## <u>Summary</u>

GML Exploration was retained by Sasquatch Resources to continue independent bedrock geological mapping at the Mt. Sicker project in the Fall of 2022. This work builds on field work conducted by GML Exploration in the Fall of 2021. The primary objective was to augment and enhance the current geological understanding of the Mt. Sicker volcanogenic massive sulphide (VMS) deposits and prospects that are within Sasquatch's mineral tenure boundary by producing an updated bedrock geology map and providing a contextual discussion on base metal massive sulphide mineralization throughout the project area.

In 2022, Sasquatch Resources expanded their project tenure size along the northwest trend of mineralization. Geological mapping was carried out on the additional claims and confirms continuation of a common mineralized stratigraphy between the Historic Mining Zone (Lenora Mine) and the Hope, Sharon Copper and Randy North showings (Figure 1).

Twenty-three (23) rock samples were collected from 66 additional field control sites. Four (4) backpack drill holes were logged and separated into 13 separate samples with an average thickness of 1m each. All related spatial files, notes, maps, photos and interpretation that form the complete package of field work data associated with the current work are available in the company's Dropbox folder.

## **Background**

The Mt. Sicker project area encompasses the past producing Lenora mine, a high-grade An-Pb-Cu-Au-Ag VMS deposit and numerous exploration adits and shafts. The project is underlain by the McLaughlin Ridge Formation, a sequence of mafic to felsic volcanic and volcaniclastic rocks now metamorphosed into chlorite-sericite and sericite-quartz schist (Figure 1). These rocks are correlative with the Myra formation, approximately 300 km to the northwest, which hosts the Myra Fall mine.

For thorough background information of the Mt. Sicker Project, the reader is encouraged to review the May, 2022 Technical Report, available on Sasquatch Resources website (<u>www.sasquatchresources.com</u>)

### **Geology Discussion**

### Mount Hall Gabbro

Intrusive gabbro, diabase and diorite of the Mount Hall Gabbro commonly forms topographic highs throughout the Mt. Sicker project area. The fine to coarse grained feldspar-pyroxene phyric rock caused hornfelsing [intrusive contact conductive thermochemical alteration] and partial sulphide-quartz remobilization within the Mt. Sicker Group country rock. The result is an apparent concentration of pyrite and quartz within hornfelsed country rock. Quartz-pyrite concentrations can contain appreciable quantities of base metal minerals chalcopyrite, galena and sphalerite.

Metamorphic and mineralization related alteration was not observed to modify the Mt. Hall Gabbro. This suggests that both metamorphism and mineralization systems were complete at the time of gabbro emplacement. However, it should be noted that prospects and deposits that occur along the S - S' cross section are coincident with relatively large gabbroic intrusions, and an increase in fault geometry complexity (Figure 1). This suggests that some degree of mineralization remobilization and concentration may have occurred during gabbro emplacement and/or post-mineral structural modification events.

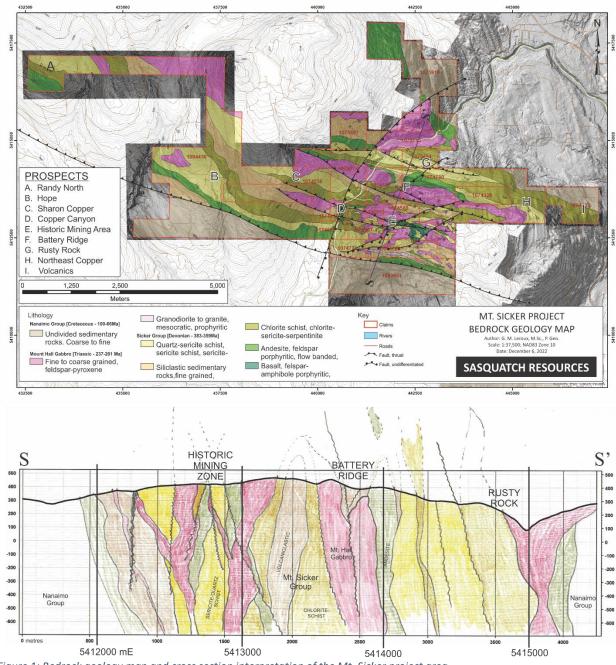


Figure 1: Bedrock geology map and cross section interpretation of the Mt. Sicker project area.

### **Randy North**

The Randy North showing is characterized by a sequence of fine-grained chlorite-sericite +/- quartz schist in contact with an andesitic to dioritic, fine grained sericitic mafic rock. Sparsely spaced massive pyrite-sphalerite +/- chalcopyrite pods with dimensions 20 cm by 50 cm represent the mineralization style throughout the quarried outcrop exposures. Notable relative increases in silicification and quartz veining occur in close proximity to the massive sulphide pods (Figure 2).

A structurally complex region is coincident with the Randy North showing. Very tight, convoluted, contorted, kink banded, folded and sheared foliation planes are conspicuous in the outcropping rock.

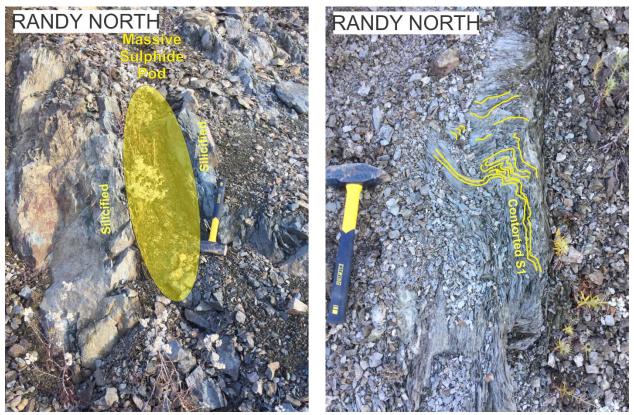


Figure 2: Outcropping expressions of the rocks at the Randy North Showing.

### Hope Showing

The Hope Showing occurs in a dense forest; the only outcropping observed is covered by overburden on all but one side. The outcropping is characterized as a fine-medium grained, chlorite-altered, feldspar-phyric intermediate to mafic volcanic rock. Malachite staining is evident in strongly chlorite-quartz-carbonate altered domains. Disseminated pyrite-chalcopyrite-sphalerite comprise up to approximately 3 modal % of the rock within altered domains with massive pyrite veins.

### Copper Canyon

Near continuous bedrock exposure along the Chemainus River [at low water levels] provides an opportunity to observe the nature of compositional variations of Mt. Sicker Group rocks across the complete thickness of the rock Group. On the banks of the Chemainus River, the stratigraphic projection of the Historic Mining Zone crops out and is referred to as the Copper Canyon Zone at this location.

The Copper Canyon Zone is characterized by tightly foliated, kink-banded mafic to felsic schist with variable concentrations of disseminated and replacement-style massive pyrite-chalcopyrite-sphalerite-galena-sulphosalts.

Felsic schist is tuffaceous, strongly clay-sericite and quartz-pyrite altered and variably silicified. Repeating layer-conformable lenses of massive quartz-pyrite, 2 – 10 cm thick are hosted in layered silicified felsic schists with 3-5 modal % pervasive disseminated euhedral pyrite. Highest concentrations of massive sulphide and base metal mineralization was observed in discomformable shear zones ranging up to 3 metres wide and containing consistent mineralization throughout (Figure 3, upper and lower left photos). Mineralization appears to exploit the host rock package by selectively replacing certain strata with quartz +/- barite and massive sulphides (Figure 3, upper right photo).

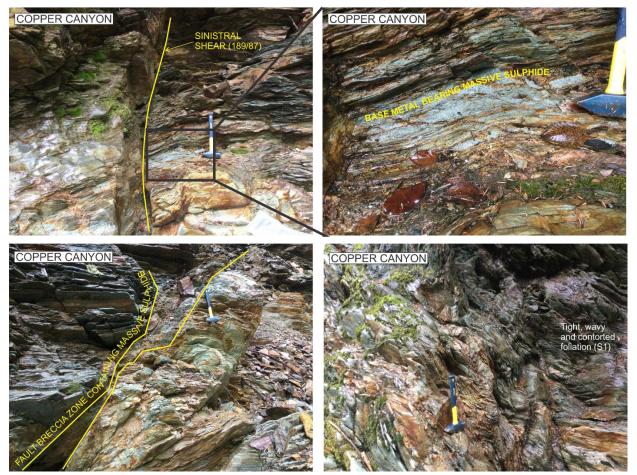


Figure 3: Coper Canyon shear zone within tuffaceous felsic schist showing preferential massive sulphide replacement of adjacent strata.

Mafic schist is strong to intensely chlorite altered, variably sericite altered, have a relatively poorly silificified matrix, friable, and contain brecciated/broken segments of deformed quartz veins. Mafic rock strata are commonly more intensely sheared and deformed than felsic rocks in Copper Canyon; this may be attributable to the appreciable chlorite content within the mafic rocks.

Historic mining in Copper Canyon targeted a specific intensely chlorite altered mafic volcanic layer approximately 1.5 m wide. The mined mafic layer is a shear zone containing broken fragments of quartz-calcite vein material and host fragments rock from outside the shear zone (Figure 4). Finely disseminated sulphides and veinlets of pyrite-chalcopyrite comprise approximately 8 modal % of the mine-targeted mafic rock.



Figure 4: Copper Canyon, mafic schist, chlorite altered shear zone targeted by historic mining.

The felsic components of stratigraphy gradationally transition between strongly sericite altered strata typically 1-5 metres thick, to strongly silicified and sericite poor strata with the same thickness range. Quartz-sulphide veins and stockwork appear to be preferentially concentrated in the sericite dominated strata.

## Historic Mining Zone

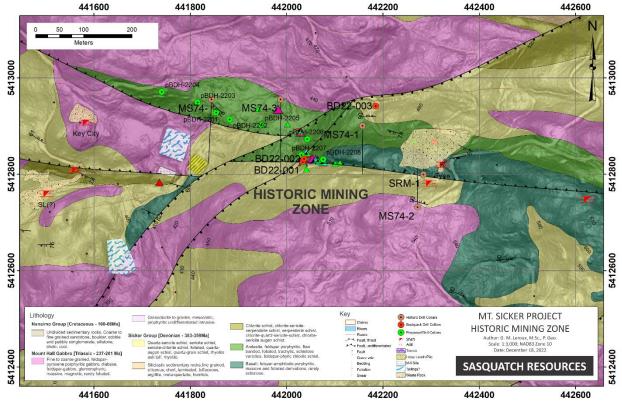
The Historic Mining Zone is the most highly base metal mineralized area known within the tenure group. The area is characterized by structural 'blocks' of chlorite-sericite schist, sericitic feldspar phyric andesite, with lesser clay-quartz and quartz-sericite schist (Figure 5). Mineralization is characterized by partial groundmass replacement of the andesite with quartz-barite-sphalerite +/- (pyrite, chalcopyrite), and

partial, layer-preferential replacement of the schist. Mineralization distribution trends with S1 (foliation) commonly forming semi-conformable sheeted massive sulphide bands 2-5 cm thick.

Metamorphism-related alteration of the Mt. Sicker Group volcanic rocks is interpreted as follows: felsic volcanic rocks metamorphosed into sericite-quartz schist; felsic tuffs and volcaniclastic rocks metamorphosed into quartz-sericite schist +/- 'quartz-eyes'; intermediate volcanic rock metamorphosed into chlorite-sericite schist and mafic volcanic rock metamorphosed into chlorite-serpentine schist. Contacts between these lithologies are commonly gradational, rarely sharp.

Mineralization-related alteration is characterized by banded and domanial, strong iron oxide and malachite staining on the surface. Quartz recrystallization of the matrix and groundmass in mineralized volcanic and volcaniclastic rocks of Mt. Sicker Group is pervasive. Quartz recrystallization was most readily observable in thinly bedded to laminated, cherty volcaniclastic rocks. Silicification (mass balance addition of SiO) of Mt. Sicker Group volcanic rocks varies from weak to intense throughout the Historic Mining Zone. Strongest silicification is noted in local domains of andesite and is weakly layer-preferential throughout the schist and volcaniclastic package.

Structural complexity in the Historic Mining Zone consists of a tight to isoclinal folded stratigraphic package of volcanic and volcaniclastic rock, faulted by at least two phases of brittle shearing and slight reconfiguration caused by gabbro emplacement which possibly reactivated some shear zones. The majority of historic mining and exploration activity has been coincident with intersections of district-scale NE-SW faulting and regional-scale ESE-WNW faulting.



*Figure 5: Bedrock geology and structure map of the Historic Mining Zone at the Mt. Sicker Project.* 

## **Battery Ridge**

The Battery Ridge Zone is representative of both the Queen Bee and Belle MINFILE showings. There is a paucity of outcropping and a dense forest in this area. Structural folding, abundant shear planes and intrusive rocks cause strong deformation of the stratigraphy in this region. Rocks were observed as being highly gossaneous, silicified and hornfelsed, laminated to thinly bedded tuffaceous volcaniclastic rock, layered with sericite schist. Lenses of 5-20 cm thick massive pyrite-chalcopyrite-sphalerite with quartz-barite gangue coincide with strongly silicified horizons of argillic and sericitic volcaniclastic shist. The mineralization and alteration at Battery Ridge are similar to that observed at the Historic Mine Zone (Lenora Mine, a.k.a Lenora-Tyee type VMS deposit).

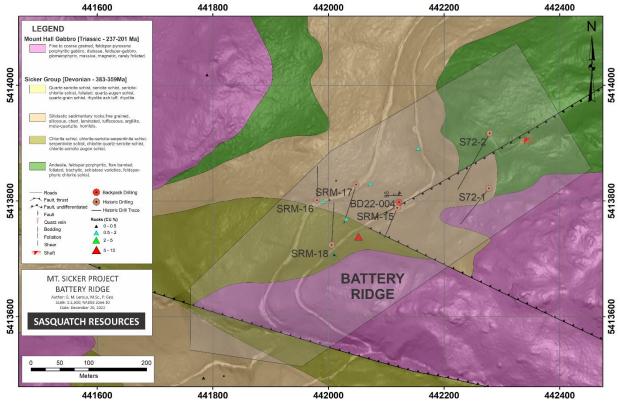


Figure 6: Bedrock geology map of the Battery Ridge Zone at the Mt. Sicker VMS Project.

### **Rusty Rock**

The Rusty Rock zone is a varied stratigraphic section of strongly altered chlorite-serpentine schist, sericite schist, quartz-sericite schist, sericitic phyllite, and laminated volcaniclastic rock. The section displays a moderate to strong degree of quartz alteration; observed as matrix quartz recrystallization, silicification of volcaniclastic layers, and minor quartz veining. Sulphide mineralization is concentrated in bands 50-100 cm thick with between 1-5 modal % total sulphides. Mineralization is coincident with areas of relatively stronger quartz +/- sericite alteration.

Approximately 200 metres to the east of the Rusty Rock zone there is an area (Area of Interest) where the structural map pattern predicts fault zone interplay, and potentially a zone of structural complexity (Figure 7). This is a similar result to what is seen at the Historic Mining zone.

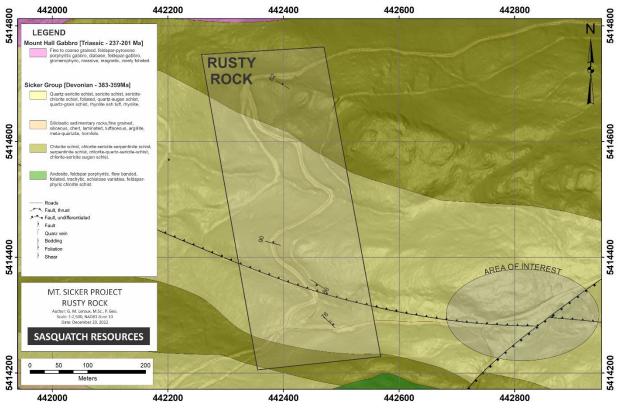


Figure 7: Bedrock geology map of the Rusty Rock Zone at the Mt. Sicker VMS Project.

The mineralization, alteration and structural features at Rusty Rock are similar to what was observed in mineralized outcrop at the Lenora mine and at Copper Canyon. Gossaneous alteration bands mineralized with pyrite +/- (sphalerite, chalcopyrite, galena, tennantite-tetrahedrite) observed at these zones are conformable with compositional layering in a varied package of chlorite-sericite-quartz schist (Figure 8).

The Rusty Rock zone is interpreted to project to the northwest towards the Chemainus River. Continued projection on the northwest side of the river coincides with a MINFILE record known as the Rose Showing, which displays similar lithological characteristics to the Rusty Rock zone. The Rose Showing is in the probable stratigraphic and structural projection path of the Rusty Rock zone. At the Rose showing, the rocks are composed of coarse-grained sericite-chlorite-serpentine schist, tightly foliated, and contain quartz – (pyrite, pyrrhotite, sphalerite, tetrahedrite) veins up to 5 cm thick in focused shear zones.

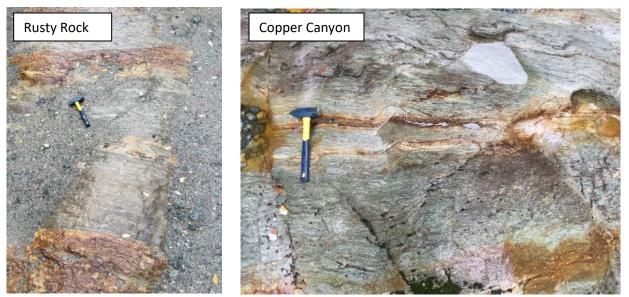


Figure 8: Photographs of the general rock appearance compared between Rusty Rock and Copper Canyon.

#### **Structure**

All measurements discussed, reported and presented here were taken in the field by the author using the Right Hand Rule (RHR) for Strike and Dip

### Bedding and Foliation

The dominant observable structures on the Mt. Sicker property are deformation foliation (S1) and primary bedding (S0), including bimodal compositional volcanic layering. Both structural fabrics were observed to have been modified locally by intrusive [gabbro] emplacement. In these cases, measurements were recorded in the field but not used in stereonet analysis. Structural measurements recorded from rocks interpreted to belong to Nanaimo Group are understood to be of a younger generation and, at this time, are not suitable to include in stereonet analysis of Mt. Sicker Group rocks; such recordings were removed from the steronet plots below (Figure 9).

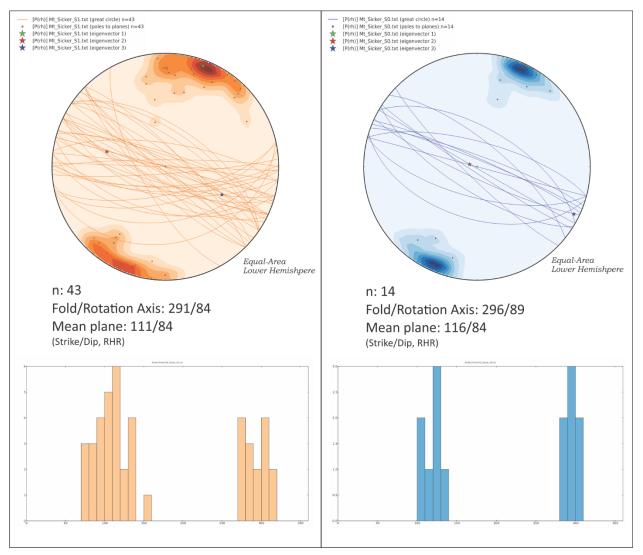
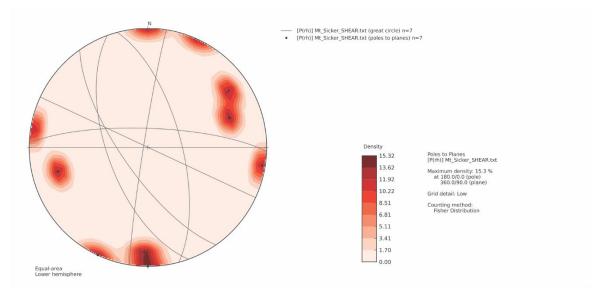


Figure 9: Stereonet and histogram plots of primary foliation (S1) and bedding (S0) at the Mt. Sicker VMS Project.

A difference of approximately 5 degrees in the average strike between bedding and foliation was observed in the field and with stereonet analysis. This implies that potentially over a distance of one kilometer, the two structures could diverge by as much as 85 metres. Metamorphism has obscured many of the volcanic and volcaniclastic rock bedding contacts, resulting in foliation being the dominant observable rock fabric. When tracing and projecting lithological rock packages and assessing structures in the field, it may be beneficial to consider this difference between bedding and foliation.



*Figure 10: Stereonet plot of mineralized shear zones across the Mt. Sicker VMS Project.* 

Visually, the most mineralized rocks were observed as being at the margins of, or within shear-fault zones. A mineralization assemblage of quartz-pyrite-sphalerite-chalcopyrite +/- barite was observed exploiting rock strata with a favorable permeability and porosity (Figure 3, upper right photo). All observed shear zones that could be measured in the field had some degree of mineralization associated with them. However, a trend in the mineralized shear zones can not be confirmed by this data (Figure 10).

Generally speaking, the shear zones observed at the outcrop scale, likely represent fault splays from district-scale faults and strata-parallel slippages that occur during tight to isoclinal folding and S1 fabric generation. This could help explain why the current limited dataset does not define a mineralization shear trend.

## **Recommendations**

Visible high-grade Zn-Cu massive sulphide mineralization was documented as occurring either in or in close proximity to shear zones. Future field mapping programs may benefit from focused shear/fault structure mapping between the Historic Mining Zone and Copper Canyon at the outcrop scale (i.e., 1:500). The objective of this activity is to characterize the architecture of structurally-controlled mineralization along the most prospective corridor within the current tenure package. The goal of this activity is to quantifiably differentiate structurally-controlled mineralization trends from bedding and foliation trends. The result of this activity is to de-risk future exploration by creating the data necessary to improve empirically defined highest probability drill vectors.

The Rusty Rock Zone is similar to the Historic Mine Zone and Copper Canyon in lithology, alteration, structure and mineralization style. Future field programs may benefit from targeted rock sampling of the Rusty Rock zone. A suggested method for this is to take a sample approximately every 50 metres along the road cut exposures within the defined area in Figure 7. Additional prospecting and rock sampling could

focus on ground truthing the stratigraphic and structural projection of Rusty Rock towards the Rose showing and investigating the marked Area of Interest in Figure 7.

At the Battery Ridge zone, historic diamond drilling, soil sampling, rock sampling, mapping and tunnelling have advanced exploration in the area. However, the records for much of this historic work only exists as scanned .pdf documents in governmental databases. Additional field work is not recommended in this area until a thorough compilation and digitization of historic exploration activities has been completed.

The Randy North showing exhibits the majority of components apparently important/necessary for oregrade concentrations of base metals. The area is structurally complex, contains variable volcanic lithologies of Mt. Sicker Group, mineralized with pyrite-chalcopyrite-sphalerite-galena, has moderate to strong mineralization-related alteration and rests in the interpreted stratigraphic projection of the Lenora Mine (Historic Mine Zone). It is recommended that prospecting and more detailed mapping continue at Randy North to refine the structural and lithological understanding of the showing.

A near complete stratigraphic exposure of Mt. Sicker Group rocks is visible and accessible at low water levels along the Chemainus River. A detailed stratigraphic characterization of this package of rocks would aid in determining if sections of the stratigraphy have been thickened by folding, if there is a preferential stratigraphic level for mineralization, and create a robust benchmark for comparison of isolated outcroppings elsewhere within the mineral tenure. It is recommended that a detailed stratigraphic section/column be created from exposures along the Chemainus River.

Initiation of the permitting process for a small 1-5 drill hole program is recommended. This will bring to light any issues [regulatory or First Nations related] that may need to be addressed prior to marketing the claim group. Proving a permit for more advanced exploration can be obtained may increase the value and attractiveness of the project.

A 6 to 8 hole backpack drill program is recommended for the Historic Mining Zone as marked in Figure 5. High-grade copper and zinc mineralization was observed within strongly altered andesitic rock, the extent of which is interpreted by the updated geological map. The backpack drilling program is designed to test the extents of high-grade mineralization within the andesite block(s). In addition to testing the extent of high-grade mineralization, the backpack drilling program is anticipated to produce near surface samples that may be ideal promotional specimens and generate modern-area geochemistry results from core.

## **Conclusion**

The most recent round of geological mapping and discussion presented here has refined lithological boundaries within the Mt. Sicker claim group to a resolution that is sufficient to aid in de-risking targeted exploration.

Additional rock geochemistry data [when available] will aid in the evaluation of prospects within the tenure boundary and help focus exploration priorities.

Several exploration activity recommendations for advancement of the project have been presented.

# Supporting Data

All supporting data for this report is available in Sasquatch's Dropbox directory, including: field notes, sketches, field and sample photographs, report figures, sample locations and descriptions, proposed drill site list and locations, GIS spatial files.