery by Happy Creek beneath 15-20m glacial till
- Hosted by Chataway granodiorite cut by Bethlehem porphyry dikes
- Quartz, chlorite, sericite, k-spar alteration
- >1000 m x 100 m x 350 m deep zone and open (depth, NE, NW)
- Dominantly bornite and chalcocite mineralization; low in pyrite
- High-grade copper zones with gold, silver, moly and rhenium values

ZONE 2 DDH Highlights						
Zone 2 Hole	Interval (m)	Cu %	Ag g/t	Mo %	Au g/t	Re 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



R17-02 chalcocite veining: Portion of 5.0m grading 4.41% Cu, 20.0 g/t Ag, 0.21 g/t Au, 0.031% Mo, 6.86 g/t Re



# Recent Work

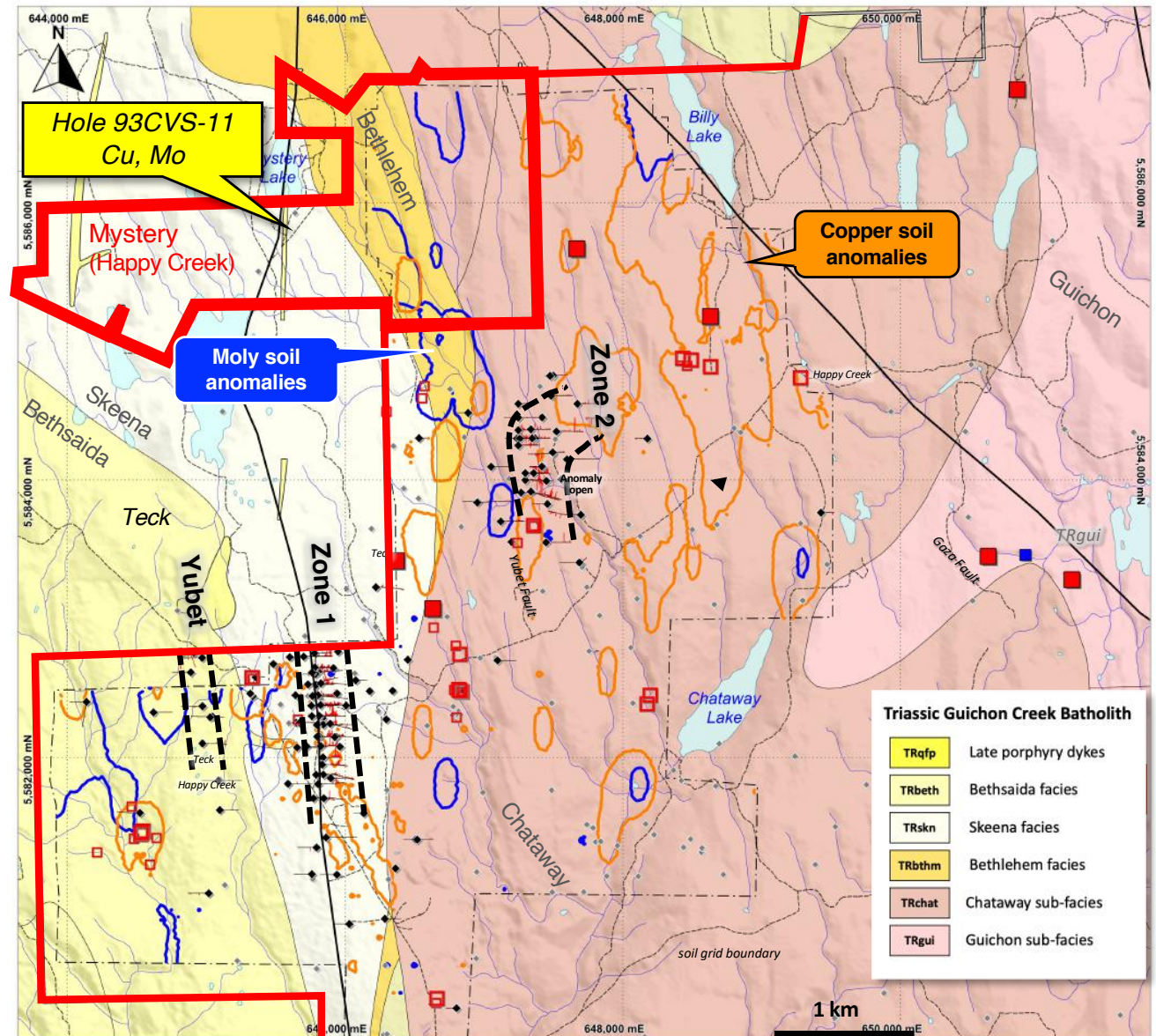
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- Mystery property acquisition (2021)
- Soils (till)
- Ground AMT resistivity survey
- 3D Inversions - Mag and AMT Res
- Follow-up prospecting and mapping
- Targeting for large new porphyry centres using all data and research



# Mystery Property Acquisition (December 2021)

- Key 438 hectare property
- Prospective phases and porphyry dikes
- 3 holes by Hudbay in 1993
- Hole **93CVS-11** cut a 230 m width of intense sericite and k-spar alteration with quartz-bornite-chalcocite stockwork veining:
  - 3 m @ 1.36% Cu, 11.8 g/t Ag
  - 12 m @ 0.27% Cu
  - 21 m @ 0.07% Cu to within 1.5 m of EOH @ 300.5 m)
- Only partially sampled, with no gold assays
- 22 historic trenches to NE with no drilling
- Strong mag low and deep IP chargeability

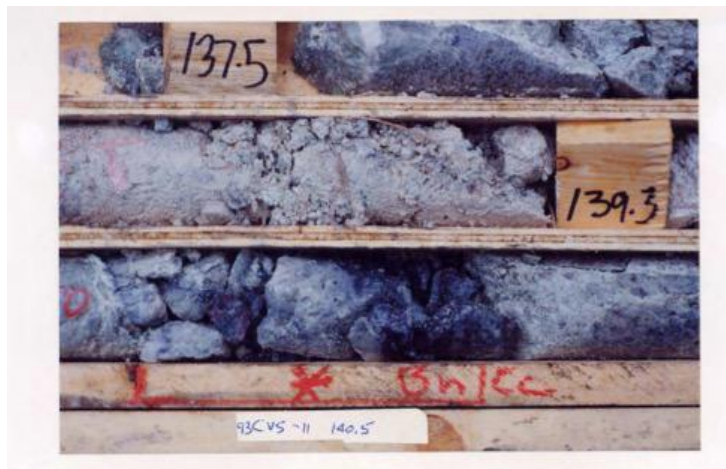


# Mystery - Hole 93CVS-11

(Hudbay, 1993)



- Quartz vein stockwork with bornite-chalcocite, with intense sericite overprinting k-spar alteration. Hematite after magnetite.



High grade bornite-chalcocite-quartz vein. Note intense, pervasive sericite II alteration in adjacent core rows.

Core photos from Hudson Bay Report by S.G Enns, 1993 (PF804381)

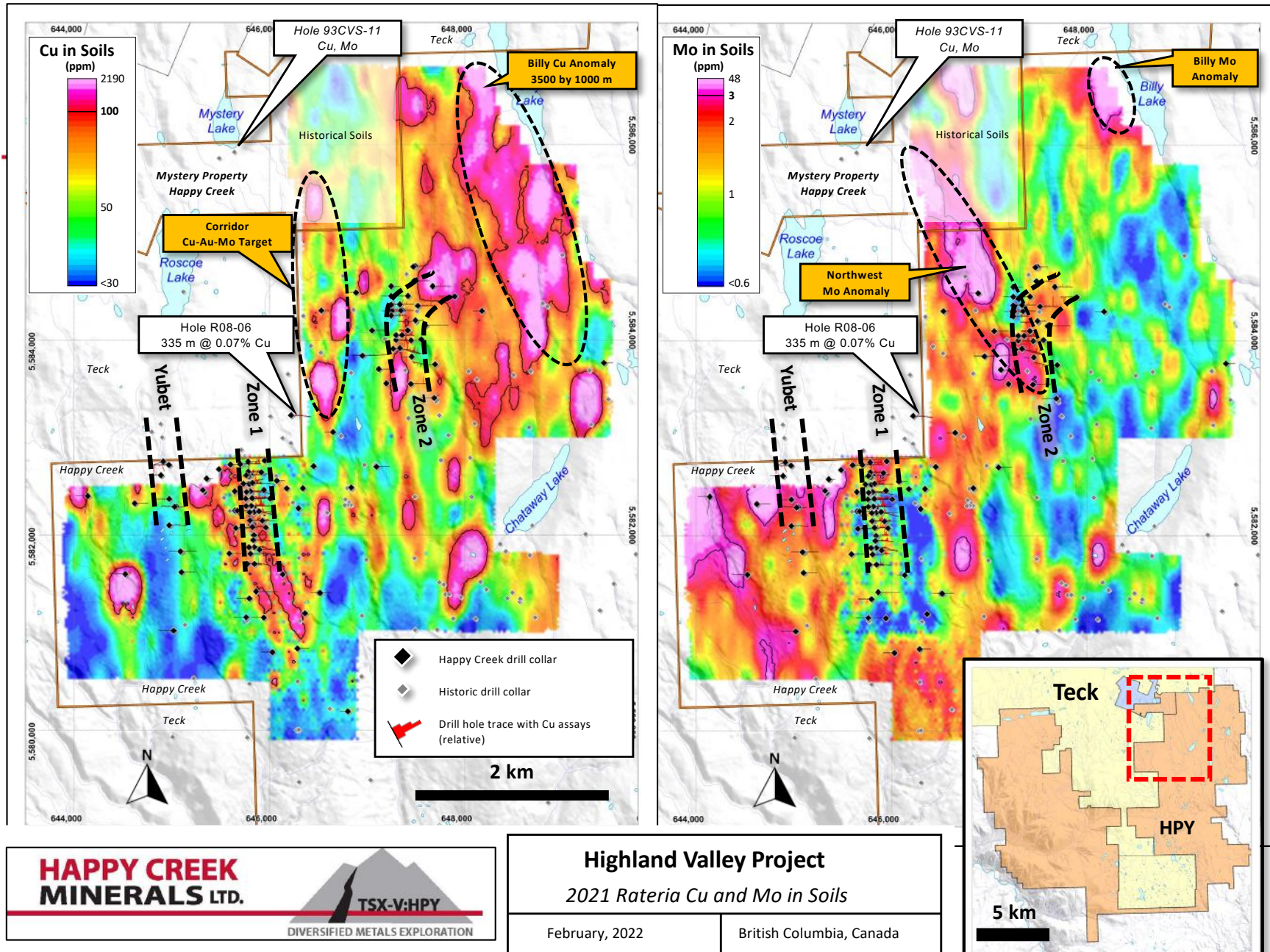


Quartz stockwork zone with bornite-chalcocite-quartz veins. Note sericite II overprint on pink K-spar alteration, which displays specks of martitized magnetite altered to hematite.



High grade bornite-chalcocite-quartz vein in pervasive sericite II altered quartz diorite.

# Northern Rateria – Cu & Mo in Soils (till)



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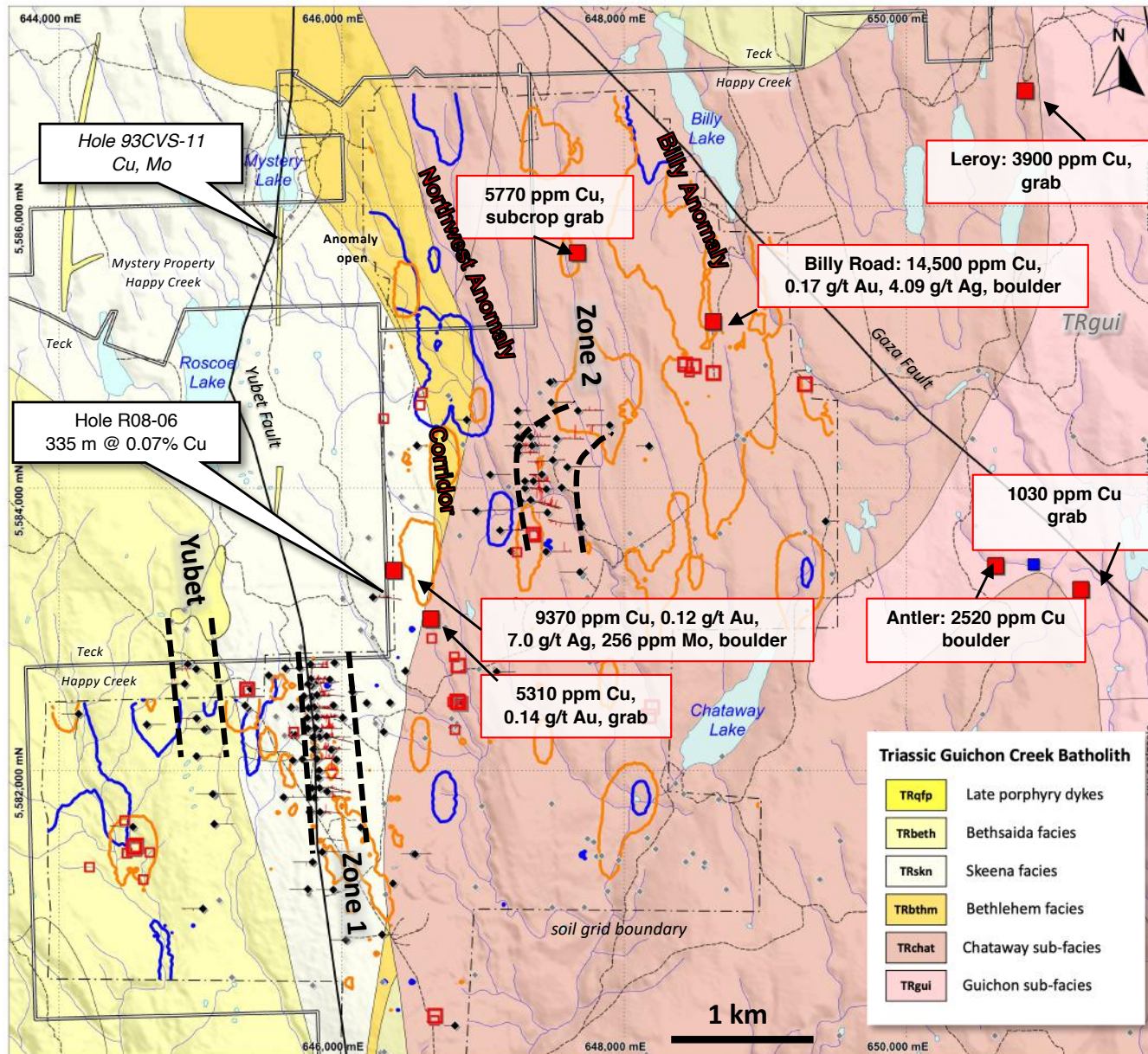
## Highland Valley Project

2021 Rateria Cu and Mo in Soils

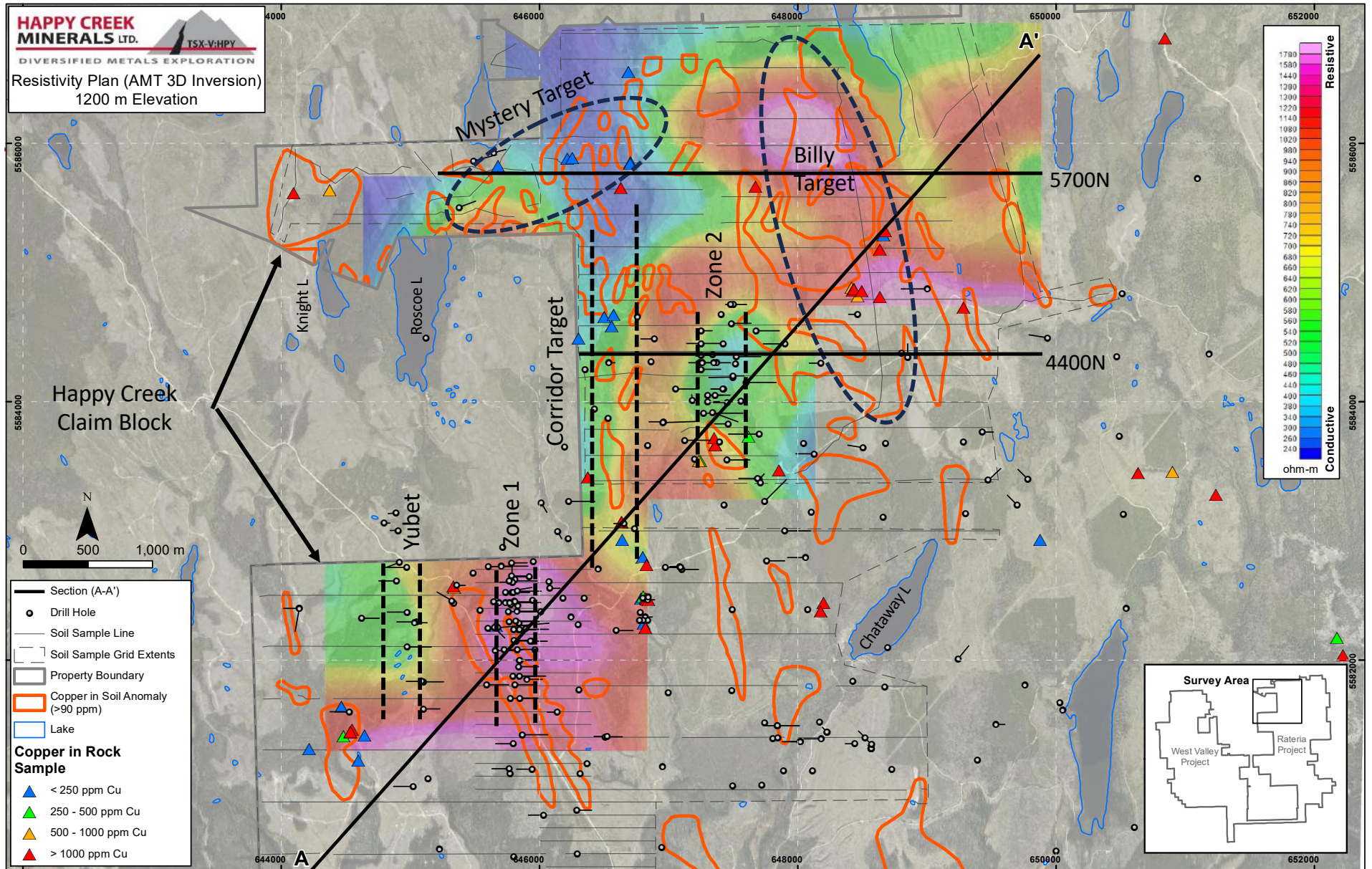
February, 2022

British Columbia, Canada

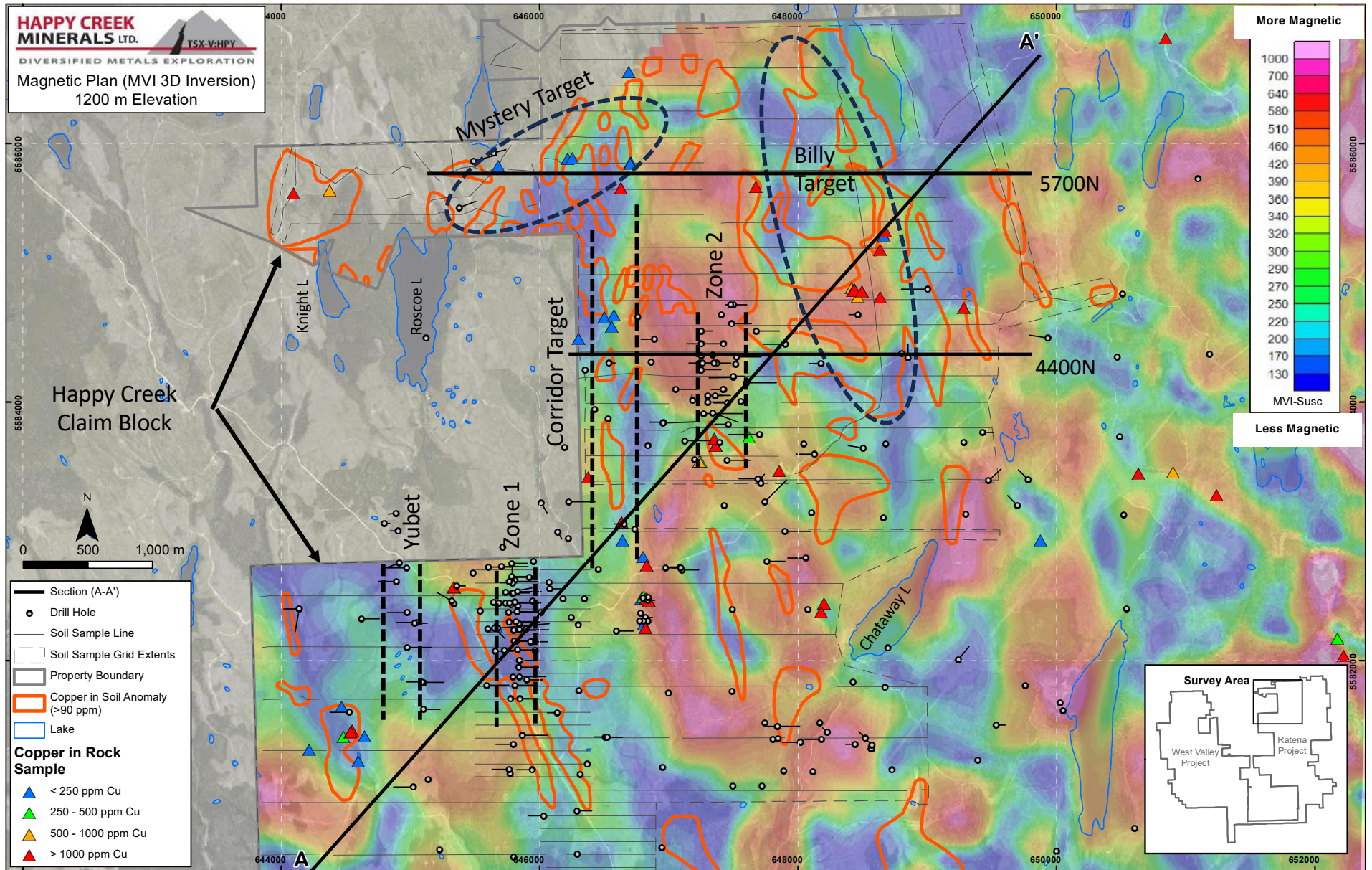
# Northern Rateria – Prospects and Geology



# Northern Rateria – Resistivity (2023 AMT 1200 m elev.)



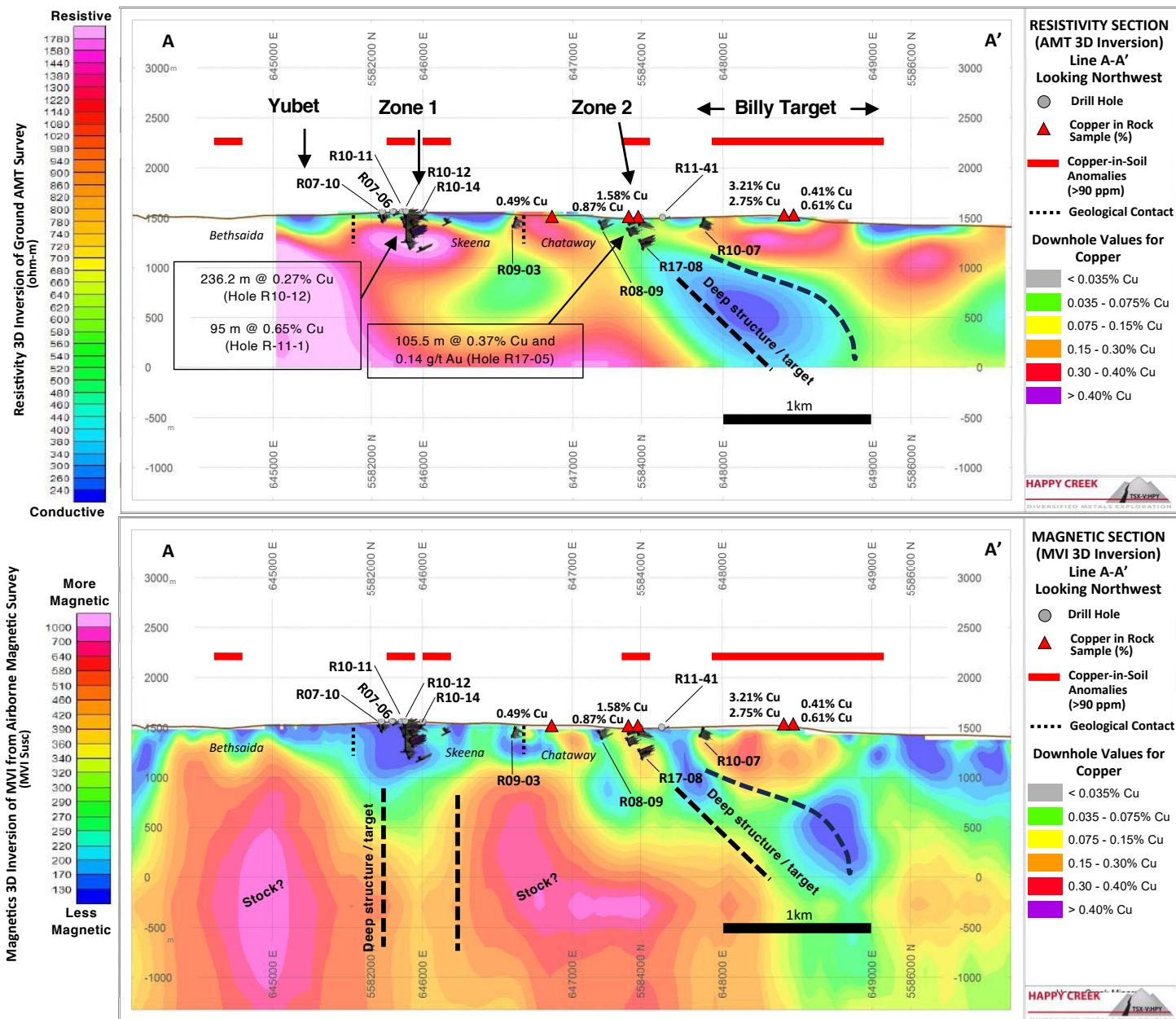
# Northern Rateria – Magnetics (MVI 1200 m elev.)



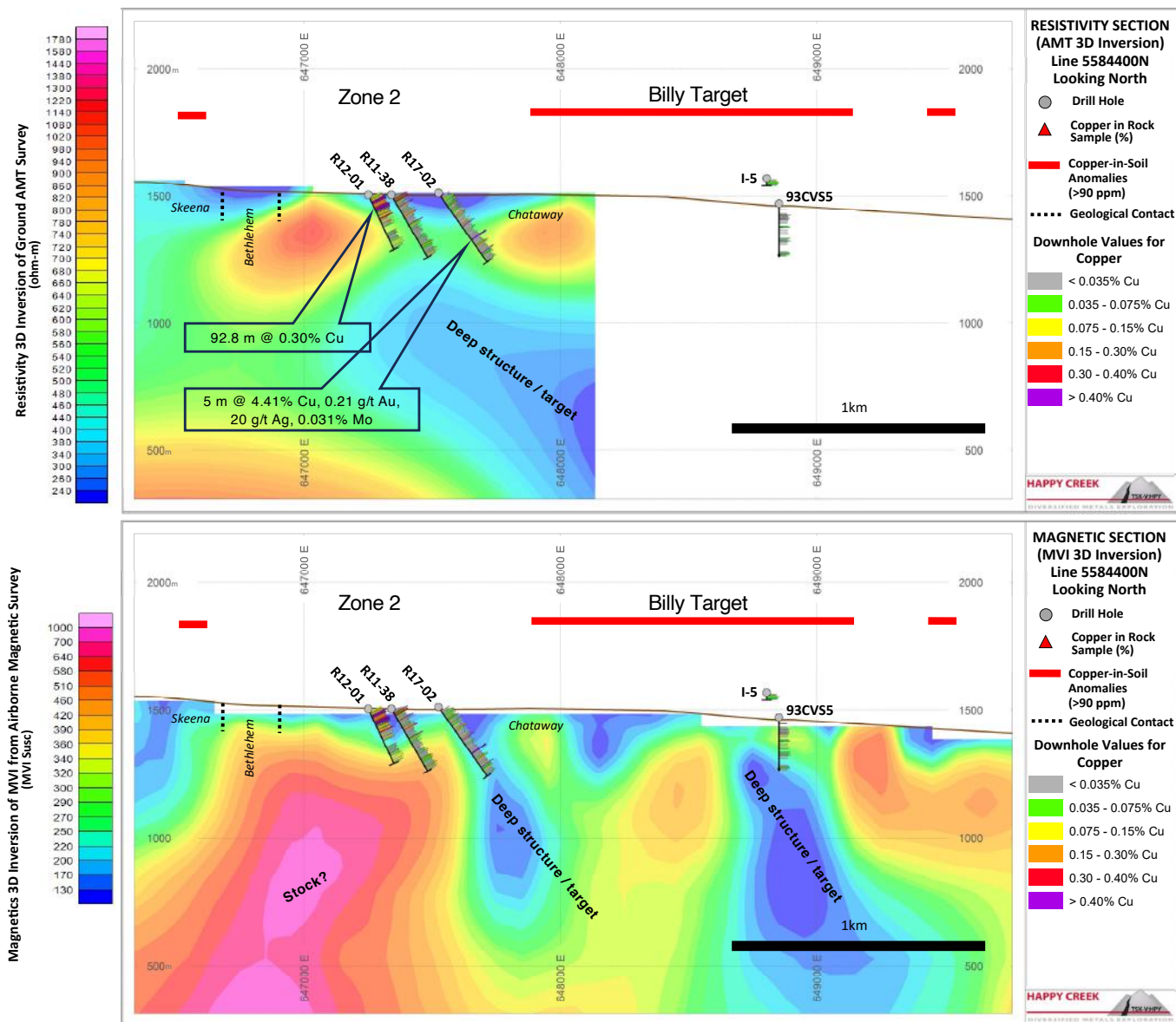


# Resistivity and Magnetics on Section A-A'

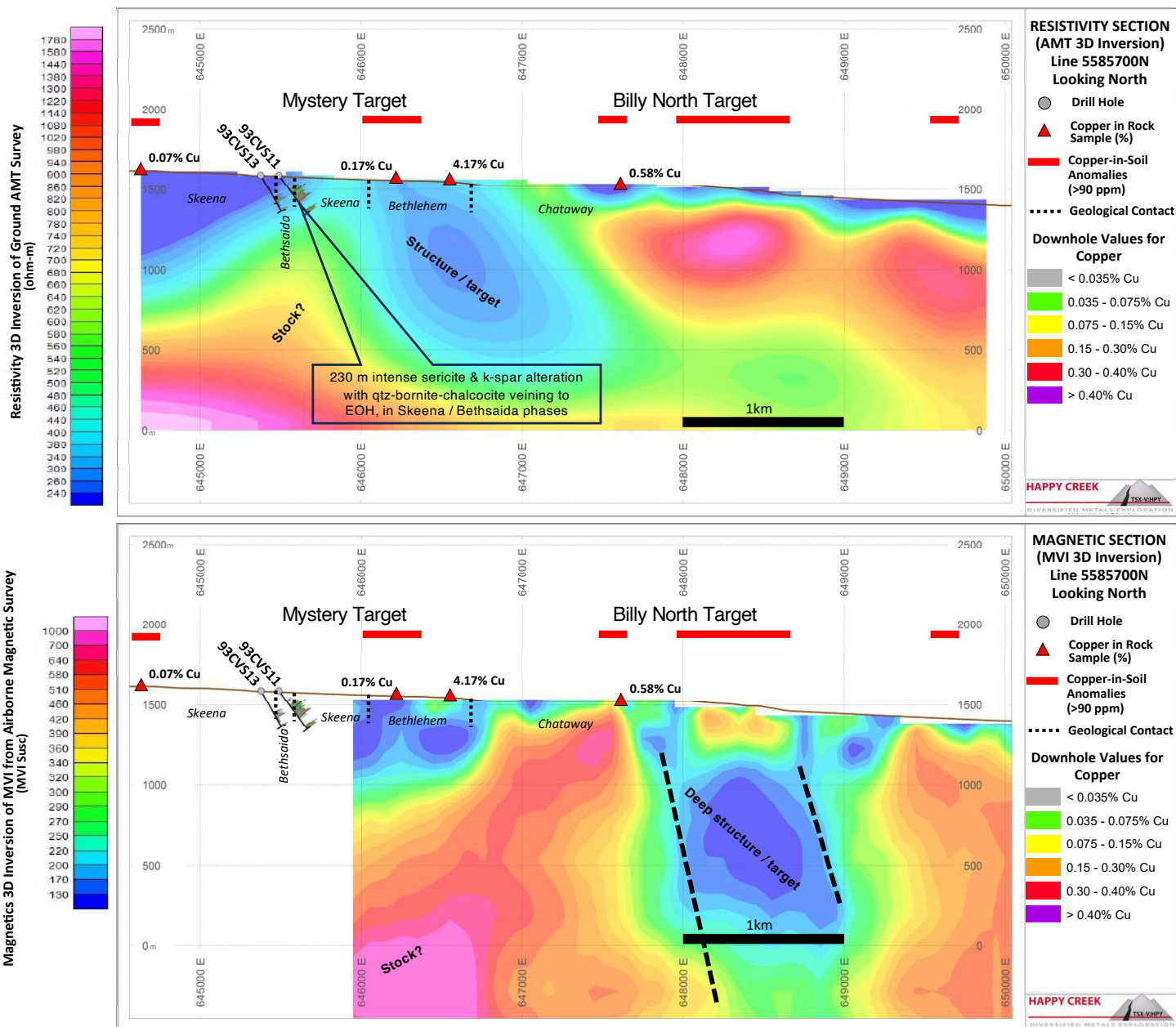
## (Looking Northwest)



# Resistivity and Magnetics on Section 4400N (Looking North, through Zone 2 and Billy targets)



# Resistivity and Magnetics on Section 5700N (Looking North, through Mystery and Billy North targets)



# Proposed Highland Valley Program

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- Pipeline of 25+ copper targets including the Zone 1 & 2 deposits
- Z1 & Z2 deposits were blind discoveries made by Happy Creek in recent years, and have been the main focus of drilling to date
- Company has proposed a \$3 million, two-phase program:
  - 10,000 m drilling in 25 holes (4000 m in Phase 1)
  - Field surveys to advance and refine more drill targets
- New targets selected using anomalous copper in soil and rocks, geology, and resistivity and mag features that have hallmarks of large and deeply-rooted porphyry centres
- Goal is to find very large, new porphyry copper deposits



# Summary

## Highland Valley Project

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- Focus on discoveries in Canada's most prolific copper district
- Large, lightly explored property in the "right rocks"
- \$3 million exploration proposed, including 10,000 m drilling
- Fully permitted for low-cost, year-round exploration
- Proven, invested, successful team
- >\$10 million in work and data
- New targets refined from new data and ideas
- Step out and drill-test our highest ranked, lightly explored targets that have hallmarks of large porphyry centres



# Extra slides

# Priority Drill Targets

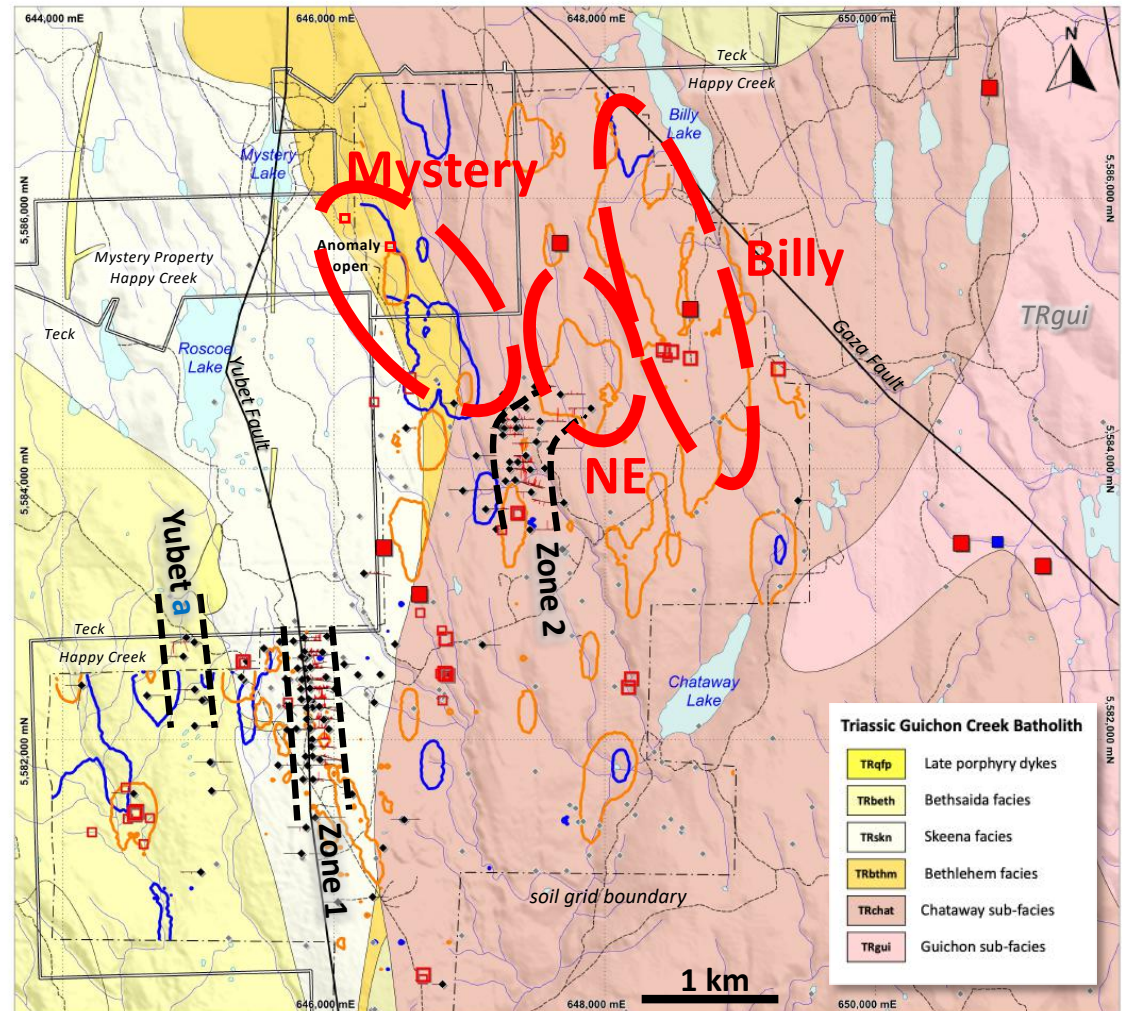
**Zone 2 NE Target:** 500 m wide Cu soil anomaly with mag low and induced polarization (IP) anomalies. Deep mag and AMT features. Only 3 previous holes, 2 with promising results:

- 5 m of 4.41% Cu, 0.21 g/t Au
- 40 m of 0.32% Cu at end of hole

**Mystery Target:** 2000 m trend of Cu and Mo soil anomalies underlain by Skeena, Bethlehem phases & dikes, Deep mag and IP features. Shallow IP anomalies. Three historical holes (Hudson Bay Mining, 1993)<sup>1</sup> on the western side of the target includes one that cut a 230 m interval with favorable sericite and k-spar alteration and quartz veining to the end of the hole. Core only partially sampled but returned:

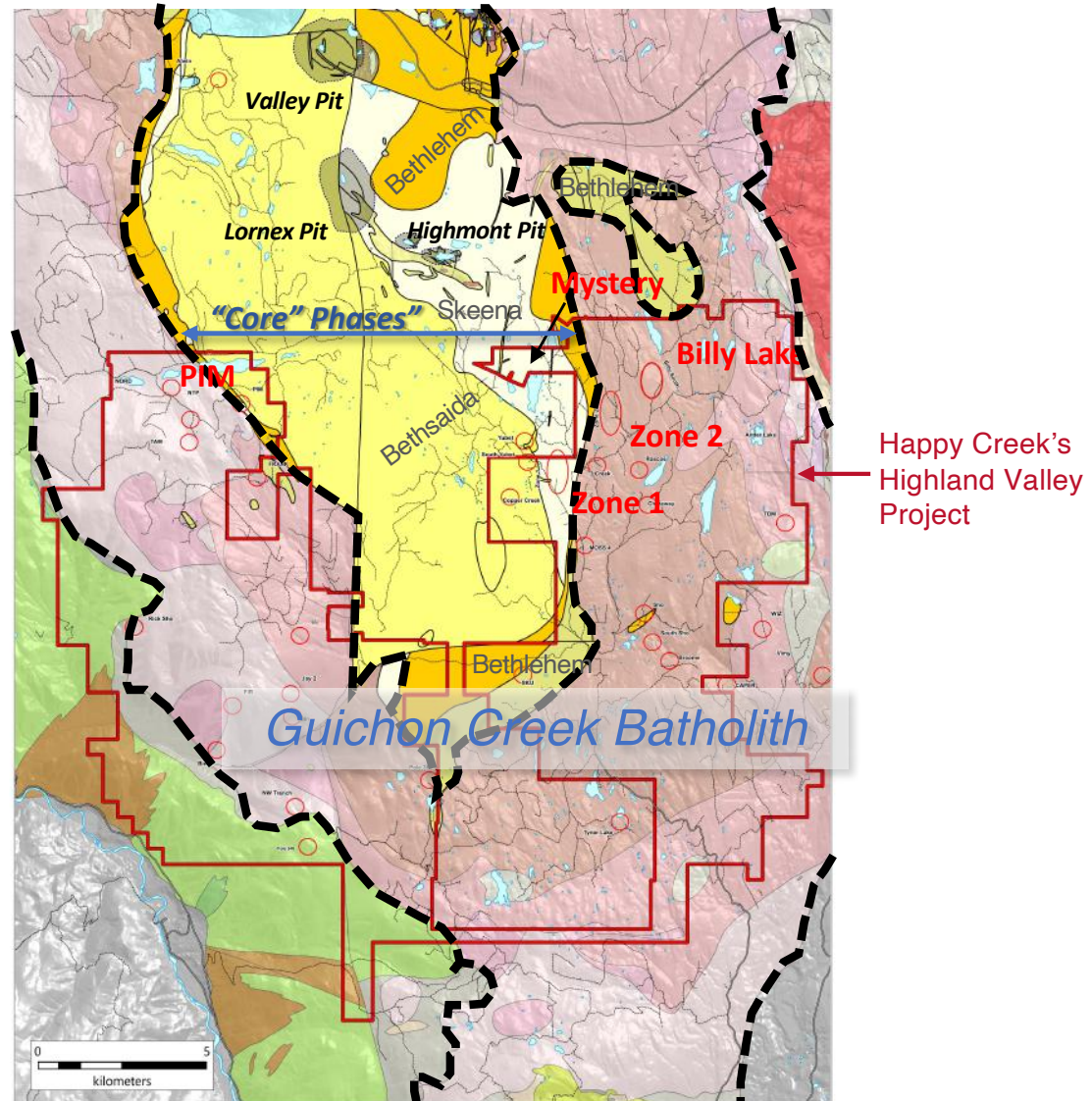
- 3 m of 1.36% Cu
- 12 m @ 0.27%
- 21 m of 0.07% Cu to within 1.5 m of end of hole<sup>1</sup>

**Billy Target:** 3500 m long Cu +/- Mo soil anomaly with copper in historic trenching. Deep magnetic and AMT anomalies and shallow IP anomalies. Only tested by one historic drill hole with widespread copper values<sup>1</sup>. Merging of regional north and NW fault zones. Grab samples to 1.45% Cu<sup>2</sup>



# Applying Regional Geology and Mineral Deposit Studies

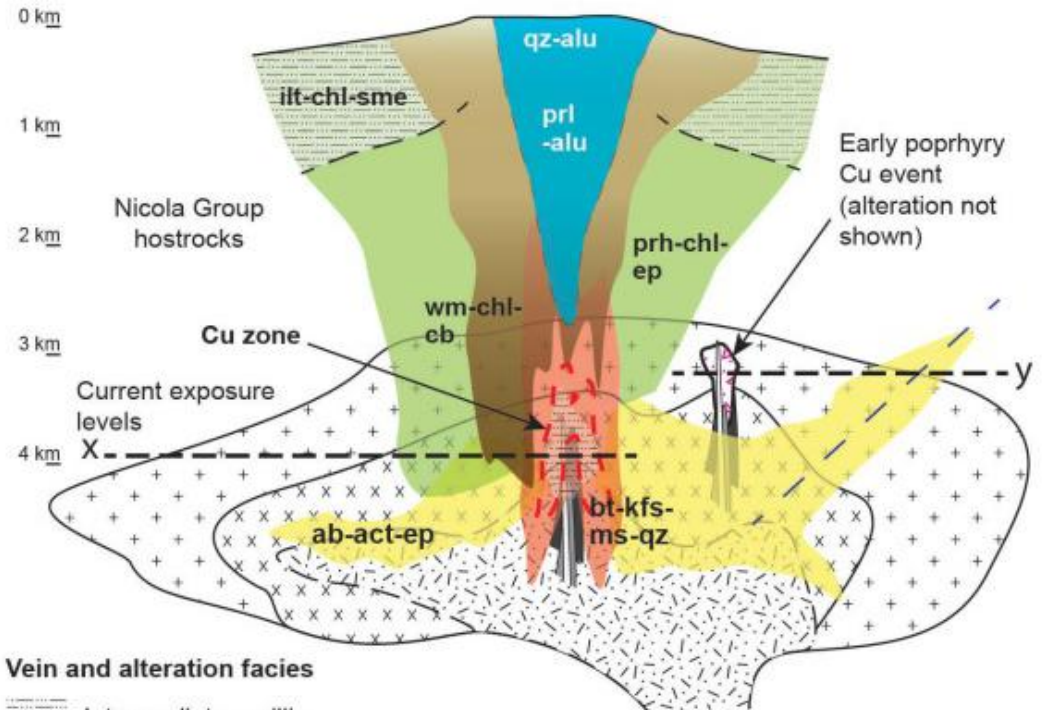
- Our Highland Valley Project covers the southern third of the zoned Guichon Creek batholith
- Deposits are all slightly different
- The main pits and deposits are mainly in the younger, more felsic, “core” phases (yellow, orange)<sup>3</sup>
- Older and slightly more mafic phases (pink) also have deposits and targets, often associated with younger dikes
- Four main porphyry mining centres defined (so far)
- Two pulses (ages) of porphyry mineralization
- Our Zone 1 & 2, Mystery and other prospects occur in or near the core phases and related dikes
- Numerous copper prospects on our claims are associated with porphyry dikes and large structures
- Terraspec white-mica alteration studies indicate prospects associated with porphyry systems



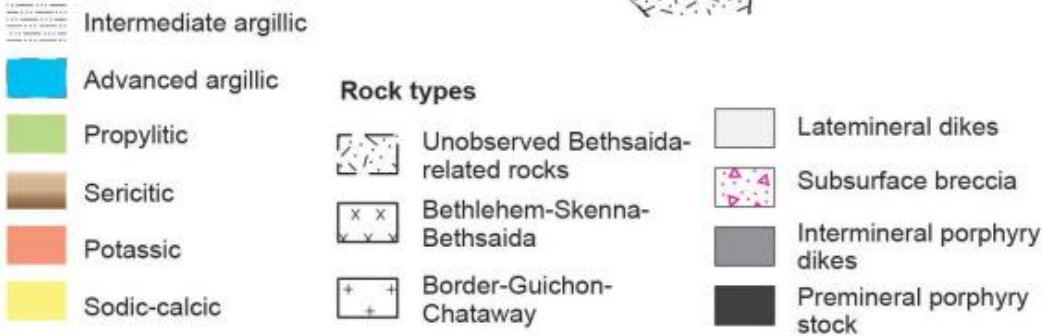


# Applying the Highland Valley Deposit Model

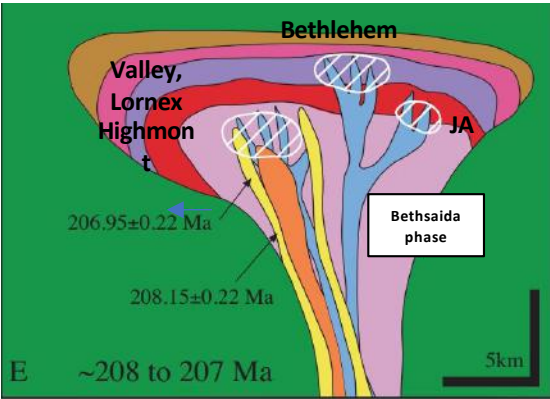
- New studies continue to refine the model and exploration tools
- Deep systems with multiple centres and ages
- Deposits are all slightly different in terms of deposit position, host rocks, alteration etc
- Potential for discovery of new porphyry centres



## Vein and alteration facies



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



# Modern Regional Geophysical Modelling



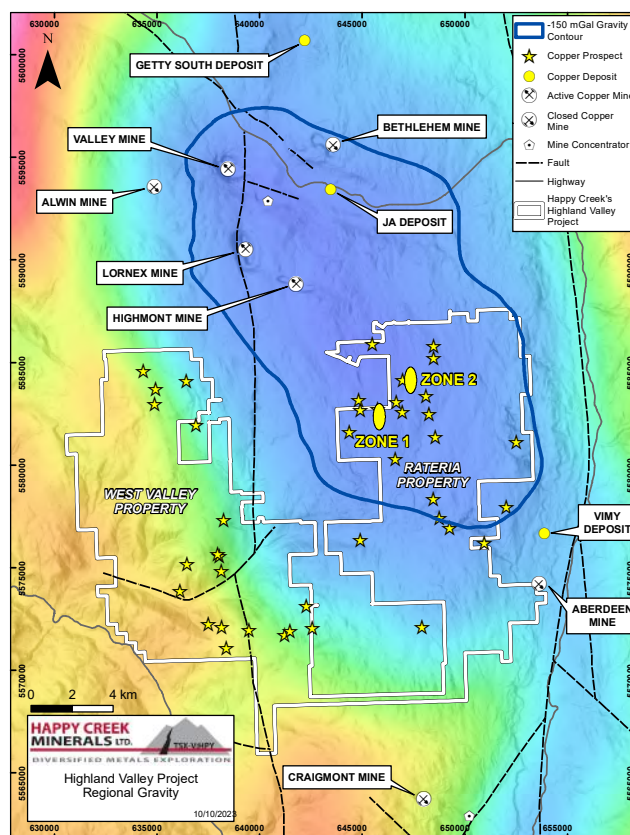
Most deposits found so far in the Guichon Creek batholith, including Happy Creek's targets, are in the core of batholith outlined by:

**Regional gravity low (blue on left)**  
(associated with less dense felsic core phases)

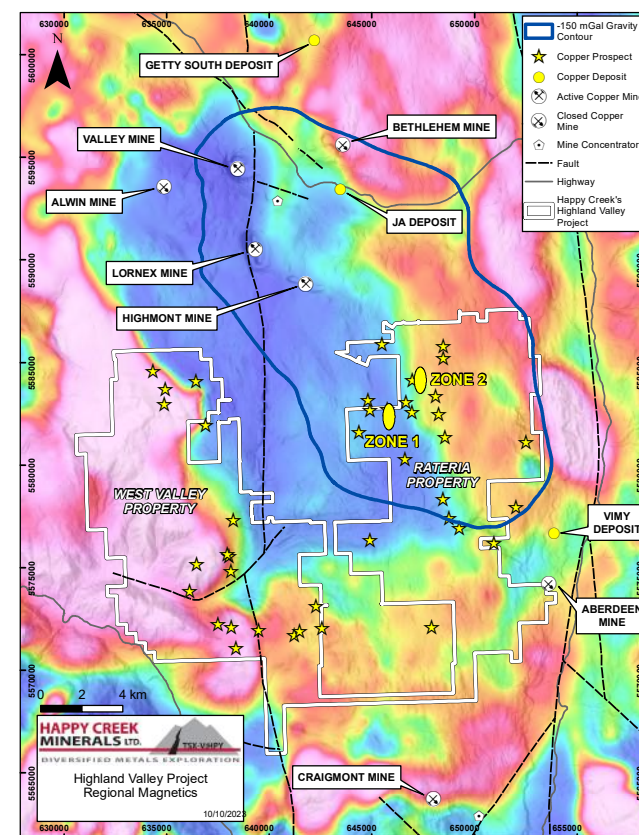
**Magnetic lows (blue on right)**  
(associated with felsic phases, structures, and/or altered rocks)

Certain major faults are also mag lows and can be associated with copper deposits

## Regional Gravity (Bouguer)



## Regional Magnetics (RTF)

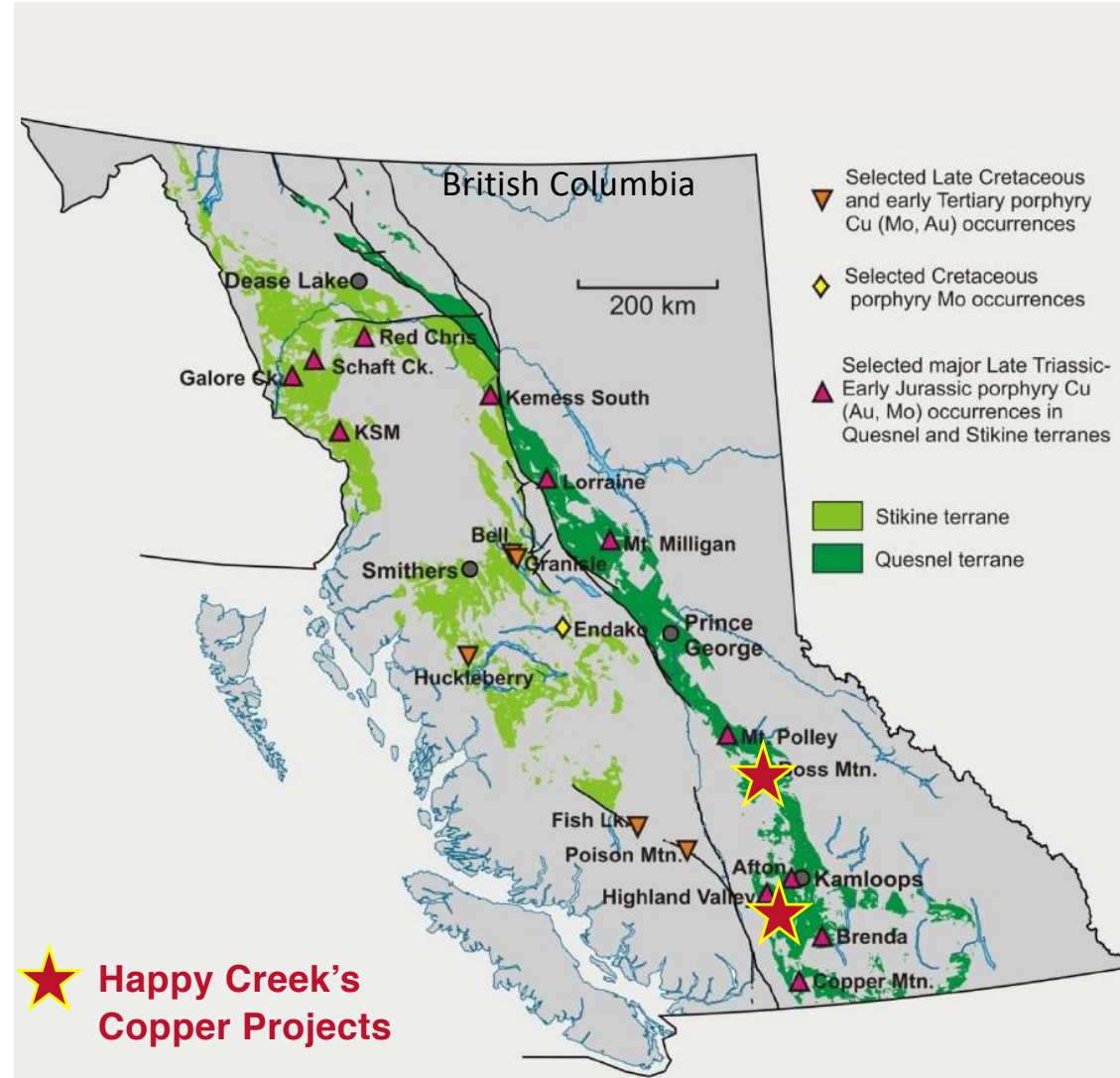


# British Columbia

## A Tier 1 Copper Jurisdiction



- >\$5.5 billion in recent mining M&A
- Recent approvals for large mines
- World-class copper endowment: 53% of Canada's copper production from BC in 2022
- Low-cost renewable hydropower
- Experienced workforce
- All Happy Creek's projects are in the heart of the Highland Valley and Cariboo mining districts in southern BC



# Thank you

For more information please contact:

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