

### Happy Creek receives Geophysical Results from the West Valley Copper Property, British Columbia

December 20, 2019 – Vancouver, British Columbia. Happy Creek Minerals Ltd. (TSXV: HPY) (the "Company"), is pleased to provide a summary of geophysical and geology results received from recently completed work on its 100% owned, 144 square kilometre West Valley property located in the Highland Valley mining district of south-central British Columbia, Canada. The West Valley property adjoins the southwestern side of the operating Highland Valley copper mine.

Further to the press release dated November 14, 2019 a 3-dimensional induced polarization geophysical survey ("IP survey") was completed by SJ Geophysics Ltd in the north and south portions of the West Valley property called the PIM and Abbott prospects, respectively. In addition, the Company's 2012 airborne magnetic survey data of the entire West Valley property was reprocessed into a 3-dimensional view and airborne high-resolution photographic imagery of the Rateria-West Valley property was performed. In conjunction with the geophysical surveys, prospecting and geological mapping were also completed.

David Blann, President of Happy Creek states "The objective for work on the 144 sq km West Valley property in 2019 was to identify potential for new copper deposits, and by conducting more detailed surface geology in specific areas and then looking three-dimensionally at two minimally explored areas, exciting new targets for drill testing at the PIM and Abbott prospects have been identified. The magnetic re-processing has provided an important new perspective on the geology. The key younger phases of potentially porphyry copper-generating intrusive rocks are now thought to occur much further west at surface or beneath older rocks. This will help guide exploration over the large under-explored areas of this property."

## Highlights

New deposit-scale targets outlined at the PIM and Abbott prospects, both without any prior drilling.

Magnetic re-processing has revealed a three-dimensional view of the younger phases of the batholith which are the host to large copper deposits in the district. These important rocks are interpreted to occur further west and underly older rocks on the property and provide greater potential for copper deposits to occur in underexplored areas.

Field work located a copper- moly showing near the intersection of the Lornex and Skuhun faults.

Results

#### Magnetic survey re-processing

The re-processing and modelling of the Company's 2012 144 sq km West Valley magnetic survey were performed by SJ Geophysics Ltd. This work generated a three-dimensional model that better defines the Bethsaida and Skeena phases of the batholith having generally lower magnetite content and which host the known giant copper deposits- Lornex and Valley- in the district. The younger phases are modelled as magnetic lows and occur in a northerly trend along the eastern side of the property, and notably occur in places beneath older, more magnetic phases and extend westward well beyond what is visible at surface. Importantly, several areas containing positive copper in stream sediment, vein alteration and copper showings in older rocks at surface are interpreted to be underlain by the younger phases of the batholith. In addition, strongly magnetic phases of the batholith, locally containing chalcopyrite copper showings are modelled as vertical, pipe-like shapes that extend to well over three km below surface.

## **PIM copper prospect**

The PIM prospect is located approximately 5.5km southwest of the Lornex mine and is underlain by Bethsaida and Skeena phases of the Guichon batholith. Prospecting and geological mapping performed in 2019 identified several new copper showings associated with magnetite-destructive alteration including various pale green to white mica, quartz veins with specular hematite, copper sulphide and oxides that are within an historical positive copper in soil anomaly 800m in length and up to 300m in width. Magnetic processing in 2019 indicates this area is underlain by a northwest trending, intense magnetic low that extends to a depth greater than 3km. The 2019 IP survey has returned a positive chargeability extending to over 450m below and adjacent the surface copper showings. The geology, alteration and presence of copper at surface combined with the geophysics suggest the PIM holds good potential for a sizeable copper zone and warrants drill testing.

# Abbott Lake copper prospect

The Abbott prospect area is located in the southwest portion of the West Valley property. This underexplored area covers a 5.5km wide section of geology including various phases of the Guichon batholith to the east and Nicola volcanic breccia and sediment to the west. Although glacial till covers much of the area, the north-south trending Lornex fault can be inferred from geophysics to cut the property.

On the western portion of the property, Nicola Group volcanic-sediments hosts the Pole 346 showing and chlorite, epidote, albite and quartz alteration minerals with chalcopyrite-magnetite occur in outcrop. Six rock samples collected in 2019 returned from 815 ppm up to 0.56% copper in a northwesterly trend having dimensions of approximately 200 metres in width and one km in length. This trend continues northwest for another kilometre to the historical Tar prospect, where the Nicola volcanic rocks and Guichon batholith contact occurs and positive copper in soils are noted in historical work. The geophysical aspects of the Nicola volcanic-sediments and associated mineralized zones include strong magnetics extending to depth, moderately high resistivity and weak but discernable chargeability values.

East of the Nicola volcanic rocks and west of the Lornex fault are a mixture of intrusive rocks including more mafic-rich border phase and more felsic Highland Valley phases, with locally intrusion breccia texture. Although much of the area is covered by glacial till, localized outcrops containing k-feldspar, chlorite-epidote, sericite and guartz veinlets occur with generally trace native copper, chalcopyrite and bornite copper minerals in an area 2km by 1.5km in dimension. Surface grab samples from the various zones in this area returned 480 ppm (parts per million) up to 1.03% copper. East of the Lornex fault, intrusive rocks appear more felsic and grade into Guichon or Chataway phases cut by dikes of Bethlehem or younger in age. In this area, geology and geophysical interpretation suggest a series of northerly trending fault and fracture zones are cut by northwest and northeast trending fracture sets and contain chlorite-epidote some kfeldspar, quartz veins and pale green to silver-white mica with bornite and chalcopyrite copper minerals. Grab samples from new showings found in the Abbott area in 2019 returned 0.51% copper, 37 ppb gold, 3.08 g/t silver and sample 4370 contains 1.31% copper, 0.04 g/t gold and 6.39 g/t silver. The 2019 IP survey identified a 1.2 km long north trending low resistivity and associated elevated chargeability within and adjacent the assumed Lornex fault and copper showings. This geophysical target is thought to warrant drill testing and continuing to expand geophysical surveys and additional geology work.

#### Bin copper prospect

During 2019, the historical Bin copper prospect was located three km to the north of the Abbott area and just west of the junction between the north trending Lornex and east trending Skuhun faults. This prospect, as with many others, has not received any recorded work since around 1970 or prior, when irregular shaped patchwork mineral claims in the area limited a broader view of its potential. The prospect consists of a mineralized zone estimated to be at least 50m in width and traced for 200 metres in length and contains strong fracturing with biotite, chlorite-epidote-k-feldspar and sericite white mica altered wall rocks and quartz-k-feldspar veins occur up to 5 cm in thickness. Copper minerals such as malachite, azurite, chalcocite, bornite and chalcopyrite occur, as does molybdenite (molybdenum sulphide). A 2.5 metre chip sample across a portion of the mineralized zone returned 1.684% copper, 36 ppm molybdenite and 5.87 g/t silver. Grab samples from subcrop and talus to the north, south, east and west of this sample returned from 1.705% copper, 193 ppm molybdenum up to 6.67% copper, 306 ppm molybdenum, 0.25 g/t gold and 30.1 g/t silver. One sample returned 518 ppm molybdenum and 0.135 g/t rhenium. The Bin prospect is part of a cluster of five surface showings in an area approximately 2 km by 2.5 km in dimension that the magnetic model suggests is underlain to the east by the Bethsaida phase.

#### About the Rateria and West Valley property

The Rateria and West Valley mineral properties are contiguous and total approximately 244 square kilometres that adjoin and surround the southern side of the Highland Valley Copper mine property, Canada's largest base metal mine. The property is underlain predominantly by the Guichon batholith which hosts four porphyry copper deposits with commercial production continuing for over 50 years.

Happy Creek has discovered two new copper zones thought to have near-term resource potential that are located approximately 6.5km southeast of the active Highmont open pits. Drilling by the Company in Zones 1 and 2 has returned 95.0 metres of 0.67% copper and 152.5 metres of 0.35% copper/ 0.12 g/t gold, respectively. Drill grades appear consistent with currently mined deposits in the district and the zones are open.

The combined 244 Km<sup>2</sup> Rateria and West Valley property is approximately 90% covered by glacial till, however at least 25 copper prospects are known to occur here and these prospects, as well as the areas in between them, remain under-explored. The Happy Creek property is regarded as a quality copper exploration asset within a highly productive mineral district.

More detail on the Rateria-West Valley property can be found on the Company's website at <u>www.happycreekminerals.com</u>. Updated presentations are expected to be completed in early 2020, and a preliminary diagram of the PIM prospect is included with this press release on the website.

On behalf of the Board of Directors,

"David E Blann"

David E Blann, P.Eng.

President, CEO

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David Blann, P.Eng., Director, is a Qualified Person as defined by National Instrument 43-101 and is responsible for the preparation and approval of the technical information disclosed in the news release. Results or information from an adjoining property does not infer that similar results or information will or does occur on the subject property. Analyses are performed by SGS Laboratories in Burnaby, B.C. using method GE\_ARMV25 and for samples > 5,000 ppm GO\_ICP21B100 total copper. Analyses also performed by ALS Chemex in North Vancouver B.C. using method ME-MS41 and Cu-OG46 copper assay for >10,000 ppm copper. Results are provided in ppm (parts per million (ppm)) or grams per tonne, and gold in parts per billion (ppb)), with ppm values converted to percent by dividing by 10,000, and ppb values converted to g/t by dividing by 1,000.

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", "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,

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