

# Happy Creek Reports on New Copper Targets at Highland Valley

March 11, 2024, Vancouver, British Columbia – Happy Creek Minerals Ltd. (TSX-V: HPY) ("Happy Creek" or the "Company") is pleased to announce the results of field work and geophysical modelling completed at the Company's 100%-owned, 240-square-kilometre Highland Valley project in southern British Columbia.

# Highlights:

- A deep-looking, audiomagnetotelluric ("AMT") survey was completed in December, 2023 in the northern part of the project area. The data was further processed by 3D inversion modelling. This method is useful in identifying geology and areas of sulphide mineralization, rock fracturing and alteration which can be closely associated with porphyry copper mineralization.
- The AMT work successfully identified several very large resistive or conductive anomalies over one kilometre in diameter and extending to depths of greater than one kilometre. These features occur beneath or in proximity to known porphyry copper-molybdenum-gold-silver mineralization in rock and soil at surface, or in shallow drill holes.
- In addition, new 3D inversion modelling of airborne magnetic data has identified similarly large and deep anomalies, with kilometre-scale footprints and depth extents. The most interesting features are magnetic lows which are interpreted to represent younger, low-magnetic felsic intrusions and/or altered rocks that may be associated with untested copper mineralization extending to depth. Some of these are associated with the AMT anomalies.
- Interpretation of new soil and stream sediment geochemical survey results has identified multiple copper anomalies of up to 500 by 750 m in diameter, particularly in the Mystery Zone 2 trend, north of Knight Lake, and southeast of Billy Lake.
- Rock sampling in the Abbott area of the West Valley property discovered several new bedrock occurrences of copper mineralization with grab samples returning up to 0.32% copper. Sampling of trench dump material from the historical "TAR" MINFILE showing assayed 2.37% copper, 100 ppm molybdenum and 31.8 ppm silver.
- Overall, the results have identified multiple new anomalies both near surface and at depth that will be targeted for future drill testing.

**Michael Cathro, Happy Creek's President and CEO commented:** "The new geophysical, geochemical and rock sampling results provide further evidence for a large-scale copper porphyry deposit at our Highland Valley Project. The results suggest that known near-surface copper mineralization could extend to depths greater than one kilometre. The work also identified new copper mineralization at surface in areas with limited historic drilling. We are very excited about these results and plan to drill test the new geological and geophysical anomalies as soon as possible."

# The Highland Valley Project

The Company's 100-percent-owned Highland Valley Project, comprising the contiguous West Valley and Rateria properties, totals approximately 240 square kilometres. Happy Creek's Highland Valley Project is adjacent to Teck's Highland Valley Copper (HVC) mine that is Canada's largest copper mine with continuous production over a 60 years (See Reference Note 1).

Happy Creek's Zone 1 and Zone 2 discoveries, which lie just 6.5 kilometres southeast of HVC's Highmont open pits, show laterally continuous mineralization that has been outlined with 28,000 metres of drilling and remain open in several directions.

#### 2023-2024 Field Work and Geophysical Processing

As announced on December 18, 2023, the Company recently completed rock and soil geochemical sampling, a deep-looking ground audiomagnetotelluric (AMT) survey, and 3D inversion modelling of AMT resistivity and airborne magnetic data. The geophysical survey and modelling were conducted by Peter E. Wallcott and Associates Limited and focused on the northeastern part of the property covering the Zone 1 and Zone 2 copper deposits and nearby targets (Figure 1). Geological work and rock sampling was also performed on the Abbott area in the southwestern part of the property.

#### **Geophysical Survey Results**

In December 2023, Happy Creek completed a ground-based AMT survey on the Highland Valley Project. This was the first AMT survey ever completed on the project and has successfully identified several very large and deep resistive or conductive features partially coincident with known mineralization at surface and in drill holes (Figures 2 and 4). The AMT survey results indicate areas with high resistivity that may potentially represent important younger-aged felsic intrusions, and/or low resistivity (more conductive) areas that are interpreted to represent rock-fracturing, structures and associated alteration. Both are useful to interpret geology which can be associated with buried copper porphyry mineralization. (See news release of December 18, 2023 for further details).

Several strong, deep, sub-circular magnetic low anomalies are seen in the 3D inversion modelling (Figures 3 and 4). These are interpreted to represent younger, low-magnetic felsic intrusions and/or altered rocks that may be associated with untested mineralization extending to depth. They occur in proximity to known mineralization and/or untested soil and rock copper geochemical anomalies.

#### **Rateria Soil, Stream Sediment Sampling Program Results**

In 2023, the Company collected 165 reconnaissance soil (glacial till) and 10 stream sediment geochemical samples in the north part of Rateria property. The results indicate several new areas of interest at the Mystery Lake target, the Knight Lake area and southeast of Billy Lake. The thickness and composition of glacial till is variable, and therefore, care must be taken interpreting the results.

Soil samples returned values from 18 to 1,580 ppm copper and 1 to 293 ppm molybdenum. Based on several thousand samples collected by the Company and others over the years, values for greater than 90 ppm copper and 3 ppm molybdenum are considered minimum anomalous values (85<sup>th</sup> percentile) in this environment.

Several new or expanded soil and stream sediment geochemical anomalies were outlined, particularly in the Mystery – Zone 2 corridor, north of Knight Lake and southeast of Billy Lake. These anomalies have received only cursory exploration and almost no drilling. Copper-in-soil anomaly outlines are shown on Figures 2 and 3.

Values from the stream sediment samples range from 220 ppm to 3,250 ppm copper and 2 to 80 ppm molybdenum with 5 samples greater than 500 ppm copper.

Figure 1 – Geology plan map of Highland Valley project showing key Happy Creek deposits, prospects and targets in red, and location of Figures 2 and 3.



# **Review of Key Target Areas**

#### Zone 1 and Yubet Target

Previous drilling at the Zone 1 copper deposit has encountered broad and locally strong grades of copper mineralization including 236 metres (m) grading 0.27% copper (Cu) in drill hole R10-12, and 95 m grading 0.65% Cu in hole R11-01. The copper mineralization has been defined over a strike distance of approximately 1,200m and to a depth of approximately 250m and remains open to depth.

The new 3D geophysical modelling over Zone 1 indicates it is underlain by a circular resistivity high, and a strong north-trending magnetic low feature, both of which extend to depth (Figures 2, 3, 4). Based on previous drilling results, the magnetic low is associated with porphyry-related fracturing, alteration and copper mineralization near-surface, and the magnetic low feature extends to more than 1500 m below surface. Sub-circular and linear shaped strong magnetic low features to the southeast and west, including the Yubet target, are only sparsely drill tested and represent similar, parallel targets as Zone 1.

#### Zone 2, Zone 2 NE and Billy South

Drilling at Zone 2 has traced porphyry copper-molybdenum-gold-silver mineralization over a length of 1000 m and to a depth of 300 m. It remains open in several directions. Highlight results include 105.5 m grading 0.37% Cu and 0.14 g/t Au, including 46 m grading 0.64% Cu and 0.30 g/t Au in hole R17-05, and 152.5 m grading 0.35% Cu and 0.06 g/t Au in R12-2.

The 3D geophysical modelling results indicate the mineralization occurs above and on the flank of a coincident resistivity high and magnetic high (See Figures 2, 3, 4). Strong magnetic lows extend to depths of 700 m to the east and west of the zone, and a very prominent sub-circular resistivity low (conductivity high) extends to depths of greater than 1000 m below surface and is coincident with the magnetic low to the east. This area, known as the Zone 2 NE target, has a strong copper-in-soil anomaly and has been only tested by three drill holes. Hole R17-02 returned 5 m grading 4.41% Cu, 0.03% Mo, 0.21 g/t Au, 20 g/t Ag and 6.86 g/t rhenium (Re).

Further east, additional deep magnetic and resistive features are associated with the south end of the 3.5-kilometre-long Billy copper-in-soil anomaly. Grab rock samples at the Billy Road prospect have returned values in the range of 1-3% copper with corresponding anomalous gold and silver values. One historic drill hole, 93CVS-5, tested a small portion of this very large target, and returned anomalous values up to 0.11% copper<sup>1</sup>.

# Mystery and Billy North

The Mystery target area is located approximately 3.5 km southeast of the Highmont open pit<sup>1</sup> (Figure 1). Mystery covers an area of approximately 2,500 m by 1000 m and includes historic drill hole 93CVS-11 that is reported to have cut 230 m of intense sericite and potassium feldspar alteration, quartz-sulphide veining and several short zones of porphyry-style copper-molybdenum mineralization extending to the end of the hole (see news release of October 11, 2023 for further details). A second hole located 400 m to the southwest, 93CVS-13, cut weaker mineralization. The Mystery target is underlain by Bethsaida, Skeena and Bethlehem rock units (Core Phases) which host the main deposits in Highland Valley.

The AMT model defines a 500 m by 500 m resistive high near hole 93CVS-11 that extends to greater than 1500 m depth. The resistive anomaly is surrounded by two broad conductive zones (low resistivity) with a coincident strong magnetic low extending to greater than 750 m below surface. New copper-molybdenum soil geochemical anomalies were defined by 2023 surface sampling in the Mystery target areas. Six hundred metres to the east of hole 93CVS-11 and in

the heart of magnetic and resistivity low features, an outcrop of sericite-altered quartz diorite with local quartz veins and trace copper minerals was found in 2023, and a grab sample returned 0.165% copper. A historical rock sample containing 1.45% copper is located 250 m southeast<sup>1</sup>.

At the Billy Lake North target to the east, geological work in 2023 located outcrop with dikes of the favorable younger intrusive phase, cut by quartz-sericite veins. Assays of grab rock samples returned up to 1.35% copper and 0.031 ppm gold, confirming that the 3.5-kilometre-long Billy Lake copper soil anomaly is associated with in-place porphyry-style mineralization. In this area, geophysical modelling indicates a strong, irregular shaped magnetic and resistivity low (conductive zone) extends to over 1500 m below surface (Section A-A'). Together these features are interpreted to represent a potential altered porphyry centre beneath anomalous copper in soils and rocks at surface. There is no record of previous drilling in this area.

#### West Valley Prospecting and Mapping

In the Abbott area of the West Valley claim block, field investigations were conducted in an area affected by extensive 2021 forest fire damage, road building and salvage logging, which provide new rock exposures. Mapping shows the Guichon Creek batholith is in northwesterly contact with Nicola Group volcanic sediments to the southwest, and the younger Spences Bridge Group overlies the older rocks. Numerous copper showings occur in the Guichon Batholith and the Nicola Group rocks.

In 2023, additional copper showings with skarn-like character were located within the Nicola Group, and a quartz vein with chalcopyrite returned 0.322% copper. This sample occurs adjacent to an IP geophysical anomaly and the regional-scale Lornex fault.

The historical TAR showing was located and a sample of trench dump material containing chalcopyrite, bornite and chalcocite returned 2.37% copper, 100 ppm molybdenum and 31.8 g/t silver hosted by Guichon batholith diorite. Green feldspar porphyry dikes, k-feldspar, quartz, chlorite, epidote and sericite alteration with copper-molybdenum values are similar to several other copper showings up to 3-4 km away in the Abbott-Skuhun creek area that together indicate potential for a large-scale mineral system.

The interpreted results of the geophysical, soil, sediment and rock sampling survey results are shown in the following compilation maps and sections.

# **Qualified Person Statement**

The technical and scientific contents of this release have been prepared, verified and approved by David Blann, P.Eng., a director of the Company, and a qualified person pursuant to National Instrument 43-101 – Standards of Disclosure for Mineral Projects. Rock, soil and stream sediment samples are prepared and analyzed at ALS Canada Ltd in North Vancouver, B.C., ISO/IEC 17025:2017accredited in North America. Soil and stream sediment analyses are analyzed by method Prep-41, screen to -180um, ME-ICP41 aqua regia digest and 30 gm fire assay gold by Au-ICP21. Results are provided in ppm. Rock samples are analyzed using method Prep 31 and 4 acid digestion ME-MS-61 ICP-MS, and 30 gm fire assay gold by method Au-ICP21. Samples returning greater than 10,000 ppm copper are re-run utilizing 4 acid ME OG62/ ICP-AES providing values in percent (%) copper.

#### **References and Disclosure**

Note 1 - 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 is based on publicly available information and cannot not be relied upon as the Company's QP, a term which was created and defined under NI43-101, has not prepared nor verified the historical information.

On behalf of the Board of Directors,

*"Michael Cathro"* President and Chief Executive Officer

#### FOR FURTHER INFORMATION, PLEASE CONTACT:

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#### About Happy Creek Minerals Ltd.

Happy Creek is focused on making new discoveries and building resources in proximity to infrastructure on the Company's 100-percent-owned portfolio of diversified metals projects in British Columbia.

Projects include the Highland Valley Project, adjacent to Teck's Highland Valley Copper Mine that has been in continuous production for over 60 years, the high-grade Fox Tungsten deposit, the Silverboss molybdenum-copper-gold-silver project adjacent to Glencore's closed Boss Mountain molybdenum mine, and the adjacent Hen-Art-DL gold and silver project.

Happy Creek is committed to responsible mineral resource development. The Company's priority is to build and sustain mutually beneficial relationships with Indigenous Communities in the territories in which the Company explores.

Additional information relating to Happy Creek Minerals Ltd. may be obtained or viewed on the SEDAR+ website at <u>www.sedar.com</u> or on the Company's website at <u>www.happycreekminerals.com</u>.

#### Forward Looking 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 release.

This press release contains "forward-looking information" within the meaning of applicable securities laws. including statements that address capital costs, recovery, grade, and timing of work or plans at the Company's mineral projects. Forward-looking information may be, but not always, identified by the use of words such as "seek", "anticipate", "foresee", "plan", "planned", "continue", "expect", "thought to", "project", "predict", "potential", "targeting", "intends", "believe", "opportunity", "further" and others, or which describes a goal or action, event or result such as "may", "should", "could", "would", "might" or "will" be undertaken, occur or achieved. Statements also include those that address future mineral production, reserve potential, potential size or scale of a mineralized zone, potential expansion of mineralization, potential type(s) of mining, potential grades as well as to Happy Creek's ability to fund ongoing expenditure, or assumptions about future metal or mineral prices, currency exchange rates, metallurgical recoveries and grades, favourable operating conditions, access, political stability, obtaining or renewal of existing or required mineral titles, licenses and permits, labour stability, market conditions, availability of equipment, accuracy of any mineral resources, anticipated costs and expenditures. Assumptions may be based on factors and events that are not within the control of Happy Creek and there is no assurance they will prove to be correct. Such forward-looking information involves known and unknown risks, which may cause the actual results to materially differ, and/or any future results expressed or implied by such forward-looking information. Additional information on risks and uncertainties can be found within Financial Statements, Prospectus and other materials found on the Company's SEDAR profile at www.sedar.com. Although Happy Creek has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking information, there can be no assurance that such information will prove to be accurate as actual results and future events could differ materially from those anticipated in such statements. Happy Creek withholds any obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise, unless required by law.

*Figure 2 – Highland Valley Project.* Ground Resistivity (AMT) (3D Inversion model at 1200 m elevation, or approximately 300 m below surface).



Figure 3 – Highland Valley Project. Airborne Total Magnetic Intensity (3D Inversion model at 1200 m elevation, or approximately 300 m below surface).





