

# **NI 43-101 TECHNICAL REPORT**

## **ON THE**

# **MOUNT RICHARDS PROJECT**

### **Project Location:**

Duncan Area  
Vancouver Island  
British Columbia, Canada

Centered at approximately  
Latitude 48° 50' 56.7" N, Longitude 123° 40' 38.8" W  
450,300 E, 5,410,900 N (UTM NAD83 Zone 10)

NTS Map Sheet 92B/082  
Victoria Mining Division

### **Report Prepared For:**

**Starlo Ventures Ltd.**  
1400, 400 Burrard Street  
Vancouver, BC V6C 3A6

### **Prepared By:**

**Jeffrey D. Rowe, B.Sc., P.Geo.**

**Effective Date: March 8, 2023**

# TABLE OF CONTENTS

	PAGE
1.0 SUMMARY .....	1
1.1 Executive Summary .....	1
1.2 Technical Summary.....	4
2.0 INTRODUCTION .....	13
2.1 Site Visit .....	13
2.2 Sources of Information .....	14
2.3 Abbreviations and Units of Measure .....	15
3.0 RELIANCE ON OTHER EXPERTS.....	16
4.0 PROPERTY DESCRIPTION AND LOCATION .....	17
4.1 Property Location .....	17
4.2 Property Description.....	17
4.3 Mount Richards Property Purchase Agreement.....	20
4.4 Mineral Tenure Ownership in British Columbia .....	20
4.5 Environmental Regulations & Exploration Permits.....	22
4.6 Environmental Considerations.....	23
5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY .....	24
5.1 Accessibility.....	24
5.2 Climate, Vegetation and Wildlife .....	25
5.3 Physiography .....	26
5.4 Local Resources & Infrastructure .....	26
6.0 HISTORY.....	27
7.0 GEOLOGICAL SETTING AND MINERALIZATION .....	35
7.1 Regional Setting.....	35
7.2 Local Geology .....	39
7.2.1 Property Geology.....	39
7.2.2 Structural Geology.....	43
7.2.3 Mineralization and Alteration.....	44
8.0 DEPOSIT TYPES .....	48
8.1 Volcanogenic Massive Sulfide Deposits .....	48
8.2 Low-Sulfide Gold-Quartz Vein Deposits .....	51
9.0 EXPLORATION .....	54
10.0 DRILLING .....	62
11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY .....	63

11.1 Sample Preparation, Transportation and Security .....	64
11.2 Laboratory Analytical Procedures .....	64
11.3 Duplicates, Standards and Blanks .....	65
12.0 DATA VERIFICATION .....	65
12.1 Database.....	65
12.2 Independent verification .....	66
13.0 MINERAL PROCESSING AND METALLURGICAL TESTING .....	69
14.0 MINERAL RESOURCE ESTIMATES.....	70
15.0 ADJACENT PROPERTIES .....	70
16.0 OTHER RELEVANT DATA AND INFORMATION .....	70
17.0 INTERPRETATION AND CONCLUSIONS .....	71
18.0 RECOMMENDATIONS.....	73
19.0 REFERENCES .....	75
20.0 DATE AND SIGNATURE PAGE .....	79
21.0 CERTIFICATE OF QUALIFIED PERSON.....	79

## LIST OF TABLES

	PAGE
Table 2.1 Abbreviations used in this Report .....	15
Table 4.1 Mount Richards Property mineral tenures .....	18
Table 6.1 Production data for Lenora, Tyee, Richard III and Twin J mines (Minfile 092B-001) ....	28
Table 6.2 Significant mineralized intervals from drill hole West87-14 (Pattison & Money, 1988) .	34
Table 8.1 Britannia Ore Type Average Grades (from Payne et al., 1980).....	50
Table 10.1 Mount Richards Project Drilling Statistics .....	63
Table 18.1 Phase I proposed exploration budget .....	74

## LIST OF FIGURES

	PAGE
Figure 4.1 Location of the Mount Richards Property in southwest BC .....	17
Figure 4.2 Mount Richards Property mineral claims .....	18
Figure 4.3 Mount Richards Property land ownership .....	22
Figure 5.1 Satellite view of Mount Richards Property area with named features .....	25
Figure 5.2 Duncan Average Temperatures and Precipitation .....	26
Figure 6.1 Mount Richards Area Historical Mines.....	28
Figure 6.2 Historical claim blocks and areas of previous work.....	29
Figure 6.3 Falconbridge drillhole locations 1984-1987 .....	31

Figure 6.4 Drill section for hole West87-14 showing numerous narrow mineralized intercepts (Pattison & Money, 1988).....	33
Figure 7.1 Mount Richards and selected VMS deposit locations relative to major lithological units of Vancouver Island (from Marshall et al., 2018) .....	37
Figure 7.2 Mount Richards Property local geology and Minfile mineral occurrences (geology derived from Massey et al., 1987b) .....	40
Figure 7.3 Schematic stratigraphic column of rock units in the Cowichan uplift (from Massey, 1995) .....	43
Figure 8.1 Schematic model for active VMS mineralization showing principal alteration and mineralization types (source: Gibson et al., 2007).....	49
Figure 8.2 Schematic cross-section of shear zone hosted gold-quartz veins, alteration, and associated elements (from Goldfarb et al., 1996) .....	52
Figure 9.1 Mt Richards & Maple Mountain areas Cu soil anomalies and geology.....	55
Figure 9.2 Mt Richards & Maple Mountain areas Zn soil anomalies and geology .....	56
Figure 9.3 Mt Richards & Maple Mountain areas As soil anomalies and geology .....	57
Figure 9.4 Mt Richards & Maple Mountain areas Ba soil anomalies and geology.....	58
Figure 9.5 Airborne total magnetic intensity with mineral occurrences & coincident Cu-Zn anomalies (warmer colours represent higher magnetic values) from Sadlier-Brown, 2008.....	59
Figure 9.6 Breen Lake area airborne EM conductivity and Falconbridge drillhole locations (warmer colours represent higher conductivity values) from Sadlier-Brown, 2008.....	60
Figure 9.7 Property Geology with selected exploration target areas based on favourable geological, geophysical and geochemical data.....	62
Figure 12.1 Breen Lake area phyllic altered felsic volcanic rocks with silica bands and abundant pyrite disseminations and veinlets.....	67
Figure 12.2 Jane occurrence historical rock pit and view from Jane area looking southwest.....	68
Figure 12.3 The Property area is largely forested, with local clear-cut logged plots that reveal areas of outcrop .....	68

# 1.0 Summary

## 1.1 EXECUTIVE SUMMARY

### Summary and Conclusions

The Mount Richards Property (the “Property”) is located on the southern part of Vancouver Island, British Columbia within a belt of Devonian volcanic and sedimentary rocks that are known to host volcanogenic massive sulfide (VMS) mineral deposits at the historical Mount Sicker mines, located 3 km to the northwest, and at the Myra Falls mine 160 km to the northwest.

Previous exploration programs within the Property area have focused on discovery of VMS mineralization or high-grade precious metal veins, similar to some of the deposits found on nearby properties. Significant mineralization has been discovered in two areas of the Property: Breen Lake and Little Sicker Mountain. Historical work has primarily been concentrated in the Breen Lake area, leaving extensive regions of the property under-explored.

Of the two main exploration areas, Breen Lake, in the central part of the Property, has received the greatest amount of drilling to date. This drilling has primarily tested geophysical and geological targets for massive sulfide mineralization which, in many VMS deposits, is concentrated in bodies that occupy a relatively small area. As such, these targets may require close-spaced geophysical surveying to provide adequate definition for planning of drill holes.

Falconbridge drilled 22 holes from 1984 to 1987, primarily along a 3.5 km-long, west-northwest trending, EM-conductive zone with local coincident magnetic and IP chargeability anomalies. Falconbridge was encouraged by intercepts of VMS-style alteration containing narrow bands of semi-massive pyrite with minor copper and zinc minerals in silicified tuff. The IP chargeability highs appeared to reliably indicate areas of sulfides, suggesting that further IP surveying is warranted outside the small area previously surveyed.

The airborne Electromagnetic (EM) conductor in the Breen Lake area is strongest near its east and west ends, but where it passes through the Jane showing on the west it was only partially tested by drilling because Falconbridge did not own all of the claims in that area. To the east it extends under Crofton Lake, and this target also has not been drilled. Although a number of Falconbridge drill holes intersected subeconomic Cu-Zn mineralization, Sadlier-Brown & Ruks (2010) noted that the intercepts appear to be offset to the north of the airborne EM anomaly. This may imply that there is potential for stronger mineralization at depth further to the south of the drilling and beneath the conductive zone. It should be noted that if any carbonaceous sedimentary lithologies are present they would have very high conductivity, which could mask any EM response from sulfides.

In the Little Sicker Mountain area, the most significant showing has been described by Falconbridge as a possible exhalative horizon consisting of several bands of silica with 5-10% pyrite found in

pyroxene-feldspar tuff at the contact with porphyritic basalt. This horizon was traced for 500 m, along which intermittent sampling returned mostly low assays, however, one grab sample returned a value of 1910 ppm Zn. Numerous shear zones in the area were found to carry significant amounts of pyrite and minor chalcopyrite. These could be footwall feeder veins indicative of nearby VMS-style mineralization, but there is no indication that they were followed up at the time.

At Little Sicker Mountain, favourable Sicker Group rocks are primarily found on the lower part of the east slope. Variable magnetic highs and lows appear to be related to a large Mount Hall Gabbro body on the upper slopes to the west, however, there are more subtle magnetic highs in the area mapped as Sicker Group rocks that should be investigated. Falconbridge collected 102 rock samples in this region, but there is no report of any soil sampling, which the author suggests would be an effective way to test for potential near-surface mineralization in the Sicker Group rocks in this area.

Other areas of the Property have also indicated mineral potential. In particular, clusters of anomalous soil geochemical anomalies have been revealed on Maple Mountain from sampling programs by Canamax and, most recently, by Starlo Ventures Ltd. ("Starlo"). These copper, zinc and barium anomalies are within an area mapped as Nitinat Formation, however, rocks within this area have been described by Fleming (1986) as pyritic chlorite schist and quartz-feldspar porphyritic dikes that bear some resemblance to McLaughlin Ridge Formation rocks in the Breen Lake area. Detailed geological mapping and follow up of the geochemical anomalies are recommended by the author.

Airborne magnetic results that cover about two-thirds of the Property show very strong response from regionally distributed gabbro bodies, however, subtle, moderately magnetic zones may reflect sulfides, and should be correlated with favourable geology, geochemistry and chargeability highs to help define possible mineral targets. Linear magnetic lows may be indicative of faults or intense alteration zones that could also be targets of interest.

Geological mapping and modeling have indicated that the McLaughlin Ridge Formation is the primary potential host unit for VMS mineralization on the Property and, significantly, the extent of this unit may be greater than indicated by regional mapping, especially in the Maple Mountain area. Detailed mapping of selected areas on Maple Mountain and Little Sicker Mountain are warranted. In particular, areas of sericite or chlorite alteration and silicification should be noted, as well as fine grained sedimentary units that may be indicative of a restricted, possibly fault-bounded, quiescent basin environment where VMS mineralization could have been deposited, undisturbed by volcanic activity. Iron formation and barite horizons are also important indicators in a VMS system that are often found laterally distant from massive sulfide bodies.

At the Myra Falls mine, more than 20 lenses of massive sulfides are found within a section of Myra Formation several hundred meters in thickness, suggesting that at Mount Richards the lithologies underlying McLaughlin Ridge Formation should also be considered prospective for mineralization.

The deposits at Myra Falls are typically confined to intervals of coarse-grained rhyolitic volcanoclastic rocks, sandstones, and mudstones, which are similar to lithologies in some parts of the McLaughlin Formation on the Property.

It is the author's opinion that the style of mineralization found on the Property, plus coincident geochemical and geophysical anomalies, of which some have not been drill tested, indicate good potential for the discovery of VMS-style mineralization similar to the nearby Mount Sicker and Lara deposits, and the deposits of the more distant Myra Falls mine. Further exploration is definitely warranted.

On the Property there has been a relative lack of concentrated exploration beyond the limits of the historically worked showing areas, both on surface and at depth. In addition, there appears to have been a lack of a coherent property-scale stratigraphic and structural modelling that might help guide exploration and develop drill targets, as well as a relative lack of geochemical and geophysical work in some areas of the property, which again may help in guiding exploration and developing targets.

The following recommendations are made by the author, many of which are included in a proposed Phase I, two-week exploration program, with an estimated cost of \$115,000. This program is not dependant on the issue of an exploration permit; however, the company should communicate with land owners regarding access on private property.

- GIS Database: All historical exploration data, as well as topographic and geologic data, should be compiled in a GIS database.
- Geological Mapping: Mapping should be undertaken over the entire Property to outline the geological framework, with more detailed mapping in the primary mineralized zones. Emphasis should be placed on defining felsic volcanic units and alteration that may be related to VMS systems, as well as determining the projections of major fault zones, and the location of intrusive bodies, including dykes and stocks. Mineralized zones should be mapped in detail to determine trends and possible mineral controls.
- Soil Geochemical Sampling: Soil sample lines should be established to test Sicker Group units in all areas of the Property where there is no record of previous soil sampling.
- Stream Sediment Geochemical Sampling: Stream sediment sampling can effectively evaluate large swaths of terrain that have not been previously soil sampled by collecting sediment from small streams that cut favourable stratigraphy. Anomalies defined by sediment samples should be followed-up by focused soil sampling, targeting the upper parts of anomalous drainages.
- Prospecting: Areas of anomalous soils or stream sediments should be prospected for possible mineral showings, accompanied by rock sampling and geological evaluation.
- Airborne versatile time-domain electromagnetic (VTEM) and magnetic survey: An airborne VTEM and magnetic survey should be flown over any parts of the Property that have not been

previously surveyed, and merged with historical data, to provide a geophysical framework that will aid in delineation of host lithologic units during geologic mapping and to help identify key geological structures, particularly those that may offset mineralized horizons. The geophysical data should be merged with soil geochemical and geological data to define prospective exploration targets.

- Electromagnetic (EM) or Induced Polarization (IP) geophysical survey: A program of ground-based EM or IP is recommended as a targeting tool to help identify and define sulfide-bearing lithologic units, structures, or alteration zones that commonly surround mineral bodies. Strong chargeability and low to high resistivity responses might be expected in areas containing sulfide mineralization and alteration, such as silicification causing high resistivity or certain clay alteration minerals causing low resistivity. EM and IP have previously identified targets in the Breen Lake area, where drilling confirmed strong pyrite-sericite-chlorite-carbonate alteration with narrow zones of stratiform zinc and copper mineralization.
- Diamond Drilling: GIS compilation of historical data may reveal promising targets that warrant drill testing in various areas of the Property. Geological models developed in conjunction with exploration results from geochemical and geophysical programs are also expected to define prospective drill targets. Based on the currently known soil geochemical and geophysical targets on the Property, preliminary drilling in a Phase II program could total as much as 5000 meters in 10 to 20 holes.

In summary, the presence on the Property of a 1 km x 1 km area containing more than 5 known VMS-type occurrences, in addition to extensive areas of coincident copper and zinc soil geochemical anomalies, and continuation of the favourable stratigraphy over several kilometers, suggest a good possibility of discovering significant mineralization. Further geological, geochemical, and geophysical exploration is warranted and if further compelling evidence is found then diamond drilling should be conducted to test areas at depth.

## **1.2 TECHNICAL SUMMARY**

### **Property Description and Location**

The Property is centered 8 kilometers north of the town of Duncan, on the southern part of Vancouver Island, British Columbia. The Property consists of a west-northwest-trending block of contiguous mineral claims approximately 13 km x 2.5 km in size. The terrain is moderately mountainous and largely forested. Approximately 10% of the Property area has been recently logged and some areas have been cleared for agriculture.

### **Land Tenure**

The Property consists of 19 MTO mineral tenures, covering 2721 hectares, within the Victoria mining division. The mineral tenures are in good standing to July 6, 2026. The tenures are registered as 100% ownership by 1335137 B.C. Ltd. (FMC #289076), a wholly-owned subsidiary



of Starlo. The work program set out in this technical report is fully within the 19 MTO mineral tenures.

There are as many as eighteen surveyed Crown Grant mineral claim lots that lie within, or partly within the Property. Most of these lots measure about 20 hectares or less in area. A title review undertaken by the Company determined that most of these lots appear to have the mineral rights forfeited, or reverted to the Crown, however, mineral land tax records are not always available, so it can not be determined definitively that they are, in fact, forfeited. Records for four of the Crown Grant lots indicate that they may still be active, and that the underlying mineral rights may be held by others. Up-to-date mineral land tax payments for these four lots need to be verified to determine if they still hold the mineral rights to underlying base metals, or gold and silver.

The E&N Railway was granted large areas of lands on Vancouver Island by the Government of the Dominion of Canada circa 1887. These lands included surface, timber, and certain base metal mineral rights, but not the gold and silver rights. Basically, the entire Property is underlain by land lots that were originally part of the E&N land grant, although they are now owned by various companies, municipalities and individuals.

Over the years E&N Railway and its successor entities entered into various agreements respecting the land, timber and mineral rights for various parts of the E&N Railway grant. Unfortunately, the records in the Land Title Office do not reflect all of these transfers because of the size of the Property and the multitude of titles which came into effect over time as the E&N lands were subdivided into blocks and even further smaller parcels over time.

In 1973 the BC Mineral Land Tax Act came into effect and it imposed mineral land taxes on all mineral Crown Grant interests in the province including the lands contained within the E&N Railway grant. As a result of this, most of the mineral rights for E&N lands were forfeited for non-payment of taxes or surrendered to the Crown by way of various agreements.

Global surrender of the mineral rights on much of the lands retained by E&N was implemented by surrender documents dated December 21, 1973 and August 1, 1975. There are a number of schedules to these agreements where transfers of different interests in the E&N Railway lands were excluded from the surrender of the mineral rights, and documentation was not always filed.

The possibility exists that there are unregistered interests which have never come to light and because the land title system did not track all of the transfers or subsequent transfers respecting the underlying mineral rights, it is not possible to say with 100% certainty that no mineral rights are held by third parties within the Property area.

It is the author's view that Starlo's ownership of base metal mineral rights for the Property is of very high probability, however, there is a remote possibility that in the future an unregistered document, originating from a transferred E&N land lot may be brought forward. In that instance the author

believes that mineral ownership rights would be difficult for a third party to establish in the absence of clear and unambiguous documentation. Regardless, the gold and silver rights, which were not part of the E&N mineral rights, are held by Starlo's current mineral tenures.

A small, 19-hectare, Provincial Park (Eves Park) is located near the north-central boundary of the Property. Land in a park established under an Act of British Columbia is considered "alienated" and any part of a claim that covers the alienated land holds no mineral rights.

### **Site Infrastructure**

Highway #1 crosses the western claims and municipal roads are present in the central and eastern areas. Logging company-owned roads provide access to some higher elevation areas and extensive branch roads stem from the mainlines. A major power transmission line that runs the length of Vancouver Island passes through the Property, adjacent to Highway #1 with readily available power for possible future development on the Property. The west-central part of the Property covers lower elevations occupied by farmland and private properties near highway #1. Higher elevation areas are unoccupied.

### **History**

Polymetallic massive sulfide mineralization was first discovered nearby on the west slope of Big Sicker Mountain in 1897. The Lenora, Tyee and Richard III Mines were developed about 3000 meters west of the present Property boundary. The three mines were worked between 1898 and 1909 and mineralized material was shipped to nearby smelters. A total of 229,221 tonnes of mineralization was mined from these three deposits, with recovered grades of 4.0% Cu, 4.8 g/t Au and 100.1 g/t Ag. Zinc was not recovered at that time.

A single, combined operation (the Twin J mine) worked the deposits intermittently between 1942 and 1952, producing 48,082 tonnes, with recovered grades of 4.0% Zn, 0.8% Cu, 0.3% Pb, 1.3 g/t Au and 41.7 g/t Ag. The Twin J property received steady exploration by various companies continuing from 1964 and, based on work up to 1970, a small mineral resource was estimated, however, there has been limited work since that time.

***Although the nearby known mineral deposits are hosted by similar geological units to those of the Property, that is not necessarily indicative of the tenure of mineralization that may be present on the Property that is the subject of this report.***

Prospecting and geological evaluation of the favourable belt of rocks extending eastward from Twin J over the last 100 years has produced many mineral discoveries, primarily located to the northwest and southeast of Crofton Lake, several of which fall within the Property area. For the most part, however, records of early 20<sup>th</sup> century exploration within the Property area are either limited or not known to be available.

In the central part of the current Property numerous trenches, open cuts, adits and shafts were developed on Mount Richards in the early 1900's. To the southwest of Breen Lake, the Lucky Strike showing has been explored by two adits, up to 15 m in length. Two irregular, roughly parallel shears run southeasterly along the tunnels and are locally mineralized with lenses of pyrrhotite, sphalerite and chalcopyrite. At the Jane showing, near the west end of Breen Lake, several open cuts and two short adits contain massive sulfides, with pyrrhotite, sphalerite and chalcopyrite up to 90 cm in thickness. On the north side of Breen Lake, the Ironclad workings consisted of two short shafts, and a 30° incline 36 meters in length.

More recent exploration efforts by various companies have also been concentrated in the central part of the Property, with the majority of the work undertaken by Falconbridge in the 1980's. In 1970, Canpac Minerals staked and explored their Sirius claims surrounding Crofton Lake with a program of geological mapping and a ground magnetic survey on a northwest-oriented grid measuring about 3500 m long by 1300 m wide. A few shears and narrow quartz veins with pyrite and chalcopyrite were noted and chalcopyrite was observed in the dump boulders at the Yreka shaft.

In 1978, the area covering much of the previous Sirius claim was staked by SEREM as the Croft claim and a program of geological mapping and soil and rock sampling was completed in 1979 on a 1 km by 1 km grid just to the north of Breen Lake. Copper mineralization was noted in three places near contacts of gabbro-diorite intrusive sills. A 30-cm-wide quartz vein cutting the gabbro contains chalcopyrite and arsenopyrite over about a 6 m exposed length. A flooded adit was found at the contact between intrusive and felsic volcanic rocks. The adit dump rocks contain sphalerite and chalcopyrite. The soil sample results indicated a strong correlation of anomalous copper and zinc values with areas of felsic volcanics and sedimentary rocks.

In 1982 and 1983, the area north and south of Crofton Lake was staked as the West claims by R.J. Bilquist and a program of prospecting was completed. In 1984 Falconbridge optioned Bilquist's claims and staked additional claims to form the West group that covered the central part of the current Property. Work by Falconbridge in 1984 consisted of flying an airborne EM survey, detailed mapping, litho-geochemical sampling and a ground EM survey. Several easterly trending EM conductors were identified, three of which were identified as high priority for ground follow-up. Other work in 1984 included the drilling of eight diamond drill holes (West 84-1 to 8), mainly to the north and south of Breen Lake to test EM conductors and geochemical anomalies. The results from the first two holes were reported, describing 25 cm and 60 cm zones of semi-massive magnetite with trace pyrrhotite. The only mineralized interval was 0.8 m of 0.13% Cu and 0.01% Zn described as sericitic volcanic rock with quartz eyes cut by a highly chloritic shear zone containing 20% pyrite and pyrrhotite (Chandler and Lear, 1985). A single drill hole, West 84-8, was drilled beneath the Jane adit on a Crown Grant adjacent to Falconbridge's claims but it was entirely in gabbro and no significant mineralization was intersected. Holes 84-3 and 84-4 were later relogged and reported in the 1987 program as having narrow intercepts of 0.31% Cu over 2.0 m and 0.34% Cu over 1.5

m at the base of a feldspar porphyry flow/ tuff unit. In 1985, four more holes (West 85-9 to 12) were drilled by Falconbridge about 1200 m north-northeast of Breen Lake. The results from these holes are not available to the author.

In 1982 P. Lieberman staked claims that covered the west side of the current Property, lying on the east slope of Little Sicker Mountain and the lowlands to the east. Lieberman conducted prospecting and in 1983 drilled three x-ray-size holes totalling 107 m. The holes intersected mafic and intermediate volcanics, with some silicified zones. Fine calcite and quartz veins with pyrite were encountered but had no significant copper or zinc values.

In 1985 Falconbridge added to their property by optioning the Lieberman claims on which they conducted geological mapping and litho-geochemistry on 112 samples. Surface mapping and sampling defined one possible exhalative horizon that had exploration potential on the Lieberman Option. It was described as several bands of silica with 5-10% pyrite that occur at the contact of pyroxene feldspar basalt porphyry flow and pyroxene feldspar tuff, which can be traced for 500 m. Sampling of this horizon produced one significant assay value of 1910 ppm Zn from a grab sample however, overall, values were low. Numerous shear zones on the claims were found to carry significant amounts of pyrite and minor chalcopyrite but these were not considered suitable exploration targets.

In 1985, Canamax Resources undertook soil geochemical sampling on their Crof 1 claim on the eastern part of the current Property. This area, on the west slope of Maple Mountain is about 1.5 to 4.5 km southeast of Crofton Lake, and was adjacent to, and east of, the Falconbridge ground. A total of 380 soil samples were collected and analyzed, revealing mainly single sample isolated highs in Cu, Zn, Ag and Au, commonly coincident with pyritic chlorite schist or porphyritic volcanic rocks.

In 1986 and 1987, Falconbridge explored the PF claims in the area south of Crofton Lake which is adjacent to and partially overlapping the south side of the current Property. Programs of geological mapping, prospecting and geochemical sampling were conducted. Soil samples returned isolated copper highs, within areas of feldspar crystal ash flow, but with no associated zinc anomalies. Mineralized outcrops include a 60 cm milky white quartz vein with 1% chalcopyrite and two pyritic zones along Osborne Bay Road rock cuts (Booth, 1987). One zone has 3-5% pyrite in stringers cutting intrusive but returned no anomalous metal values. The other has disseminations and stringers of pyrite in chloritic mafic volcanic, from which a grab sample returned 0.09% Cu, but no Pb or Zn.

Falconbridge also drilled three diamond drill holes on the PF claims in 1987, totalling 1083.0 meters, approximately 1.5 km southeast of Crofton Lake to test chargeability highs with coincident Cu anomalies in soil (PF-87 showing). The best mineralized drill intersections were from ten isolated intervals, each about 1 meter in length, that contained greater than 1000 ppm copper, and one weakly anomalous gold sample. Seven, non-contiguous 1-meter samples from drill hole PF87-

2 contained between 1243 and 3718 ppm copper. Three samples from PF87-3 contained between 1160 and 2311 ppm copper and one contained 780 ppb gold near the top of the hole (Money, 1987). This PF-87 mineralized area is located near the southern boundary of the Property.

On the West claim group, Falconbridge's 1986 program included a litho-geochemical survey and an IP survey. The 1987 program consisted of ten diamond drill holes totaling 3170.1 meters (West 87-13 to 22) clustered around Breen Lake, and the relogging of holes West 84-3, 4 and 8.

Falconbridge's drilling tested many of the high chargeability anomalies that were identified by the IP survey in the Breen Lake area, and most of them were believed to be explained by 2-5% sulfides (mostly pyrite) intersected over several meters in drill holes (Pattison & Money, 1988). Low resistivity anomalies that were drill tested did not return significant sulfides. An elongate ESE-trending EM conductor that persists over a length of 3.5 km and passes through the Jane showing was only partially tested by drilling because Falconbridge did not own all of the claims that covered the anomalous trend to the west.

As reported by Pattison & Money (1988), one of the better drill holes, West87-14, intersected numerous narrow mineralized intervals including a 1.2-meter section of semi-massive sulfides in chlorite-carbonate altered felsic lapilli tuff yielding 1.14% zinc and 0.103% copper. Another 0.15-meter section of massive pyrite-chalcocopyrite assayed 2.08% copper. Intercepts consist primarily of banded pyrite, with lesser chalcocopyrite and sphalerite, but also include disseminations and veins of sulfides. Drill sections interpret the bedding in the volcanics and tuffaceous rocks to dip 50–65 degrees to the south-southwest. Note that hole West87-14 is the southern-most hole and there has been no drill testing beneath it, or further to the south.

Many of the other Falconbridge drill holes intersected multiple narrow mineralized intervals and some of the significant results include:

Drill hole West87-16 contained a 0.12-meter sample of massive pyrite-chalcocopyrite yielding 0.37% copper. Another section of strongly chloritic quartz-feldspar porphyry containing pyrite and chalcocopyrite assayed 0.48% copper over 0.7 meter.

Drill hole West87-20 intersected a 0.8-meter-long interval of semi-massive pyrite-chalcocopyrite in silicified mafic ash tuff that assayed 0.97% copper. Another 1.0-meter section of strong pyrite mineralization assayed 0.64% copper and 0.56% zinc.

Drill hole West87-03 and 87-04 encountered chalcocopyrite in chlorite-carbonate altered andesitic tuff and yielded values of 0.31% and 0.34% copper over 1.5 and 2.0 meters.

In 2007, Maple Mountain Explorations Inc. completed a program of rock and soil sampling in the eastern part of the current Property on Maple Mountain. This work identified a rock cut exposure on the M-120 logging road containing massive pyrite mineralization in layered greenstone with epidote alteration. Sample assays returned high iron, but low copper, zinc and gold values. The 80 soil samples analysed for multi-elements by ICP did not return any anomalous values.

In 2008, Westridge Resources Inc. contracted Aeroquest International to fly an electromagnetic and magnetic survey totalling 440 line-km that covered the central and western parts of the current Property. The strongly magnetic results were interpreted to be primarily caused by magnetite in intrusive rocks and there is a very close correlation of strong magnetic values with the Mount Hall Gabbro bodies. There were several conductive features identified from the EM results, with two of them picked as primary targets. One of these, the Northeast Copper Zone, lies off the Property to the northwest. The other is in the Breen Lake area, where the eastern part of the conductive zone has received some drilling by Falconbridge, however, the western 500 m segment was not drilled due to ownership issues and remains untested by drilling. It was also concluded by Sadlier-Brown (2008) that the conductive zone extends south of the area of drilling and there is potential for mineralization at depth in that direction.

In 2010, Westridge completed a program of geological mapping and geochemical sampling in the Breen Lake area. Grab samples of massive sulfide mineralization from a new showing (Minfile Jane 2 occurrence) assayed up to 4.26% copper and 12.1 g/t silver (Sadlier-Brown & Ruks, 2010). This new showing has apparently not been followed up since that time and no further work has been reported for the Property area.

## **Geology**

Volcanic and sedimentary units of the Devonian Sicker Group and Permian Buttle Lake Group are the oldest in the area. They are overlain by Upper Triassic basaltic rocks of the Karmutsen Formation (Vancouver Group). Late Triassic Mount Hall gabbroic rocks that locally form extensive areas of dikes and sills in Palaeozoic Sicker units are believed to be associated with the Karmutsen volcanics. The Lower Jurassic Bonanza Group volcanics and lesser sediments overlie Karmutsen Formation and are followed by Upper Cretaceous sediments of the Nanaimo Group. In places, all the above units are intruded by Early to Middle Jurassic Island Plutonic Suite rocks, typically of diorite to granodiorite composition. Minor Late Eocene Mount Washington Intrusive Suite dacite sills and dikes occur throughout the area.

Most of the Property is underlain by Middle to Late Devonian Sicker Group rocks interpreted to represent three distinct volcanic and volcanoclastic assemblages. The three main Sicker Formations (Duck Lake, Nitinat and McLaughlin Ridge) show a general west-northwesterly trend across the claims, possibly repeated by folding about northwest-trending fold axes.

The Duck Lake Formation is the oldest of the series, at the base of the section, but is not known to outcrop on the Property. Nearby exposures of this unit consist of dominantly massive and pillowed tholeiitic basalt, which passes upward into calc-alkaline lava.

The Nitinat Formation overlies the Duck Lake Formation and comprises mafic, submarine volcanic and volcanoclastic rocks with dominantly calc-alkaline compositions and trace-element signatures typical of volcanic arc settings. On the Property and surrounding areas these rocks are mostly dark

green pyroxene-feldspar-phyric basalts and basaltic andesites. They typically occur as agglomerates, breccias, lapilli tuffs and crystal tuffs that formed as pyroclastic flows, debris flows and lahars. Minor interbeds of laminated tuff and chert occur locally.

The McLaughlin Ridge Formation overlies the Nitinat Formation and represents a more evolved stage of arc activity. In the Property area it is described as a heterogeneous sequence of intermediate to felsic volcanics and volcanoclastic sediments with lesser tuffaceous sediments. A thick package of dacitic to rhyolitic quartz-crystal, quartz-feldspar-crystal and fine dust-tuffs is developed in the area from Mount Sicker to Mount Richards that locally is host to sulfide mineralization. The felsic rocks appear to be at a stratigraphically high level within the formation.

Sericite and quartz alteration is commonly very strong in the felsic volcanic rocks, often obscuring the original host rock textures. Thin layers of chert and mudstone have been described locally and are occasionally accompanied by jasper or magnetite iron formation, which may be distal equivalents of VMS mineralization.

In the northeast part of the Property, elongate, northwest-trending intrusive bodies of the Salt Spring Intrusive Suite, up to 7 km long and tens of meters to 1500 m wide, intrude Nitinat and lower McLaughlin Ridge Formation rocks. These intrusions of granodiorite and quartz-feldspar porphyry are believed to be coeval with the McLaughlin Ridge Formation felsic volcanic rocks.

A number of thin and scattered greenstone dikes also intrude the felsic volcanics throughout the belt of McLaughlin Ridge volcanics, extending southeast to Maple Mountain. They differ markedly from Late Triassic diabase dikes, also found in this area, in being generally aphyric, weak to moderately foliated and strongly altered to epidote-chlorite-actinolite-calcite assemblages. The age of these dikes is unknown, although they may be contemporaneous with basaltic and dacitic volcanics that overlie the Sicker Group.

The Property area displays a complex history of folding, faulting and thrusting. The structural grain shows a pronounced west-northwest trend. Along the south side of the Property a WNW-trending, NNE-dipping regional fault has thrust Sicker Group rocks over Nanaimo Group. A broad zone, 100's of meters wide, in the Nanaimo Group sedimentary rocks underlying the thrust is deformed with footwall folding and imbricate faults.

Lithologic units primarily dip moderately to steeply to the south-southwest suggesting that the units are overturned, although folding along NNW-trending axes may add complexity to this interpretation. A NNE-trending fault cuts the western part of the Property and appears to be steeply dipping. It has produced offsets of the thrust fault and stratigraphic units, but the displacements appear to be small. These northerly-trending structures that postdate regional Eocene thrust faults may have been important features controlling the emplacement of mineralized veins, as seen at other mineral properties in the region.

## Mineralization

Some of the known mineralization on the Property, although confined to thin sulfide horizons, has a similar style of base and precious metals mineralization, as well as host rocks of the same age as those of the Myra Falls VMS deposits, located about 160 km to the northwest. VMS deposits are predominantly stratabound accumulations of sulfide minerals that precipitate from hydrothermal fluids on, or below, the seafloor. These types of deposits represent major sources of copper, zinc, lead, gold and silver in a high grade, low tonnage ratio.

The Myra Falls deposits are typically classed as Kuroko, or bimodal-felsic VMS deposits that are spatially associated with felsic volcanic rocks of the Myra Formation, which is part of the Middle to Late Devonian Sicker Group. Myra Formation is a succession of rhyolitic, andesitic, and basaltic volcanic and sedimentary rocks that are equivalent to some of the rocks on the Property. At Myra Falls there are up to twenty, or more, mineralized lenses that lie at various levels within a section of Myra Formation several hundred meters in thickness. Mineralized zones are massive to semi-massive tabular sulfide bodies, with main ores of chalcopyrite, sphalerite, pyrite, and galena. The H-W Main lens is one of the largest at 950 m long, 450 m wide and 1 to 60 m thick, totalling 22.1 M tonnes. Stringer mineralization consisting of veins of chalcopyrite, pyrite, and lesser quartz may underlie the sulfide lenses within broad zones of silicified rock that represent the conduits for the mineralizing hydrothermal fluids.

***Although the Myra Falls mineral deposits are hosted by similar geological units to those of the Property, that is not necessarily indicative of the tenure of mineralization that may be present on the Property that is the subject of this report.***

On the Property, the most significant VMS-type mineral showings are located near Breen Lake. At the Jane workings, west of Breen Lake, mineralization in adits and trenches consists of lenses of fine-grained, dense, massive sulfides lying along the schistosity in quartz-feldspar porphyry. Pyrrhotite, sphalerite, chalcopyrite and pyrite are the principal sulfides, and small amounts of quartz and calcite form the gangue material. The largest lens is about 45 centimeters wide and up to 1.5 meters long. A sample taken across 91 centimeters assayed 16.1% zinc and 0.05% copper.

The Lucky Strike adits, southwest of Breen Lake, follow an irregular shear zone in a narrow band of quartz-sericite schist. The schist is locally mineralized with massive lenses of pyrrhotite, chalcopyrite and sphalerite. A sample across one lens measuring 45 cm in width returned 4.9% Zn, 0.3% Cu and trace Au and Ag.

The Breen Lake occurrence area, located south of Breen Lake, is underlain by andesitic and rhyolitic volcanics and volcanoclastic rocks. Locally, as indicated by drilling, bands and beds of massive pyrite less than 0.4 m thick are common, and pyrrhotite with other minor sulfide minerals also occurs in chlorite-carbonate altered felsic lapilli tuff, andesitic tuff and quartz feldspar porphyry.



Vein-type mineralization is also common in the Breen Lake area. At the Quarry occurrence two small pits are reported to contain some of the more heavily pyritized rocks in the area with associated chalcopyrite, malachite and bornite. In the lower quarry, extensive pyritization occurs as disseminations and masses in fractures, with minor amounts of copper minerals, within silicified sediments 20 meters north of the contact with gabbro. At the contact is an altered chloritic schist with quartz veining containing chalcopyrite and minor amounts of pyrite occurring mainly along the bedding. In 1985, drilling intersected small, 25 to 60 cm-thick, zones of semi-massive magnetite with trace pyrrhotite, which returned 0.13% copper and 0.01% zinc over a 0.80 m core interval.

Exploration for VMS mineralization generally includes the following techniques: geological mapping to identify prospective volcanic and volcanoclastic rocks, which typically show intense hydrothermal alteration close to the mineralized center; geochemical surveys to identify elements (Cu, Zn, Pb, Au, Ag, Ba) indicative of mineralization; geophysical surveys to identify contrasts in magnetic, electrical conductance, and gravity measurements; followed by trenching and drilling to identify, then delineate mineralization.

Ongoing exploration on the Property should focus attention on the characteristics that are common for Kuroko-type VMS deposits, which are apparent in at least two areas of the Property based on the data from previous exploration work. Gold- and silver-bearing quartz veins are targets as well.

## **2.0 INTRODUCTION**

At the request of Starlo Ventures Ltd., a British Columbia incorporated company, the author carried out an independent review and evaluation of the Company's exploration results for the Mount Richards Property, as well as reviewing available historical documentation and conducting a property examination. This Report includes the Author's conclusions and recommendations for further work. Details of the work undertaken in 2022 are included in Section 9.0. No field work has been undertaken since the author's visit. This Report was prepared in accordance with the requirements of National Instrument 43-101 and Form 43-101F1 *Standards of Disclosure for Mineral Properties* to be a comprehensive review of exploration carried out to date on the Property and, if warranted, to provide recommendations for future work.

### **2.1 SITE VISIT**

The author visited the Property on November 19, 2022. Three of the principal target areas were visited to view the terrain, potential access routes, extent of bedrock exposures and local zones of alteration and mineralization. The main area of interest surrounding Breen Lake was partly traversed on foot to examine outcrops of altered volcanic rocks with pyrite and possible copper and zinc minerals.

The main areas of interest are largely forest covered, although some fairly recent logging was noted in the Breen Lake area. Road access is good to most areas, although the Breen Lake access road

has a locked gate (the key is available from the local landowner). The Mable Mountain area covers a Municipal Forest Reserve that has numerous and extensive hiking, bicycling, and horseback trails but is largely restricted for motor vehicle access. A few residences and farms were viewed within the claims; however, most areas at higher elevations appear to be uninhabited.

The author photographed outcrops of altered, pyritic rocks and general vistas of the Property, and visited sites of previous work. There have been a number of drill sites reported, however, no drill sites were seen, or searched out, since most drilling was done 35 to 40 years ago and sites are likely to be overgrown. Historical drill core from holes drilled at various locations on the Property was not available to the author. Descriptions and photographs from the site visit are provided in Section 12.2 of this report.

In preparation for the writing of this report, the author reviewed all aspects of exploration work carried out to date on the Property, including results from historical sampling, trenching, drilling, and geochemical and geophysical surveys. The Property hosts at least 10 known mineral showings, several of which have received only limited early-stage exploration work. The Property is considered to have excellent exploration potential, based mainly on the presence of VMS-style mineral showings that are similar to the style of mineralization found at the Lenora, Tyee and Richard III Mines located 3 km to the west-northwest. Gold- and silver-bearing veins in shear zones have been discovered over narrow widths indicating additional potential for discovery of precious metal vein-type deposits.

The data review and Property inspection by the author indicate that there is significant alteration and mineralization present, and that further exploration is warranted.

## **2.2 SOURCES OF INFORMATION**

The author has reviewed previous exploration activities on the Property, including assessment reports on file available through the BC Government's Ministry of Energy, Mines & Low Carbon Innovation ARIS (Assessment Report Indexing System) database, which includes reports prepared between the 1970's and 2020. This report in part draws upon and references past work and reports by other qualified geologists and professional field personnel. Other non-project specific reports by qualified personnel have been referenced wherever possible. Although some of the earlier work referenced was carried out in the era prior to adoption of the NI 43-101 standards, it is the opinion of the author that the work referred to appears to have been carried out by reputable exploration companies in a competent, professional manner, and the results are representative. The information, conclusions, opinions and recommendations in this report are based upon:

- information available to the author at the time of preparation.
- assumptions, conditions and qualifications as set forth in this report.
- data, reports and other information provided by Starlo and other third-party sources.

- published reports from the operating mines in the region, plus other published government reports and scientific papers.

Information concerning the agreements for purchase of the mineral tenures currently comprising the Property was provided by Starlo and has not been independently verified by the author. Statistics, weather, and local information for the Project area was obtained from online sources, historical reports and personal knowledge of the Property area. A detailed list of references and sources of information is provided in the References section of this report.

Much of the background information for this report, such as geological descriptions, regional mineral occurrences, geochemical and geophysical results and their interpretations, was derived from previous technical reports prepared for various exploration companies. The documentation reviewed, as well as other sources of information, are listed at the end of this report in the References section.

## 2.3 ABBREVIATIONS AND UNITS OF MEASURE

Metric units are used throughout this report and currencies are in Canadian Dollars (C\$) unless otherwise stated. Market gold or silver metal prices are reported in US\$ per troy ounce. A list of abbreviations that may be used in this report is provided in Table 2.1 below.

**Table 2.1 Abbreviations used in this Report**

Abbreviation	Description	Abbreviation	Description
AA	atomic absorption	li	limonite
Ag	silver	m	meter
ASL	above sea level	m <sup>2</sup>	square meter
As, aspy	Arsenic, arsenopyrite	m <sup>3</sup>	cubic meter
Au	gold	Ma	million years ago
AuEQ	gold equivalent grade	mg	magnetite
AgEQ	silver equivalent grade	mm	millimeter
Az	azimuth	mm <sup>2</sup>	square millimeter
Bi	bismuth	M oz	million troy ounces
b.y.	billion years	ser	sericite
C\$ or \$	Canadian dollar	M t	million tonnes
ca	calcite	mu	muscovite
cl	chlorite	m.y.	million years
cm	centimeter	NI 43-101	National Instrument 43-101
cm <sup>2</sup>	square centimeter	oz/ton	troy ounces per short ton (34.285 grams/tonne)
cp	chalcopyrite	oz	troy ounce (31.1035 grams)
Cu	copper	Pb	lead
cy	clay	pf	plagioclase feldspar
°C	degree Celsius	po	pyrrhotite
°F	degree Fahrenheit	ppb	parts per billion
DDH	diamond drill hole	ppm	parts per million
ep	epidote	py	pyrite
ft	feet	QA	Quality Assurance
ft <sup>2</sup>	square feet	QC	Quality Control
ft <sup>3</sup>	cubic feet	qz	quartz

g	gram	RQD	rock quality description
gn	galena	Sb	antimony
go	goethite	SEDAR	System for Electronic Document Analysis & Retrieval
GPS	Global Positioning System	SG	specific gravity
gpt, g/t	grams per tonne	sph	sphalerite
ha	hectare	t	tonne (1,000 kg or 2,204.6 lbs)
Hg	mercury	Te	Tellurium
hm	hematite	to	tourmaline
ICP	inductively coupled plasma	ton	short ton (2,000 pounds)
kf	potassium feldspar	um	micron
kg	kilogram	US\$	United States dollar
km	kilometer	VMS	Volcanogenic massive sulfide
km <sup>2</sup>	square kilometer	Zn	Zinc

### 3.0 RELIANCE ON OTHER EXPERTS

This report has been prepared by Jeffrey D. Rowe (author) for Starlo. The information, conclusions, opinions, and estimates contained herein are based on information available to the author at the time of preparation of this report and on data, reports, and opinions supplied by Starlo and other third-party sources. The author reserves the right, but will not be obligated, to revise the Technical Report and conclusions if additional information becomes known to the author subsequent to the effective date of this Technical Report.

On December 20, 2022, the author confirmed the status and registration of the subject mineral tenures with information available through the web page of the Mineral Titles Branch, Ministry of Energy, Mines and Low Carbon Innovation, Government of British Columbia (Government of British Columbia, 2022). This B.C. government agency records real-time tenure information for all mineral claims in the province. The tenures that comprise the Property are registered 100% to 1335137 B.C. Ltd., which is a wholly-owned subsidiary of Starlo.

In December 2022, the Company had a title review undertaken of various Crown Grant mineral claim lots that are covered by the Property. It was determined that four of the lots owned by others may hold underlying mineral rights. Up-to-date mineral land tax payments for the four lots need to be verified to determine if they still hold the mineral rights to underlying base metals, or gold and silver.

The British Columbia Geological Survey geological library was accessed for geological maps and reports (Government of British Columbia, nd).

The author, Jeffrey D. Rowe, is responsible for preparing all sections of this report. The author is a Qualified Person only in respect of the areas in this Technical Report identified in their "Certificate of Qualified Person" submitted with this Technical Report to the Canadian Securities Administrators.

## 4.0 PROPERTY DESCRIPTION AND LOCATION

### 4.1 PROPERTY LOCATION

The Property is centered 8 kilometers north of the town of Duncan, on the southern part of Vancouver Island, British Columbia (Figure 4.1). The Property consists of a block of contiguous mineral claims approximately 13 km x 2.5 km in size (Figure 4.2). The co-ordinates of the center of the Property are approximately 48° 50' 56.7" N latitude and 123° 40' 38.8" W longitude, on map sheet NTS 92B/082 and tenures are located within the Victoria mining division.

**Figure 4.1 Location of the Mount Richards Property in southwest BC**

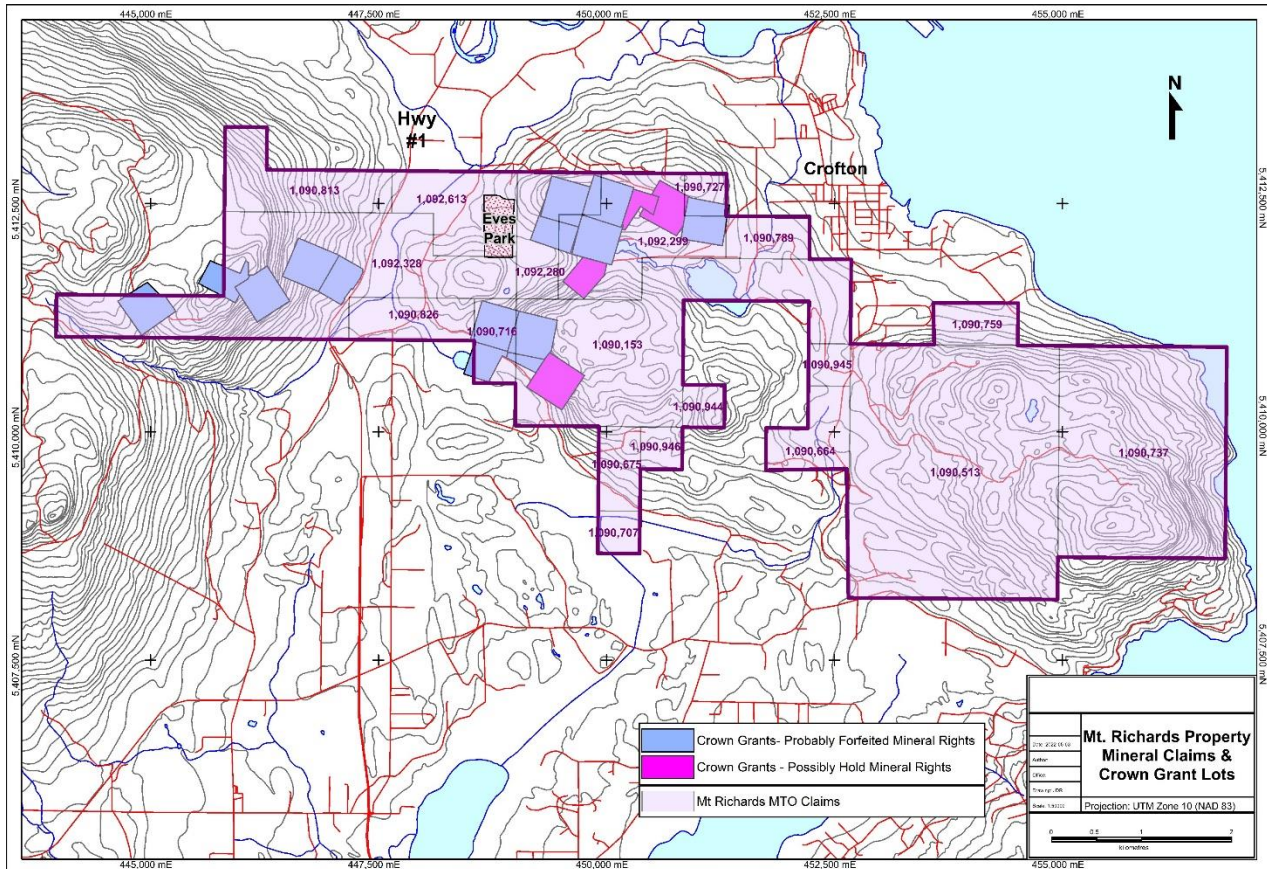


### 4.2 PROPERTY DESCRIPTION

The Property, as of December 20, 2022, consisted of 19 MTO mineral tenures, covering 2721 hectares, shown on Figure 4.2 and listed in Table 4.1. The author has determined, by viewing British Columbia Mineral Titles Online records, that the mineral tenures are in good standing to July 6, 2026, as of December 20, 2022, as shown in Table 4.1. The tenures are all registered with the

MTO office as 100% ownership by 1335137 B.C. Ltd. (FMC #289076), a wholly-owned subsidiary of Starlo. Starlo undertook soil geochemical sampling on the Property in 2022 and filed the cost of the work for claim assessment in December, 2022 to maintain the claims in good standing.

**Figure 4.2 Mount Richards Property mineral claims**



**Table 4.1 Mount Richards Property mineral tenures**

Title Number	Owner	Map Number	Issue Date	Good To Date	Area (ha)
1090153	289076	092B	2022/JAN/24	2026/JUL/06	382.65
1090513	289076	092B	2022/JAN/24	2026/JUL/06	637.85
1090664	289076	092B	2022/JAN/24	2026/JUL/06	63.78
1090675	289076	092B	2022/JAN/24	2026/JUL/06	42.53
1090707	289076	092B	2022/JAN/24	2026/JUL/06	21.26
1090716	289076	092B	2022/JAN/24	2026/JUL/06	42.52
1090727	289076	092B	2022/JAN/24	2026/JUL/06	21.25
1090737	289076	092B	2022/JAN/24	2026/JUL/06	425.22
1090759	289076	092B	2022/JAN/24	2026/JUL/06	42.51
1090789	289076	092B	2022/JAN/24	2026/JUL/06	42.51
1090813	289076	092B	2022/JAN/24	2026/JUL/06	106.27
1090826	289076	092B	2022/JAN/24	2026/JUL/06	63.77
1090944	289076	092B	2022/JAN/24	2026/JUL/06	21.26
1090945	289076	092B	2022/JAN/24	2026/JUL/06	21.26

1090946	289076	092B	2022/JAN/24	2026/JUL/06	21.26
1092280	289076	092B	2022/JAN/28	2026/JUL/06	85.02
1092299	289076	092B	2022/JAN/28	2026/JUL/06	170.04
1092328	289076	092B	2022/JAN/28	2026/JUL/06	403.88
1092613	289076	092B	2022/JAN/28	2026/JUL/06	106.27
				Total:	2721.12

There are as many as eighteen surveyed Crown Grant mineral claim lots shown on Mineral Titles Online website maps that lie within, or partly within the Property (Figure 4.2). Most of these lots measure about 20 hectares or less in area. A title review undertaken by the Company determined that most of these lots appear to have the mineral rights forfeited, or reverted to the Crown, however, mineral land tax records are not always available, so it can not be determined definitively that they are, in fact, forfeited.

Land title records for four of the Crown Grant lots (highlighted on Figure 4.2), indicate that “all subsurface minerals except Coal, Coal Oil, Iron and Fireclay” are registered to the District of North Cowichan for the “Black Prince” and “Derby No.1” mineral claims, Winifred Hope McLellan for the “Lucky Strike” mineral claim, and Joseph T. Pearce for the “Title Wave” mineral claim. Up-to-date mineral land tax payments for these four lots need to be verified to determine if they still hold the mineral rights to underlying base metals, or gold and silver.

The E&N Railway was granted large areas of lands on Vancouver Island by the Government of the Dominion of Canada circa 1887 as payment for construction of a 115 km rail line from Esquimalt to Nanaimo (Taylor, 1975), and these lands included surface, timber, and certain base metal mineral rights, but not the gold and silver rights. Basically, the entire Property is underlain by land lots that were originally part of the E&N land grant, although they are now owned by various companies, municipalities and individuals. Many of the E&N lots on Vancouver Island have been purchased by timber companies to acquire the timber rights that are attached to the E&N land grant lots.

Over the years since 1887 E&N Railway and its successor entities entered into various agreements respecting the land, timber and mineral rights for various parts of the E&N Railway grant. The early transfers were made by Canadian Pacific as it had acquired the E&N Railway and a number of the Canadian Pacific entities were the transferees of various interests. Unfortunately, the records in the Land Title Office do not reflect all of these transfers because of the size of the Property and the multitude of titles which came into effect over time as the E&N lands were subdivided into blocks and even further smaller parcels over time.

In 1973 the BC Mineral Land Tax Act came into effect and it imposed mineral land taxes on all mineral Crown Grant interests in the province including the lands contained within the E&N Railway grant. As a result of this, most of the mineral rights for E&N lands were forfeited for non-payment of taxes or surrendered to the Crown by way of various agreements.

Global surrender of the mineral rights on most of the lands retained by E&N was implemented by surrender documents dated December 21, 1973 and August 1, 1975. There are a number of schedules to these agreements where transfers of different interests in the E&N Railway lands were excluded from the surrender of the mineral rights, and documentation was not always filed.

The possibility exists that there are unregistered interests which have never come to light and because the land title system did not track all of the transfers or subsequent transfers respecting the underlying mineral rights, it is not possible to say with 100% certainty that no mineral rights are held by third parties within the Property area.

It is the author's view that Starlo's ownership of base metal mineral rights for the Property is of very high probability, however, there is a remote possibility that in the future an unregistered document, originating from a transferred E&N land lot may be brought forward. In that instance the author believes that mineral ownership rights would be difficult for a third party to establish in the absence of clear and unambiguous documentation. Regardless, the gold and silver rights, which were not part of the E&N mineral rights, are held by Starlo's current mineral tenures.

A small, 19-hectare, Provincial Park (Eves Park, Figure 4.2) is located near the central northern boundary of the Property. Land in a park established under an Act of British Columbia is considered "alienated" and any part of a claim that covers the alienated land holds no mineral rights.

### **4.3 MOUNT RICHARDS PROPERTY PURCHASE AGREEMENT**

The Property is comprised of a parcel of claims that are subject to an agreement with C.J. Greig and Associates Ltd., whereby 100% ownership of the claims was acquired by 1335137 B.C. Ltd., a wholly-owned subsidiary of Starlo, from C.J. Greig and Associates Ltd. in exchange for:

- (i) 175,000 common shares of Starlo; and
- (ii) the option granted to C.J. Greig and Associates Ltd. to undertake the Stage I work program on the Property.

There are no production royalty interests attached to any of the mineral claims.

### **4.4 MINERAL TENURE OWNERSHIP IN BRITISH COLUMBIA**

In British Columbia, the owner of a mineral claim on Crown land, as well as on most private property, is granted 100% ownership of all sub-surface minerals. A valid Free Miner Certificate ("FMC") is required to record a claim or acquire a recorded claim or interest in a recorded claim by transfer, and to conduct exploration for minerals on mineral claims within British Columbia. A company FMC is available to any registered corporation in good standing for a fee of \$500, and to individuals for \$25, renewable annually.

Mineral titles in British Columbia are acquired and maintained through Mineral Titles Online, a computerized system that provides map-based staking. Acquisition costs for claims are \$1.75 per

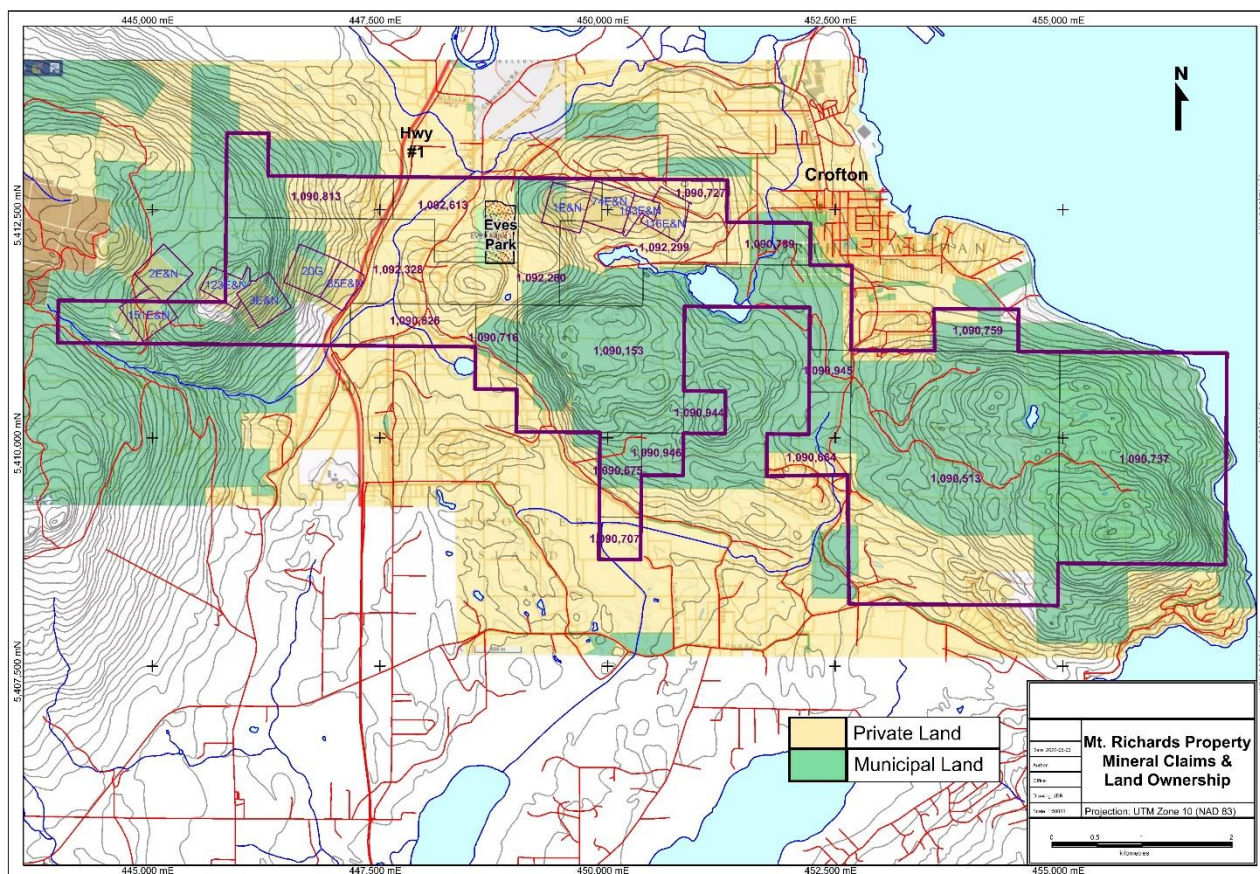


hectare. This confers ownership of the claim for one year beyond the date of staking. To continue to hold the claims beyond the first year, the owner must complete assessment work, either physical or technical, on the property, or pay cash in lieu. A report must be filed detailing the work performed and the results. These assessment reports remain confidential for one year and then become available for public access. If assessment work or cash in lieu is not filed by the required date the claims will automatically forfeit.

For years 1 and 2 of claim existence the work requirement is \$5 per hectare per year, for years 3 and 4 it is \$10 per year, years 5 and 6 it is \$15 per year, and thereafter \$20 per year. Rather than perform work on the Property, cash in lieu may be paid to hold the claims, at a rate twice that of required exploration expenditures. The Property tenures were all staked in January 2022, and the end of the first anniversary year falls in January 2023. Expenditures for work undertaken in 2022 was applied to the claims to extend their "Good-To" dates to July 6, 2026. Therefore, the annual exploration and development work requirements to extend the expiry dates of the claims is now \$10 per hectare.

A large part of the Property area is identified in public records as Municipal land and is listed as held by the Corporation of the District of North Cowichan (Figure 4.3). Areas in the north-central and southeastern parts of the Property are identified as privately-owned land lots. Starlo may require agreements with the landowners to allow access and to operate exploration equipment on these areas of their claims. In British Columbia, the Mineral Tenure Act allows Free Miners to enter their mineral claims to explore for or develop minerals, however, the Company must provide proper notice to the landowner and compensate the landowner for any loss or damages.

**Figure 4.3 Mount Richards Property land ownership**



#### 4.5 ENVIRONMENTAL REGULATIONS & EXPLORATION PERMITS

A reclamation bond or security is required to be posted with the government of BC as part of the exploration permitting process to pay for the cost of reclamation of surface disturbance in the event that a company defaults on its obligation to perform any required remediation. Permits and reclamation security are required for any type of exploration work that may cause disturbance or possible environmental damage to the land. These include, but are not limited to, the following:

- cutting of timber for geophysical grid lines or access trails
- trenching
- construction of roads or trails
- construction of drill sites and helicopter pads
- use of tracked or other mobile equipment and diamond drills
- fuel storage
- camp construction
- drilling and blasting
- underground development

The posted bond, or security, can be recovered by the Company upon acceptable remediation of environmental disturbance on the Property caused by exploration activities. There are small areas

of historical disturbance on the Property that may require remediation and the posting of a bond by Starlo to cover the possible cost of remedial work. The primary requirements for clean-up related to historical workings could be the secure closure of certain adit openings in the Breen Lake area, with monitoring and management of surface and groundwaters in historically disturbed areas. An exploration permit can be obtained from the BC Ministry of Mines that provides for a range of property exploration activities, including specified levels of diamond drilling, blasting, geophysical surveys, camp site development, fuel storage, underground exploration and more, by making application to the regional BC Ministry of Mines office. The permit process generally takes from 4 to 6 months to complete, following consultation with other Ministries and affected groups.

The permitting process for specific types of work may also require baseline archaeological and environmental studies (water quality, flora, fauna) in the areas proposed for exploration, and consultation with any affected First Nations or local groups. Water quality protection may be a priority issue since streams within the Property drain into local water supply sources. Also, certain areas close to dwellings may be subject to equipment noise limitations during certain hours of the day. The author does not foresee any significant factors or risks that may affect access, title, or the right or ability to perform work on the Property.

The Company does not require an exploration permit to conduct the proposed Phase 1 exploration program included in this report (Section 18.0), however, it is anticipated that following Phase 1 work the Company will submit an application to the Ministry of Mines for a permit to allow more advanced types of work in 2024 and beyond. Promising results from Phase 1 work will justify the request to authorize more advanced work that could include ground-based geophysics, access trail construction and diamond drilling in various areas of the Property. In the opinion of the author, based on similar work in nearby areas, the granting of such a permit is considered probable.

#### **4.6 ENVIRONMENTAL CONSIDERATIONS**

To the best knowledge of the author, there are no serious environmental considerations or other significant factors or risks that may affect the right or ability to perform work on the Property.

The Property covers part of Crofton Lake which was, up until 2019, a back-up water supply for the village of Crofton. Crofton is now connected to North Cowichan's South End water system as back-up (Municipality of North Cowichan, 2019). The primary water supply for the village is the Cowichan River, from which water is pumped under a licence by Crofton pulp and paper mill. The Property covers a portion of Bonsall Creek and its tributaries that supply irrigation water for several farms within lowlands on the western part of the Property.

Surface exposures of mineralization and small historical dumps from exploration tunnels that may have contributed metals to surface waters over a period of many years are located on the upper slopes of Mount Richards, near Breen Lake. It is suggested that Starlo conduct water quality sampling in Bonsall Creek, which collects drainages from the north and west sides of Mount

Richards and from Little Mount Sicker, to establish a baseline of the current water quality and to monitor any changes. Bonsall Creek encompasses important ecosystems and contains salmon spawning habitat (SGS Sustainability Group, 2016).

## **5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

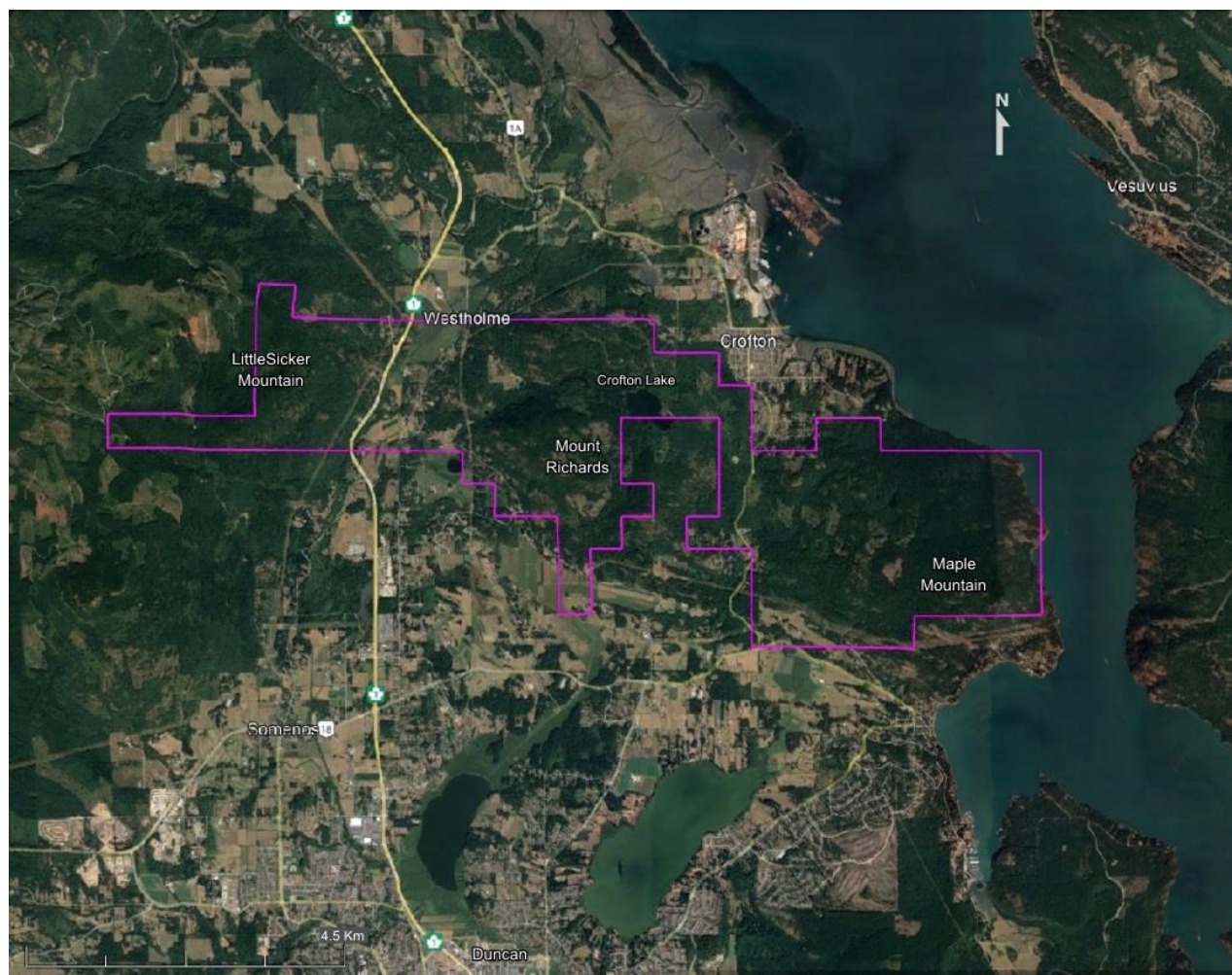
### **5.1 ACCESSIBILITY**

Highway #1 crosses the western claims and municipal roads are present in the central and eastern areas. Logging company-owned roads provide access to some higher parts of the Property, where clear-cut logging has been conducted in the past (Figure 5.1). Extensive branch roads stem from the mainlines and provide access to most parts of the Property although some of the steep hillsides have no road access.

The western part of the Property is accessed from Mt. Prevost Road, which climbs westerly to the top of Little Sicker Mountain, and from which logging roads branch northerly on the claims. The west-central part of the Property is at lower elevations and occupied by farmland and private properties near highway #1. The central claims overlie the unoccupied upper slopes of Mount Richards which is accessed by various roads primarily from the north and east sides of the mountain, originating in the Crofton area. Logging has been undertaken in several small plots and Crofton Lake sits near the top of the mountain. The east end of the Property covers hilly terrain that is largely forested, with a few small clear-cut logged plots. Limited-use roads extend into the area from the north, west and south, however, the far east end has only limited access trails, and Maple Mountain drops rather steeply in this area down to the ocean.

Pattison and Money (1988) reported access for drilling in the Crofton Lake area in 1987. They described four-wheel-drive dirt logging roads accessed from either Crofton Road, northwest of Crofton, or Osborne Bay Road, south of Crofton. The route from Crofton Road passes through private property with a gate maintained by the local owner. Access via Osborne Bay Road is through a locked gate, situated opposite Maple Mountain Park, belonging to the Municipality of North Cowichan. The 1987 drill sites were situated on land owned by the Municipality of North Cowichan and on land belonging to Mr. Whittaker. Both owners granted permission to drill on their lands in return for monetary compensation for timber removed and for access road improvement.

**Figure 5.1 Satellite view of Mount Richards Property area with named features**



## 5.2 CLIMATE, VEGETATION AND WILDLIFE

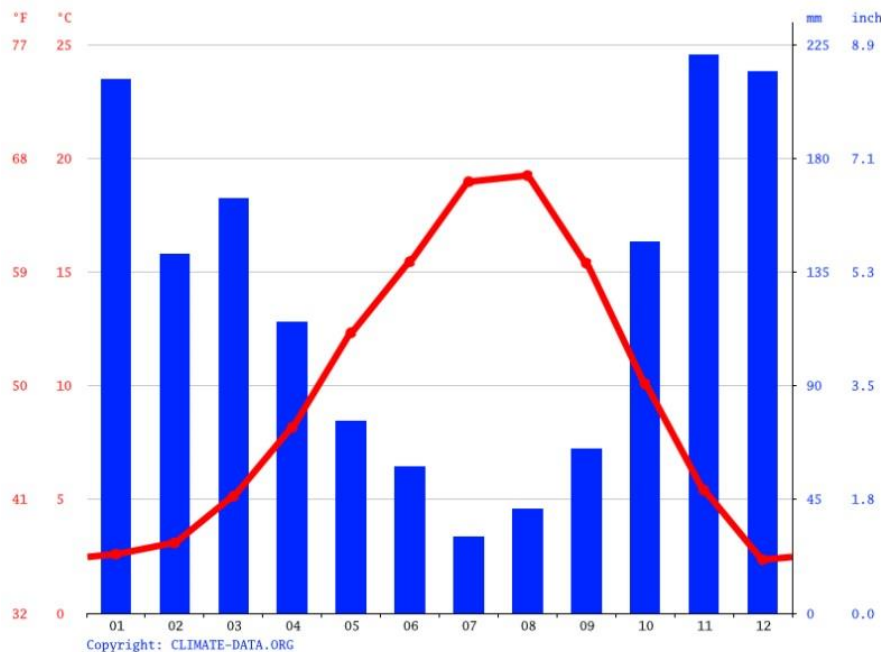
The climate on the Property is very similar to that of Duncan, as it lies just 7 km to the north of the town and ranges from 50 m to 550 m higher in elevation.

The climate in Duncan is warm and temperate. The winter months are much rainier than the summer months. The average temperature in Duncan is 9.9 °C and approximately 1484 mm of precipitation falls annually (Figure 5.2).

August is the warmest month of the year averaging 19.2 °C. December is the coldest month, with temperatures averaging 2.4 °C. The driest month is July, with 30 mm of rain and the most precipitation falls in November, averaging 221 mm.

The most common form of precipitation throughout the year is rain alone, although inter-mixed snow does fall from mid-November through February. On the Property, at higher elevations, the amount of precipitation falling as snow is greater than in Duncan and remains on the ground longer. Periods of hot, dry weather in the summer may lead to closure of the forests and limitation of work.

**Figure 5.2 Duncan Average Temperatures and Precipitation (Climate Data, 2022)**



In the Duncan area there is a long history of timber harvesting. The forests are principally comprised of stands of Douglas fir, with minor amounts of red alder, western red cedar and western hemlock. Salal forms thick patches of undergrowth in some areas. Approximately 10% of the Property area has been recently logged and some areas have been cleared for agriculture.

The Property area is home to a variety of small mammals and birds, as well as some larger mammals such as black bear, deer, and less commonly, cougar and wolves.

### 5.3 PHYSIOGRAPHY

The area is somewhat mountainous and lies within the Vancouver Island Ranges of the Insular Mountains physiographic zone. Within the Property the low mountains form a west-northwest trending ridge that is cut by a northeast-oriented valley containing Bonsall Creek, a moderate-sized drainage that flows into the Pacific Ocean near Crofton (Figure 5.1). Small streams originating within the Property flow northeast and southwest off of the mountain ridge. A few small ponds, and 800-m-long Crofton Lake, lie in flat spots along the ridge. Elevations within the Property range from sea level at the eastern boundary, to peaks of about 300 to 580 m above sea level along the ridge.

### 5.4 LOCAL RESOURCES & INFRASTRUCTURE

The Property area covers a few residences and farms, primarily at lower elevations along the southern boundary and near Highway #1 where it cuts northeasterly across the west part of the Property. Infrastructure located on the upper elevations of the Property consists of logging access and recreational roads, and perhaps a few local cabins. Exploration activity on the Property will be

facilitated by existing services located in the nearby towns of Crofton, Chemainus and Duncan. Four-lane, paved, Highway #1 runs north from Victoria the length of Vancouver Island and passes through the Property. Some secondary roads on the Property are privately owned by local timber companies or the Municipality, and some have gates restricting unauthorized access.

A major power transmission line that runs the length of Vancouver Island passes through the Property, adjacent to Highway #1. Nearby electrical power sources are readily available for possible future development on the Property.

## 6.0 HISTORY

Polymetallic massive sulfide mineralization was first discovered on the west slope of Big Sicker Mountain in 1897 by F.L. Sullivan, T. McKay, Henry Buzzard and Harry Smith. The original prospects, which became the Lenora, Tyee and Richard III Mines, lie about 3000 meters west of the present Property boundary (Figure 6.1). The Lenora mine was worked between 1898 and 1903 (inclusive) as well as in 1907. The Tyee mine was worked intermittently from 1901 to 1909 and the Richard III mine was in production for three years between 1903 and 1907 (Minfile No. 092B 001). Mineralized material was initially shipped to smelters at Vananda (Texada Island), Everett, Tacoma and, later, to Ladysmith and Crofton. Zinc was not recovered at that time.

Production data reported in the Minfile No. 092B 001 mineral inventory indicate that, between 1898 and 1909, a total of 229,221 tonnes of mineralization was mined from these three deposits, with recovered grades of 4.0% Cu, 4.8 g/t Au and 100.1 g/t Ag (Table 6.1). The three deposits were mined intermittently as a single operation (the Twin J mine) between 1942 and 1952, and during that period a total of 48,082 tonnes were produced with recovered grades of 4.0% Zn, 0.8% Cu, 0.3% Pb, 1.3 g/t Au and 41.7 g/t Ag.

The Twin J property received steady exploration by various companies from 1964 and, based on work up to 1970, a small non-compliant mineral resource was estimated, however, there has been limited work since that time.

***Although the nearby known mineral deposits are hosted by similar geological units to those of the Property, that is not necessarily indicative of the tenure of mineralization that may be present on the Property that is the subject of this report.***

Figure 6.1 Mount Richards Area Historical Mines

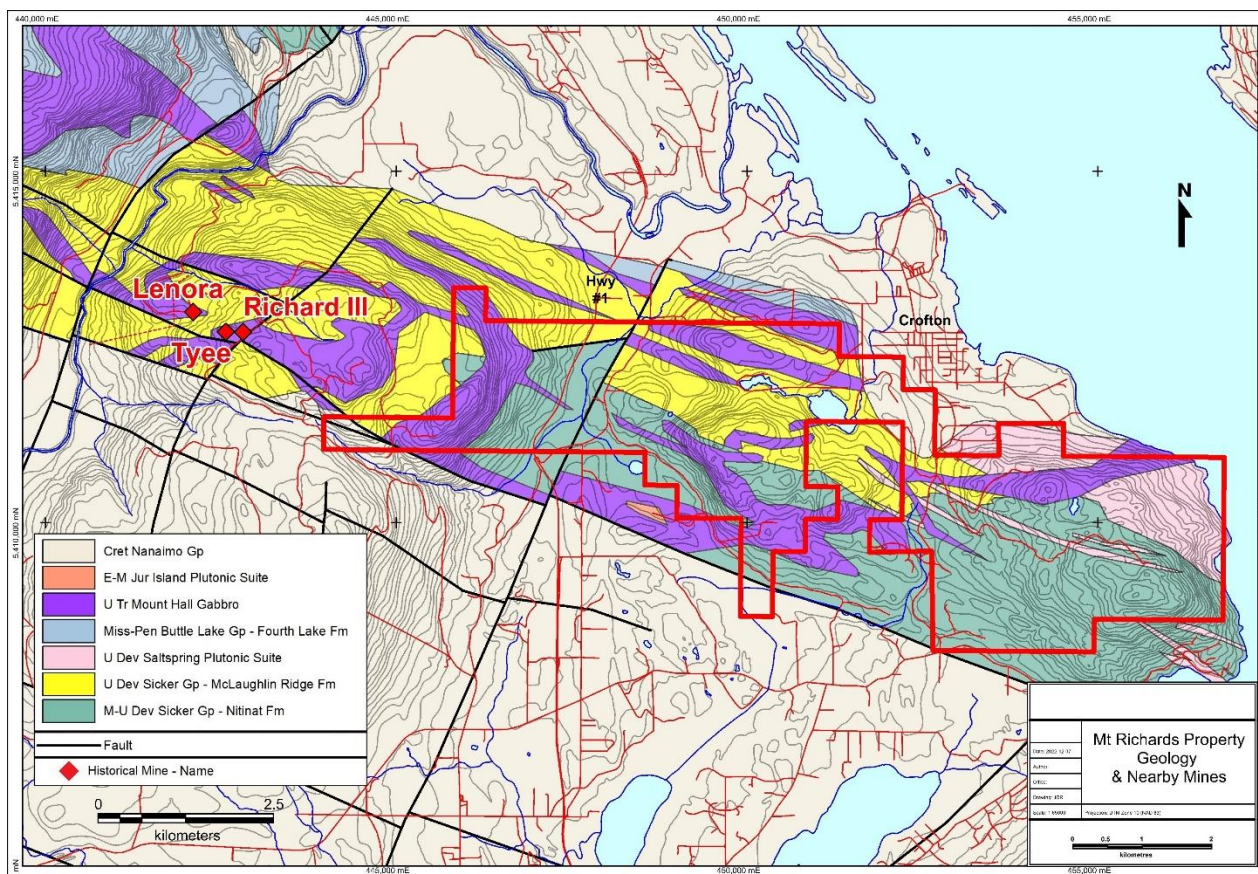


Table 6.1 Production data for Lenora, Tye, Richard III and Twin J mines (Minfile 092B-001)

Mine	Tonnes	Au_gm	Au_g/t	Ag_gm	Ag_g/t	Cu_kg	Cu %	Pb_kg	Pb %	Zn_kg	Zn %
Lenora	71650	321886	4.49	8706817	121.52	3226034	4.50				
Tye	152668	762553	4.99	13725069	89.90	5840593	3.83				
Richard III	4903	22830	4.66	522714	106.61	113604	2.32				
<b>Total</b>	<b>229221</b>	<b>1107269</b>	<b>4.83</b>	<b>22954600</b>	<b>100.14</b>	<b>9180231</b>	<b>4.00</b>				
<b>Twin J</b>	<b>48082</b>	<b>63730</b>	<b>1.33</b>	<b>2002971</b>	<b>41.66</b>	<b>364755</b>	<b>0.76</b>	<b>164587</b>	<b>0.34</b>	<b>1926111</b>	<b>4.01</b>

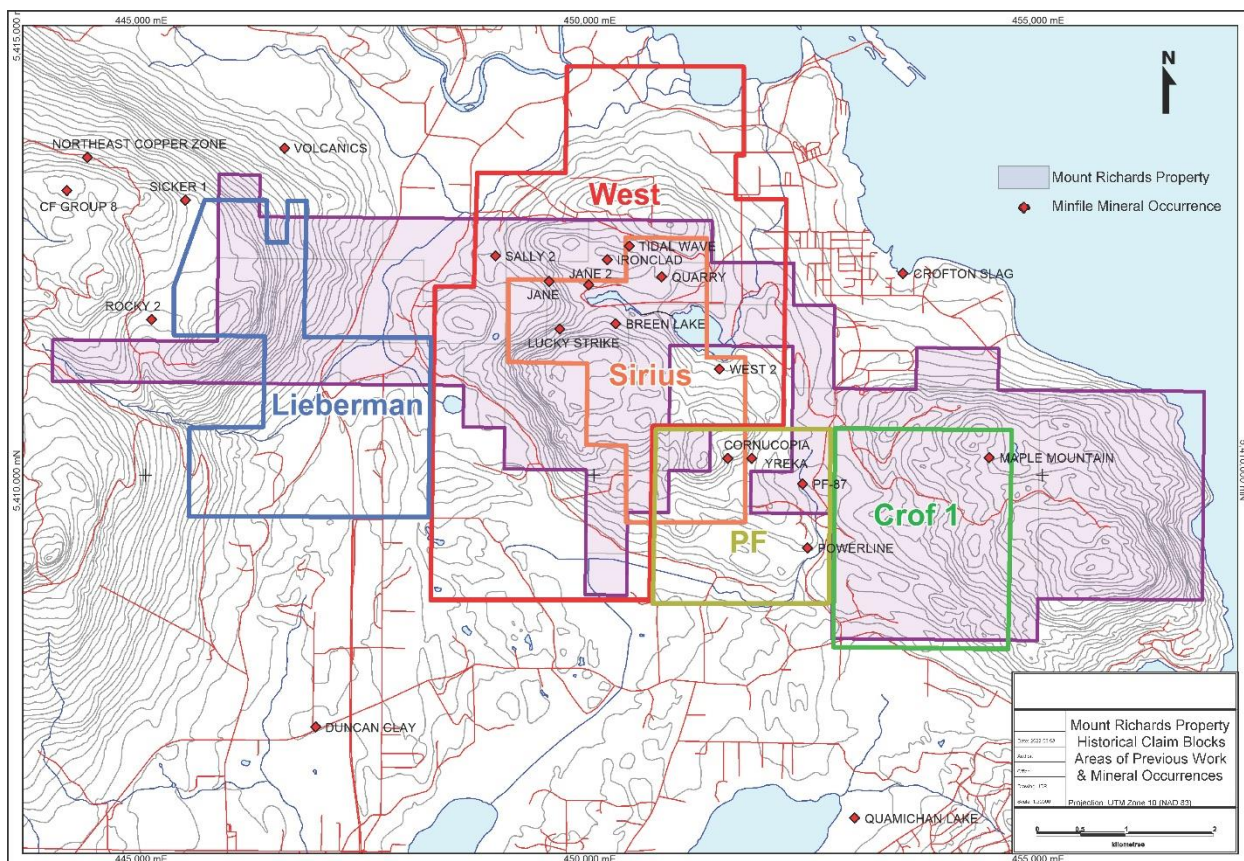
Prospecting and geological evaluation of the favourable belt of rocks extending eastward from Twin J over the last 100 years has produced many mineral discoveries, primarily located to the northwest and southeast of Crofton Lake, several of which fall within the Property area. For the most part, however, records of early 20<sup>th</sup> century exploration within the Property area are either limited or not known to be available, although it is apparent that this area has not been explored to the extent of the resources described above at the Mount Sicker deposits.

In the central part of the current Property numerous trenches, open cuts, adits and shafts were developed on the Property in the early 1900's, including some notable workings such as the Lucky Strike, Jane and Ironclad occurrences (Figure 6.2). To the southwest of Breen Lake, the Lucky Strike showing has been explored by two adits, up to 15 m in length. Two irregular, roughly parallel



shears run southeasterly along the tunnels and are locally mineralized with lenses of pyrrhotite, sphalerite and chalcopyrite. At the Jane showing, near the west end of Breen Lake, Pattison and Money (1988) described several open cuts and two short adits that contain massive sulfides, with pyrrhotite, sphalerite and chalcopyrite up to 90 cm in thickness. On the north side of Breen Lake, the Ironclad workings consisted of two short shafts, and a 30° incline 36 meters in length.

**Figure 6.2 Historical claim blocks and areas of previous work**



Most of the more recent exploration efforts by various companies have also taken place in the central part of the Property, with the majority of the work undertaken by Falconbridge in the 1980's. In 1970, Canpac Minerals staked and explored their Sirius claims surrounding Crofton Lake (Figure 6.2). A program of geological mapping and a ground magnetic survey was completed on a northwest-oriented grid measuring about 3500 m long and extending from about 500 m north of Crofton Lake to about 1800 m south of the lake. A few shears and narrow quartz veins with pyrite and chalcopyrite were noted and chalcopyrite was observed in the dump boulders at the Yreka shaft (Rushton, MacFarlane and Douglas, 1970, AR2397).

In 1978, the area was staked by SEREM as the Croft 2 claim covering much of the previous Sirius claim, and a program of geological mapping and soil and rock sampling was completed in 1979 on a 1 km by 1 km grid just to the north of Breen Lake. Copper mineralization was noted in three places near contacts of gabbro-diorite intrusive sills. A 30-cm-wide quartz vein cutting the gabbro

contains chalcopyrite and arsenopyrite over about a 6 m exposed length. A flooded adit was found at the contact between intrusive and felsic volcanic rocks. The adit dump rocks contain sphalerite and chalcopyrite. The soil sample results indicated a strong correlation of anomalous copper and zinc values with areas of felsic volcanics and sedimentary rocks.

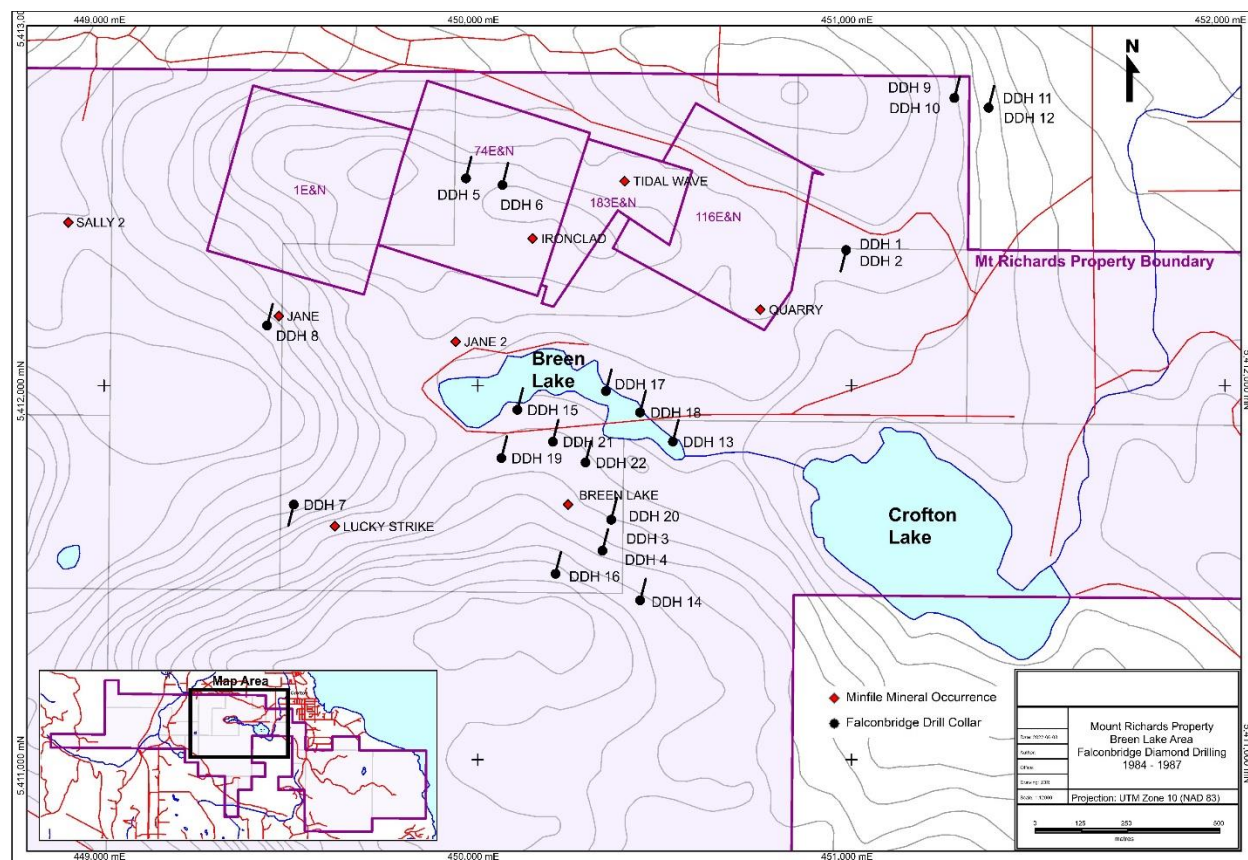
In 1982 and 1983, the area north and south of Crofton Lake was staked as the West claims by R.J. Bilquist and a program of prospecting was completed. In 1984 Falconbridge optioned Bilquist's claims and staked additional claims to form the West group that covered the central part of the current Property. Work by Falconbridge in 1984 consisted of flying an airborne electromagnetic (EM) survey, detailed mapping, litho-geochemical sampling and a ground EM survey. Several easterly trending EM conductors were identified, three of which were listed as high priority for ground follow-up (Chandler and Martyn, 1985). Other work in 1984 included the drilling of eight diamond drill holes (West 84-1 to 8), mainly to the north and south of Breen Lake to test EM conductors and geochemical anomalies (Figure 6.3). The results from the first two holes were reported, describing 25 cm and 60 cm zones of semi-massive magnetite with trace pyrrhotite. The only mineralized interval was 0.8 m of 0.13% Cu and 0.01% Zn described as sericitic volcanic rock with quartz eyes cut by a highly chloritic shear zone containing 20% pyrite and pyrrhotite (Chandler and Lear, 1985). A single drill hole, West 84-8, was drilled beneath the Jane adit on a Crown Grant adjacent to Falconbridge's claims but it was entirely in gabbro and no significant mineralization was intersected. Holes 84-3 and 84-4 were later relogged and reported in the 1987 program as having narrow intercepts of 0.31% Cu over 2.0 m and 0.34% Cu over 1.5 m at the base of a feldspar porphyry flow and tuff interval. In 1985, four more holes (West 85-9 to 12) were drilled by Falconbridge about 1200 m north-northeast of Breen Lake. The results from these holes are not available to the author.

In 1982 P. Lieberman staked claims that covered the west side of the current Property, lying on the east slope of Little Sicker Mountain and the lowlands to the east (Figure 6.2). Lieberman conducted prospecting and in 1983 drilled three x-ray-size holes totalling 107 m. The holes intersected mafic and intermediate volcanics, with some silicified zones. Fine calcite and quartz veins with pyrite were encountered but had no significant copper or zinc values.

In 1985 Falconbridge added to their property by optioning the Lieberman claims on which they conducted geological mapping and litho-geochemistry on 112 samples. Surface mapping and sampling defined one possible exhalative horizon with exploration potential on the Lieberman Option. It was described as several bands of silica with 5-10% pyrite that occur at the contact of pyroxene feldspar basalt porphyry flow and pyroxene feldspar tuff, which was traced for 500 m. Sampling of this horizon produced one significant assay value of 1910 ppm Zn from a grab sample however, overall, values were low. Numerous shear zones on the claims were found to carry significant amounts of pyrite and minor chalcopyrite but these were not considered suitable exploration targets. Further mapping, sampling and geophysical surveys were recommended on

the possible exhalative horizon (Lefebure, 1985), but there is no published record of this being done.

**Figure 6.3 Falconbridge drillhole locations 1984-1987**



In 1985, Canamax Resources undertook soil geochemical sampling on their Crof 1 claim on the eastern part of the current Property. This area on the west slope of Maple Mountain is about 1.5 to 4.5 km southeast of Crofton Lake, and was adjacent to, and east of, the Falconbridge ground. A total of 380 soil samples were collected and analyzed, revealing mainly single sample isolated highs in Cu, Zn, Ag and Au, commonly coincident with pyritic chlorite schist or porphyritic volcanic rocks (Fleming, 1986). This area was partially soil sampled by Starlo in 2022 to better define the anomalous areas. The results of this work are described in Section 9.0.

In 1986 and 1987, Falconbridge explored the PF claims in the area south of Crofton Lake which is adjacent to and partially overlapping the south side of the current Property (Figure 6.2). Programs of geological mapping, prospecting and geochemical sampling were conducted. Soil samples returned isolated copper highs, within areas of feldspar crystal ash flow, but with no associated zinc anomalies. Mineralized outcrops include a 60 cm milky white quartz vein with 1% chalcopyrite and two pyritic zones along Osborne Bay Road rock cuts (Booth, 1987). One zone has 3-5% pyrite in stringers cutting intrusive but returned no anomalous metal values. The other has disseminations

and stringers of pyrite in chloritic mafic volcanic, from which a grab sample returned 0.09% Cu, but no Pb or Zn.

Falconbridge also drilled three diamond drill holes on the PF claims in 1987, totalling 1083.0 meters, approximately 1.5 km southeast of Crofton Lake to test chargeability highs with coincident Cu anomalies in soil (Figure 6.2, PF-87 showing). The best mineralized drill intersections were from ten isolated intervals, each about 1 meter in length, that contained greater than 1000 ppm copper, and one weakly anomalous gold sample. Seven, non-contiguous 1-meter samples from drill hole PF87-2 contained between 1243 and 3718 ppm copper. Three samples from PF87-3 contained between 1160 and 2311 ppm copper and one contained 780 ppb gold near the top of the hole (Money, 1987). This PF-87 mineralized area is located near the southern boundary of the current Property.

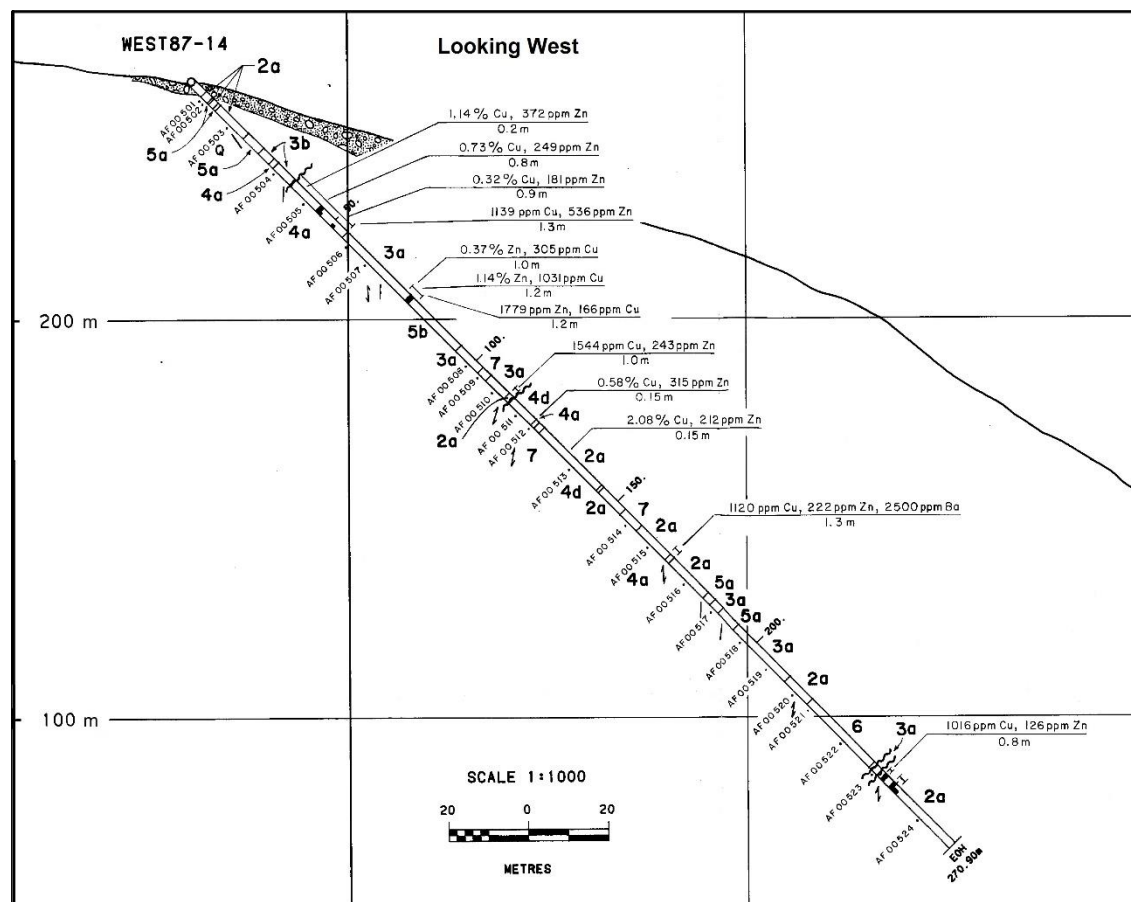
On the West claim group, Falconbridge's 1986 program included a litho-geochemical survey and an induced polarization (IP) survey. The 1987 program consisted of ten diamond drill holes (West 87-13 to 22) clustered around Breen Lake, and the relogging of holes West 84-3, 4 and 8. The 1987 drilling program, totaling 3170.1 meters, was reported in assessment report 17007 by Pattison and Money (1988).

Falconbridge's drilling tested many of the high chargeability anomalies that were identified by the IP survey in the Breen Lake area, and most of them were believed to be explained by 2-5% sulfides (mostly pyrite) intersected over several meters in drill holes. Low resistivity anomalies that were drill tested did not return significant sulfides and were believed to be caused by lake bottom sediments (Pattison & Money, 1988). An elongate ESE-trending EM conductive zone that persists over a length of 3.5 km and passes through the Jane showing was only partially tested by drilling because Falconbridge did not own all of the claims that covered the anomalous trend to the west.

Drillhole locations are shown on Figure 6.3 and some of the results recorded in Falconbridge's report are discussed below.

Drill hole West87-14 intersected numerous narrow mineralized intervals including a 1.2-meter section of semi-massive sulfides in chlorite-carbonate altered felsic lapilli tuff yielding 1.14% zinc and 0.103% copper. Another 0.15-meter section of massive pyrite-chalcopyrite assayed 2.08% copper (Figure 6.4, Table 6.2). Intercepts consist primarily of banded pyrite, with lesser chalcopyrite and sphalerite, but also include disseminations and veins of sulfides. Drill sections interpret bedding in the volcanics and tuffaceous rocks to dip 50–65 degrees to the south-southwest. Note that hole West87-14 is the southern-most hole; there has been no drill testing beneath it, or further to the south.

**Figure 6.4 Drill section for hole West87-14 showing numerous narrow mineralized intercepts (Pattison & Money, 1988)**



Many of the other Falconbridge drill holes intersected multiple narrow mineralized intervals and some of the significant results include:

Drill hole West87-16 included a 0.12-meter sample of massive pyrite-chalcopyrite yielding 0.37% copper. Another section of strongly chloritic quartz-feldspar porphyry containing pyrite and chalcopyrite assayed 0.48% copper over 0.7 meter.

Drill hole West87-20 intersected a 0.8-meter-long interval of semi-massive pyrite-chalcopyrite in silicified mafic ash tuff that assayed 0.97% copper. Another 1.0-meter section of strong pyrite mineralization assayed 0.64% copper and 0.56% zinc.

Drill hole West87-03 and 87-04 encountered chalcopyrite in chlorite-carbonate altered andesitic tuff and yielded values of 0.31% and 0.34% copper over 1.5 and 2.0 meters.

**Table 6.2 Significant mineralized intervals from drill hole West87-14 (Pattison & Money, 1988)**

WEST87-14					
Sample Number(s)	From (m)	To (m)	Width (m)	Assay	Description
AG08005	38.9	39.1	0.2	1.14% Cu	30% py & 1% cpy in quartz eye bearing felsic tuff. Strong black chlorite and minor carbonate alteration.
AG08010	45.2	45.6	0.4	1.04% Cu	30% py & 1% cpy as above.
AG08011	45.6	46.0	0.4	0.41% Cu	7% py & tr-1% cpy in chlorite altered felsic quartz eye tuff
AG08014	50.0	50.9	0.9	0.32% Cu	5% py and tr-1% cpy in weakly to moderately carbonate altered quartz eye tuff
AG08016	53.0	54.3	1.3	1139 ppm Cu	3-5% py & tr-1% cpy, disseminated and in fracture controlled carbonate veinlets in quartz eye tuff.
AG08017	75.6	76.6	1.0	0.37% Zn	3% py in intermediate tuff.
AG08018	76.6	77.8	1.2	1.14% Zn 1031 ppm Cu	Semi-massive sulphides in chlorite-carbonate altered felsic lapilli tuff.
AG08019	77.8	79.0	1.2	1779 ppm Zn	2-3% fracture controlled py in cherty green argillite.
AG08020	112.0	113.0	1.0	1544 ppm Cu	5% py and tr cpy in andesitic ash tuff.
AG08021	120.8	120.9	0.1	0.58% Cu	30% banded py in chloritized quartz eye bearing lapilli tuff.
AG08022	132.4	132.5	0.1	2.08% Cu	Massive pyrite with 3 to 5% cpy in andesitic ash crystal tuff.
AG08023	168.7	170.0	1.3	1120 ppm Cu	3% py in felsic crystal tuff.
AG08024	246.5	247.3	0.8	1016 ppm Cu	Sulphide-rich (50% py) fault-gouge.

The number of drill holes that intersected subeconomic Cu-Zn mineralized zones were believed by Falconbridge to have explained the geophysical anomalies, however, Sadlier-Brown & Ruks (2010) noted that the intercepts appear to be offset to the north of the airborne anomaly. This may imply that there is potential for stronger mineralization at depth further to the south and beneath the conductive zone.

In 2007, Maple Mountain Explorations Inc. completed a program of rock and soil sampling in the eastern part of the current Property on Maple Mountain. This work identified a rock cut exposure

on the M-120 logging road containing massive pyrite mineralization in layered greenstone with epidote alteration. Sample assays returned high iron, but low copper, zinc and gold values. The 80 soil samples analysed for multi-elements by Inductively Coupled Plasma Mass Spectrometry (ICP) did not return any anomalous values.

In 2008, Westridge Resources Inc. contracted Aeroquest International to fly an electromagnetic and magnetic survey totalling 440 line-km that covers the central and western parts of the current Property. The strongly magnetic results were interpreted to be primarily caused by magnetite in intrusive rocks and there is a very close correlation of strong magnetic values with the Mount Hall Gabbro bodies. There were several conductive features identified from the EM results, with two of them picked as primary targets. One of these, the Northeast Copper Zone, lies off the Property to the northwest. The other is in the Breen Lake area, where the eastern part of the conductive zone has received some drilling by Falconbridge, however, the western 500 m segment was not drilled due to ownership issues and remains untested by drilling. It was also concluded by Sadlier-Brown (2008) that the conductive zone extends south of the area of drilling and there is potential for mineralization at depth in that direction.

In 2010, Westridge completed a program of geological mapping and geochemical sampling in the Breen Lake area. Grab samples of massive sulfide mineralization from a new showing (Minfile, Jane 2 occurrence) assayed up to 4.26% copper and 12.1 g/t silver (Sadlier-Brown & Ruks, 2010). This new showing has not been followed up since that time and no further work has been reported for the Property area.

## **7.0 GEOLOGICAL SETTING AND MINERALIZATION**

### **7.1 REGIONAL SETTING**

The geology of the southern part of Vancouver Island in the area of the Property has been documented by Eastwood (1980a, 1980b), Massey et al. (1987), Massey (1995a), Yorath et al. (1999), and more recently by Ruks et al. (2010) and Ruks (2015). The Property lies near the eastern edge of the Cowichan uplift, a prominent geanticlinal structure within the Wrangellia Terrane (Figure 7.1). Volcanic and sedimentary units of the Devonian Sicker Group and Permian Buttle Lake Group are the oldest in the area. They are overlain by Upper Triassic basaltic rocks of the Karmutsen Formation (Vancouver Group). Late Triassic Mount Hall gabbroic rocks that locally form extensive areas of dikes and sills in Palaeozoic Sicker units are believed to be associated with the Karmutsen volcanics. Lower Jurassic Bonanza Group volcanics and lesser sediments overlie Karmutsen Formation and are followed by Upper Cretaceous sediments of the Nanaimo Group. In places, all the above units are intruded by Early to Middle Jurassic Island Plutonic Suite rocks, typically of diorite to granodiorite composition. Minor Late Eocene Mount Washington Intrusive Suite dacite sills and dikes occur throughout the area.

Massey (1995) has described a complex tectonic history for Southern Vancouver Island, with an alternation of major tectonic settings that involved several major deformational events, which often rejuvenated older structures. The present map pattern in the Duncan area is dominated by the effects of Eocene contraction, though older events were important in establishing relationships within individual thrust slices.

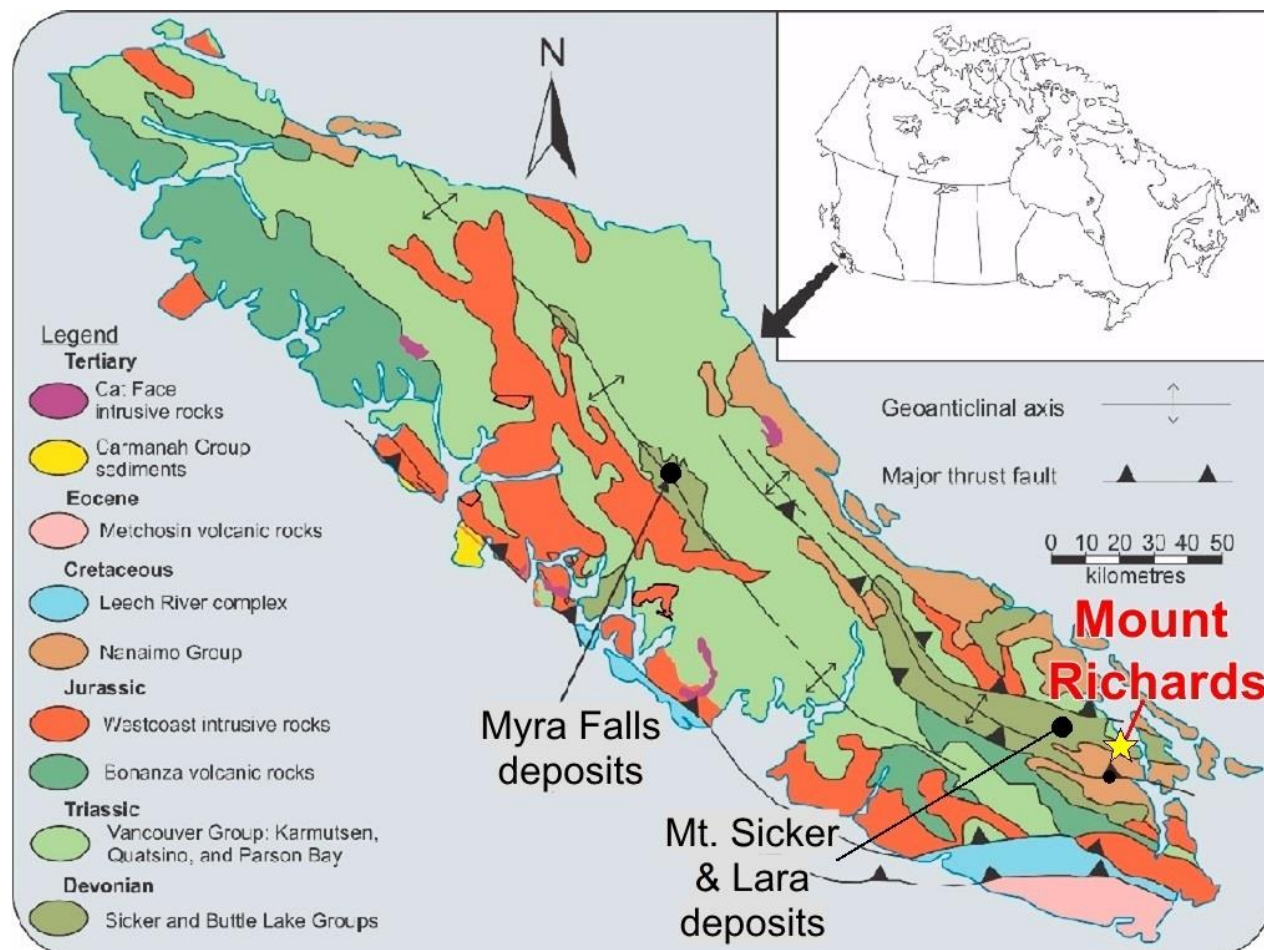
Massey (1995) has indicated that Middle Permian to Early Triassic deformation produced a series of west-northwest-trending, southwest-verging, asymmetric folds with abundant parasitic minor folds. Overtaken beds are observed rarely. Penetrative fabrics, developed as schistosity in volcanics and cleavage in sediments, are well developed parallel to fold axial planes, with moderate to steep northeasterly dips. Lineations due to bedding-foliation intersections and elongation of crystals and clasts are well developed. Plunges of the lineations are usually shallow, primarily to the west-northwest.

Pre-Nanaimo Group deformation during Early to Middle Jurassic resulted in regional-scale warping of Vancouver Island, producing the three major geanticlinal uplifts cored by Sicker Group rocks, including the Cowichan uplift (Massey, 1995). Faulting, often axial, accompanied the folding. Regionally, the plutons and stocks of the Middle Jurassic Island Plutonic Suite are often elongate parallel to the uplifts, however, they show little or no effects of the deformation themselves, suggesting the intrusions were post deformation. Uplift and erosion followed this deformational phase, establishing the pre-Nanaimo Group topography.

The Eocene Cowichan fold and thrust event produced large-scale west-northwesterly trending contractional faults that cut the region into several slices. Where exposed, these faults are high-angle reverse faults that dip between 45° and 90° to the north-northeast, paralleling the earlier axial foliation in Paleozoic rocks. They generally place older rocks over younger. Horizontal displacements along fault planes are unknown but are likely on the order of 1 to 10 kilometers and vertical displacements are estimated at 1 to 2 kilometers (Massey, 1995). The regional map pattern suggests movement along the faults was directed to the west-southwest, possibly during the Middle Eocene in response to crustal shortening. Several north-northeast-trending vertical cross faults offset the thrusts with apparent sinistral sense. The age of this faulting is unknown, but it may be a late stage of the Eocene contractional event.



**Figure 7.1 Mount Richards and selected VMS deposit locations relative to major lithological units of Vancouver Island (from Marshall et al., 2018)**



Significant mineral deposits surround the Property. Of particular importance are the nearby, VMS-type Mount Sicker and Lara deposits located 3 km and 12 km to the northwest, respectively, and the Myra Falls deposits, 160 km to the northwest. These deposits are hosted by Sicker Group rocks, and at the Property similar rocks also host showings of VMS-style mineralization.

On Mount Sicker the Lenora and Tye mines began production in 1898, lasting until 1909, and the nearby Richard III mine produced from 1903 to 1907. A total of about 229,000 tonnes were recovered from these three mines, with estimated average grades of 4.0% Cu, 100.1 g/t Ag and 4.8 g/t Au (Zn not recovered) (Minfile number 092B 001). The Tye, Lenora and Richard III deposits (which may all be parts of the same deposit) were eventually amalgamated under the Twin J mine which operated intermittently between 1942 and 1952, producing 48,000 tonnes averaging 4.0% Zn, 0.3% Pb, 0.8% Cu, 41.7 g/t Ag and 1.3 g/t Au. More recent exploration has provided estimates of additional mineralization that are about equal to that mined in the past.

At the Lara project seven VMS zones are distributed within an area located about 9 km to the northwest from the Mount Sicker deposits. A resource estimate for Lara, reported in 2007, gave an

Indicated Resource using a 1% zinc block cut off, containing approximately 1,146,700 tonnes, with average grades of 3.01% zinc, 0.58% lead, 1.05% copper, 32.97 g/t silver and 1.97 g/t gold (Minfile number 092B 129).

The Myra Falls deposits, in central Vancouver Island, initially were mined in 1966 from an open pit by Western Mines Limited (which became Westmin Resources Ltd. in 1976), but later relied mainly on underground bulk-mining methods. The current mill was commissioned in 1985 and has been progressively modernized since then. Concentrates are transported to the deep-water port at Campbell River, and from there are shipped to overseas smelters, typically in Japan and Korea. From discovery, up to 2002, an overall pre-mining mineral resource (all categories) totalled greater than 40 M tonnes averaging 6.1% Zn, 0.5% Pb, 1.8% Cu, 49.0 g/t Ag and 2.1 g/t Au (Chong et al., 2005). As of January 2004, 23.9 M tonnes had been mined and milled. Twelve known deposit areas consist of clusters of mineral lenses of variable sizes, of which the H-W deposit is the largest, at 22.1 M tonnes.

In 2004, Boliden-Westmin was taken over by Breakwater Resources, which announced in December 2010 Proven plus Probable Reserves of 6.26 M tonnes grading 4.9% Zn, 0.5% Pb, 0.9% Cu, 43 g/t Ag and 1.3 g/t Au. The mine was acquired by Nystar in 2010, but the operations were temporarily shut down in 2015 due to low metal prices.

In 2020, Trafigura Mining Group acquired the Myra Falls Mine from Nyrstar. With a projected lifespan of over ten years, the company is ramping up production at the facility to over 800,000 metric tonnes of zinc, lead and copper ore per annum. Published Proven plus Probable Reserves as of December 2018 were 4.7 M tonnes at 7.11% Zn, 0.78% Pb, 0.92% Cu, 76.6 g/t Ag and 1.78 g/t Au (Mining Data Solutions, 2018).

Polymetallic massive sulfide deposits have been a major target within the Sicker Group since the development of the Myra Falls mine in the 1960's. Following the discovery of the H-W polymetallic massive sulfide orebody of the Myra Falls deposits in 1979, nearly all areas of Sicker Group outcrop in the Alberni-Nanaimo Lakes and the Duncan regions were staked, and extensive exploration drilling has occurred in those areas since then.

Silver- and copper-bearing vein and replacement deposits, some with associated gold values, are also found within the southern Vancouver Island region, typically with associated base metals and quartz-calcite gangue. Host rocks include sedimentary, volcanic and intrusive rocks, and veins are often associated with large-scale fault structures. Mineralized veins are generally narrow (<1 m) and discontinuous but may contain localized shoots containing silver and gold grading up to 100 g/t or more. Historical mining of precious metal-rich veins in the area near the Property has typically produced only a few tens to hundreds of tonnes from zones accessed by shallow open cuts or limited underground workings.

A nearby example with gold & silver-rich veins is the Cornucopia occurrence, located adjacent to the south-central part of the Property, where a belt of schists and quartz-feldspar porphyry are strongly sheared and contain quartz in fissures. A short adit driven in schist and quartz veins in 1960 produced 23 tonnes, from which 1,058 grams of gold and 93 grams of silver were recovered (Minfile number 092B 038).

***Although the nearby known mineral deposits are hosted by similar geological units to those of the Property, that is not necessarily indicative of the tenure of mineralization that may be present on the Property that is the subject of this report.***

## **7.2 LOCAL GEOLOGY**

Limited detailed geological mapping has been undertaken, focussed mainly in the area surrounding Crofton Lake, by a number of geologists working for Can Pac Minerals, SEREM, and Falconbridge, primarily during the 1970's and 80's. Much of the detailed geological work has been concentrated in areas of mineral showings.

### **7.2.1 Property Geology**

The Property geology map shown on Figure 7.2 is based on the general geology of the Duncan Area, which was derived from Geoscience Map 1991-3, compiled by Massey et al. (1987b). The figure also shows locations of Minfile mineral occurrences. Descriptions of the map units are summarized below from various published reports.

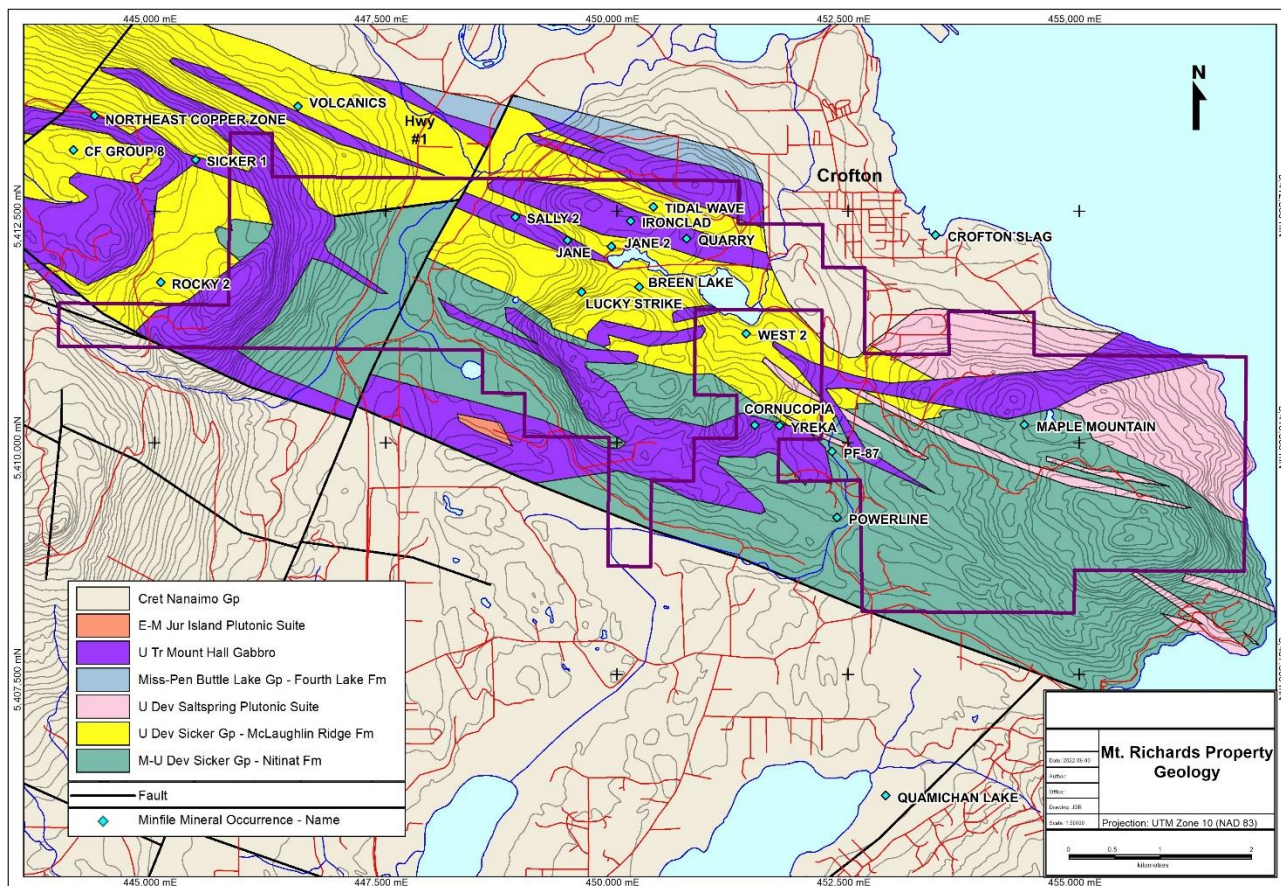
Most of the Property is underlain by Middle to Late Devonian Sicker Group rocks interpreted to represent three distinct volcanic and volcanoclastic assemblages that together are thought to record the evolution of an oceanic magmatic arc (Massey, 1995; Yorath et al., 1999).

The Duck Lake Formation is the oldest of the series and has yielded normal mid-ocean-ridge basalt geochemical signatures (Massey, 1995) and is interpreted to represent the oceanic-crust basement on which the Sicker arc was built. The Duck Lake Formation is at the base of the section and is not known to outcrop on the Property. Nearby exposures of this unit consist of dominantly massive and pillowed tholeiitic basalt, which pass upward into calcalkaline lava.

The Nitinat Formation overlies the Duck Lake Formation and comprises mafic, submarine volcanic and volcanoclastic rocks with dominantly calc-alkaline compositions and trace-element signatures typical of volcanic arc settings. These rocks are interpreted as an early stage of arc development. On the Property and surrounding areas these rocks are mostly dark green pyroxene-feldspar-phyrlic basalts and basaltic andesites. They typically occur as agglomerates, breccias, lapilli tuffs and crystal tuffs that formed as pyroclastic flows, debris flows and lahars. Abundant ovoid epidote-quartz alteration patches up to 4 to 5 cm in diameter that have been interpreted as altered volcanic clasts occur within chlorite altered matrix. Local bands of basalt contain medium to coarse crystals

of pyroxene, up to 1 cm in diameter, that comprise 5 to 20 percent of the rock. Minor interbeds of laminated tuff and chert occur locally.

**Figure 7.2 Mount Richards Property local geology and Minfile mineral occurrences (geology derived from Massey et al., 1987b)**



The McLaughlin Ridge Formation overlies the Nitinat Formation and represents a more evolved stage of arc activity. In the Property area it is described as a heterogeneous sequence of intermediate to felsic volcanics and volcanoclastic sediments with lesser tuffaceous sediments. The volcanics are predominantly intermediate pyroclastics, commonly feldspar crystal-lapilli tuffs, heterolithic lapilli tuffs and breccias, and minor pyroxene-phyric lapilli tuffs. A thick package of dacitic to rhyolitic quartz-crystal, quartz-feldspar-crystal and fine dust-tuffs is developed in the area from Mount Sicker to Mount Richards that locally is host to sulfide mineralization. The felsic rocks appear to be at a stratigraphically high level within the formation. Uranium-lead dating of zircons conducted on McLaughlin Ridge Formation felsic tuffs that host mineralization at the nearby Lenora and Lara deposits have yielded Late Devonian ages averaging ca. 369.1 Ma and 353.7 Ma, respectively (Ruks & Mortensen, 2007). According to Ruks and Mortensen (2007) these data suggest that VMS mineralization of at least two separate ages is present in the southeastern part of the Cowichan Lake uplift.

Sericite and quartz alteration is commonly very strong in the felsic volcanic rocks. This, together with a well-developed foliation, makes it difficult to distinguish between those that formed from lavas, such as porphyritic flows or sills, versus those that are crystal-bearing volcanoclastic rocks, such as crystal tuff. Thin layers of chert and mudstone have been described locally and are occasionally accompanied by jasper or magnetite iron formation, which may be distal equivalents of VMS mineralization.

In the northeast part of the Property, elongate, northwest-trending intrusive bodies of the Saltspring Intrusive Suite, up to 7 km long and tens of meters to 1500 m wide, intrude Nitinat and lower McLaughlin Ridge Formation rocks. These intrusions of granodiorite and quartz-feldspar porphyry are believed to be coeval with the McLaughlin Ridge Formation felsic volcanic rocks.

A number of thin and scattered greenstone dikes also intrude the felsic volcanics throughout the belt of McLaughlin Ridge volcanics, extending southeast to Maple Mountain. They differ markedly from Late Triassic diabase dikes, also found in this area, in being generally aphyric, weak to moderately foliated and strongly altered to epidote-chlorite-actinolite-calcite assemblages. The age of these dikes is unknown, although Massey (1992) believes they are probably contemporaneous with basaltic and dacitic volcanics within the lower Fourth Lake Formation and represent the last stages of magmatism in the Sicker arc.

Although not exposed on the Property, the regions about 300 m to the north, and 5 km to the northwest, contain large areas of Fourth Lake Formation overlying the McLaughlin Ridge Formation. This Mississippian to Pennsylvanian unit consists of a basal sequence of laminated chert, cherty tuff and argillite passing upward into a thick section of turbiditic sandstone-siltstone-argillite. Pillowed basalt flows constitute a small part of the unit.

Triassic gabbro and diabase dikes and sills (informally called Mount Hall Gabbro) that intrude rocks of the Sicker Group are very prevalent throughout the Property and are of varying thickness, ranging from a few meters to more than 100 m. Sill-like bodies are commonly sub-concordant with bedding or foliation. These rocks have variable intrusive textures but typically contain chlorite-altered hornblende phenocrysts in a crowded plagioclase matrix, with common feldspar clusters up to 3 cm in diameter. These dikes are believed to be feeders for the Upper Triassic Karmutsen Formation basaltic flows and volcanic breccias, which are not present in the Property area.

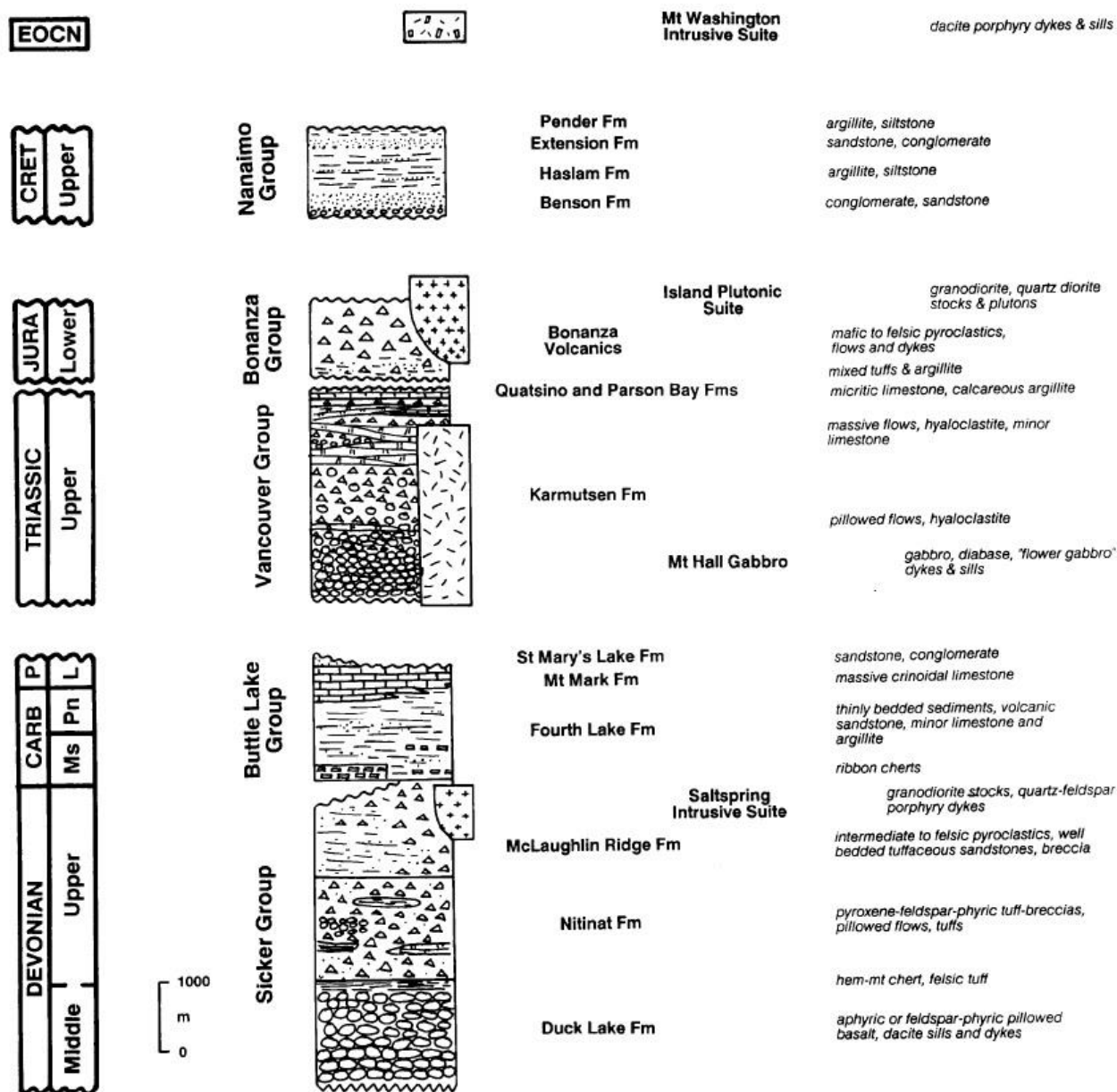
A small granodiorite to quartz diorite body of the Early to Middle Jurassic Island Plutonic Suite intrudes Mount Hall Gabbro just south of the central part of the Property, parallel to the regional structural grain. The intrusive is medium- to coarse-grained, equigranular, with a characteristic salt-and-pepper texture.

Upper Cretaceous Nanaimo Group rocks occur to the north and south of the Property. To the north they appear to unconformably overlie Sicker Group, Fourth Lake Formation, and Saltspring Intrusive Suite rocks. To the south they are in fault contact with Sicker Group Formations. Nanaimo

Group Formations are comprised of clastic sedimentary sequences of conglomerate, sandstone, siltstone and argillite that exhibit major fining upward cycles.

A schematic stratigraphic section for rocks of the Cowichan uplift was drawn by Massey (1995a) and is shown in Figure 7.3. This cross section illustrates the oldest rocks of the Sicker Group consisting of the Duck Lake Formation at the base, overlain by a thick succession of volcanic and volcanoclastic rocks of the Nitinat Formation. This is conformably overlain by intermediate to felsic volcanic breccias and tuffs of the McLaughlin Ridge Formation that are the primary target rocks for VMS mineralization on the Property. Saltspring Intrusive Suite intermediate to felsic intrusions were probably feeders for these felsic volcanic rocks.

Figure 7.3 Schematic stratigraphic column of rock units in the Cowichan uplift (from Massey, 1995)



Younger rocks, including Buttle Lake Group sedimentary units, Vancouver Group volcanic and sedimentary units, and Bonanza Group volcanics are absent from the Property, most likely due to uplift and deep erosion removing them in this area. Sedimentary units of the Nanaimo Group appear to lie unconformably on Sicker Group rocks in the Property area, whereas, farther to the northwest they overlie Buttle Lake Group and Vancouver Group rocks.

### 7.2.2 Structural Geology

The Property area displays the same complex history of folding, faulting and thrusting as the Cowichan uplift. The structural grain shows a pronounced west-northwest trend. Along the south

side of the Property a WNW-trending, NNE-dipping regional fault has thrust Sicker Group rocks over Nanaimo Group. A broad zone, hundreds of meters wide, in the Nanaimo Group sedimentary rocks underlying the thrust is deformed, with footwall folding and imbricate faults.

The Nitinat Formation rocks on the Property are in contact to the northeast with the younger McLaughlin Ridge and Fourth Lake Formations, indicating younging in that direction. The units primarily dip moderately to steeply to the south-southwest suggesting that the units are overturned, although folding along NNW-trending axes may add complexity to this interpretation. A NNE-trending fault cuts the western part of the Property and appears to be steeply dipping. It has produced offsets of the thrust fault and stratigraphic units, but the displacements appear to be small. These late northerly-trending structures may have been important features controlling the emplacement of mineralized veins, as seen at other mineral properties in the region.

### **7.2.3 Mineralization and Alteration**

There are several reported mineral occurrences on the Property, as well as in the surrounding area. Occurrences encompass various styles of mineralization but are typically comprised of small masses or lenses of possible VMS-type sulfides in siliceous, felsic schist and quartz-feldspar porphyry, or quartz-sulfide veins that may be related to shear zones.

The sulfide lenses are typically comprised of fine-grained, dense pyrite and pyrrhotite, with variable amounts of sphalerite and chalcopyrite in quartz-calcite gangue. Bands of magnetite with pyrrhotite have also been observed in drill holes, returning minor zinc and copper values. Narrow quartz-sulfide veins (generally <1m width) are found within shear zones cross-cutting the schistosity in felsic tuff units as well as in gabbro dikes and sills. The sulfides are primarily pyrite and chalcopyrite occurring as disseminations and bands within the veins and siliceous shears. Moderate silver and low gold values commonly accompany the copper-bearing mineralization.

A model for prospective mineralization is provided by the Twin J mine on Big Sicker Mountain, located three kilometers west of the Property. It was examined by J.S. Stevenson in the 1940's and the following description is derived from his paper published in 1948 (Stevenson, 1948).

The rocks in the Twin J mine include cherty tuffs, graphitic schists, rhyolite porphyry and diorite. The chert and graphitic schists together form a band of meta-sediments 30 to 45 meters thick that, near the workings, is at least 640 meters long. The strike of the meta-sediments is 110 degrees, and the dip is 50 degrees southwest.

Mineralization in the mine consists of syngenetic, stratabound, volcanogenic massive sulfide (VMS) deposits hosted by rocks of the McLaughlin Ridge Formation. There are two main zones about 50 m apart consisting of long, lenticular bodies lying along two main drag folds in the band of meta-sediments. The North Zone measures about 500 meters along strike, 37 meters down dip and from 0.3 to 3 meters in thickness. The South Zone measures 640 meters along strike, 45 meters down



dip and is about 6 meters in thickness. Most of the production in the early period came from the South Zone, but most of that mined during Twin J ownership came from the North Zone.

Two types of mineralization are found in association with cherty tuffs and graphitic schists: a baritic type consisting of a fine-grained mixture of pyrite, chalcopyrite, sphalerite, and a little galena in a gangue of barite, quartz and calcite; and a quartz type consisting of mainly quartz and chalcopyrite. Silica-sericite alteration is commonly associated with mineralized stringers in felsic volcanosedimentary rocks. These represent the likely models for the type of mineralization that may be expected to occur in the Property area.

On the Property, a concentration of mineral showings found in the Breen Lake area are underlain by volcanic rocks belonging to the Upper Devonian McLaughlin Ridge Formation of the Sicker Group and by Triassic gabbroic to basaltic dykes and sills that are informally known as Mount Hall Gabbro. Also intruding the stratigraphy are quartz-feldspar porphyry bodies of the Late Devonian Saltspring Intrusive Suite (formerly the Saltspring Intrusions).

Most of the known mineral occurrences in the Property area have been described in Minfile summaries (BC Ministry of Energy, Mines and Low Carbon Innovation Minfile Website) that have been largely compiled from assessment reports and company news releases. Following are excerpts from the Minfile summaries for the pertinent mineral occurrences on, and near, the Property. Locations of the Minfile occurrences are shown on Figure 7.2.

The **Jane** workings, west of Breen Lake, consist of two short adits and several open-cuts. Schistose quartz-feldspar porphyry forms a dyke-like body about 140 meters wide trending 110 degrees, parallel to the strike of the schistosity. It is bounded on both sides by coarse-grained diorite that appears to intrude the porphyry. Mineralization in the adits and trenches consists of lenses of fine-grained, dense, massive sulfides lying along the schistosity in the porphyry. Pyrrhotite, sphalerite, chalcopyrite and pyrite are the principal sulfides, and small amounts of quartz and calcite form the gangue material. The largest lens is about 45 centimeters wide and up to 1.5 meters long. A sample taken across 91 centimeters assayed 16.1% zinc and 0.05% copper (Minister of Mines Annual Report 1949, page 225)

The **Jane 2** occurrence was discovered by reconnaissance geological mapping and sampling in the Breen Lake area in 2008 by Ruks et al. (2009). This new polymetallic massive sulfide occurrence is located approximately 470 m east of the Jane showing. It comprises fine to medium grained massive pyrite and lesser chalcopyrite over an area of 1 square meter, hosted in silicified and chlorite-rich ash tuff that is cross-cut by abundant stockwork veinlets of pyrite and local chalcopyrite. Grab sampling of the massive sulfide mineralization yielded grades of 4.26% Cu, and 12.1 g/t Ag (Sadler-Brown & Ruks, 2010). The showing is exposed in a new roadcut but due to abundant overburden cover the extent of zone is not known.

The **Lucky Strike** adits, southwest of Breen Lake, follow an irregular shear zone in a narrow band of quartz-sericite schist that is bounded on the south by a wide band of quartz-feldspar porphyry. The schist is locally mineralized with massive lenses of pyrrhotite, chalcopyrite and sphalerite. Previous workings at Lucky Strike include two adits. The lower one supposedly extends for 15 meters in a southeast direction with a crosscut running 8.1 meters in a northeast direction. The upper tunnel is 12 meters northeast of, and 7.2 meters higher than the lower tunnel. It extends in a south-east direction for 10 meters. A sample across one lens measuring 45 cm in width returned 4.9% Zn, 0.3% Cu and trace Au and Ag (Dolmage, 1947).

The **Breen Lake** occurrence is located south of Breen Lake, approximately 600 meters west of Crofton Lake. The area is underlain by east-northeast striking, steeply dipping andesitic and rhyolitic volcanics and volcanoclastic rocks. Locally, as indicated by drilling, bands and beds of massive pyrite less than 0.4 m thick are common, and pyrrhotite with other minor sulfide minerals also occurs in chlorite-carbonate altered felsic lapilli tuff, andesitic tuff and quartz feldspar porphyry.

The **Ironclad** workings, located about 300 m north of Breen Lake, consist of two short shafts and a 30° incline 36 meters long. The material on the dump shows heavy pyrite mineralization in a strongly sheared and silicified gabbroic country rock, with minor patches of chalcopyrite.

Sulfide mineralization is also found with talc in shear zones within schists, where they are cut by quartz-feldspar porphyries that presumably underlie the gabbro sill. The talc is up to one meter thick and contains calcite and quartz as impurities. One of the Ironclad shafts is reported to have intersected a one-meter-thick band of talc at the 10-meter level (Geological Survey of Canada Summary Report 1909, page 101).

A quartz vein, up to 30 cm in width, occurs in gabbro a few hundred meters to the west of the Ironclad workings. The vein is reported to contain malachite, chalcocite, tetrahedrite and minor bornite (Grette, 1979).

The **Tidal Wave** showing is located about 300 m to the northeast of the Ironclad workings. A pit up to 6 meters in depth locally exposes a 1-meter-wide quartz vein trending west, within gabbroic rocks. The vein is practically barren except for an occasional speck of malachite.

The **Quarry** occurrence is located on the eastern slope of the ridge about 450 m northwest of Crofton Lake. Two small pits are reported to contain some of the more heavily pyritized rocks in the area with associated chalcopyrite, malachite and bornite. In the lower quarry, extensive pyritization occurs as disseminations and masses in fractures, with minor amounts of copper minerals, within silicified sediments 20 meters north of the contact with gabbro. At the contact is an altered chloritic schist with quartz veining containing chalcopyrite and minor amounts of pyrite occurring mainly along the bedding. In 1985, drilling intersected small, 25 to 60 cm-thick, zones of semi-massive magnetite with trace pyrrhotite, which returned 0.13% copper and 0.01% zinc over a 0.80 m core interval (Chandler & Lear, 1985).

The **Sally 2** occurrence is located on the western slope of Mount Richards. A 14-meter-long adit follows a fracture in diorite (possibly Mount Hall gabbro) and contains a few small quartz lenses up to 0.5 meter wide by 2 meters in length. Locally, clusters of sulfides, mainly pyrite and chalcopyrite, are present in the quartz, especially where northwest trending fractures intersect the main fracture. A selected grab sample of higher-grade material assayed 5.6% copper, nil in silver and gold (Minister of Mines Annual Report 1949, page 225).

The **West 2** occurrence is located immediately south of Crofton Lake. The area is underlain by trachyte, and minor areas of argillite and quartz-mica schist. Chalcopyrite was noted as disseminations near the contacts of the meta-sediments and trachyte, and in quartz veins up to 50 cm in width cutting the trachyte and schist.

The **PF-87** occurrence is located on the eastern flank of Mount Richards, approximately 1.6 km southeast of Crofton Lake. Locally, mafic to andesitic flows and crystal to lapilli tuffs contain zones of chlorite-calcite alteration that host pyrite, averaging 2 to 10%, and minor chalcopyrite mineralization. The sulfides occur as disseminations, fracture fillings and within fine quartz veins. Narrow quartz-feldspar porphyry sills were also noted in drill holes.

The **Maple Mountain** occurrence is located on the northwestern slope of Maple Mountain, on the east part of the Property. The area is underlain by basaltic andesites of the Nitinat Formation intruded by the Mount Hall gabbro and by quartz-feldspar porphyry. At the showing, a massive, milky white quartz vein contains about 1% disseminated chalcopyrite.

The **Cornucopia** occurrence is located on the southeast flank of Mount Richards, approximately 1.1 km south of Crofton Lake, but is just outside the Property boundary. A belt of schistose meta-volcanics is strongly sheared and fissured with some of the fissures filled with quartz carrying copper minerals.

Around 1917, a prospect pit was sunk 3.6 meters deep, and a selected sample collected from the dump assayed 2.1% copper, 27.43 g/t silver and a trace of gold (Minister of Mines Annual Report 1917, page 269). About 60 meters west of the prospect hole there is a short adit driven in schist and quartz, and about 120 meters west of the adit is an extensive outcropping of quartz reported to carry "low values" in metals. Twenty-three tonnes of mineralized rock were extracted from the Cornucopia Zone in 1960. From this material, 1,058 grams of gold and 93 grams of silver were reportedly recovered.

The **Yreka** showing is located approximately 250 m east of the Cornucopia occurrence. Two shafts, one 64 meters deep and the other 43 meters, were sunk on this zone in the early 1900's. Locally, a shear zone in schist hosts copper mineralization, which was reported to carry gold and silver values.

## 8.0 DEPOSIT TYPES

Within the Property area there is potential for discovery of different styles of mineralization such as those found on nearby properties. Significant deposits in the area include VMS-type base & precious metal-rich massive sulfide systems, and medium to high grade shear-hosted Au-Ag vein systems. Both of these deposit types have been explored on the Property.

### 8.1 VOLCANOGENIC MASSIVE SULFIDE DEPOSITS

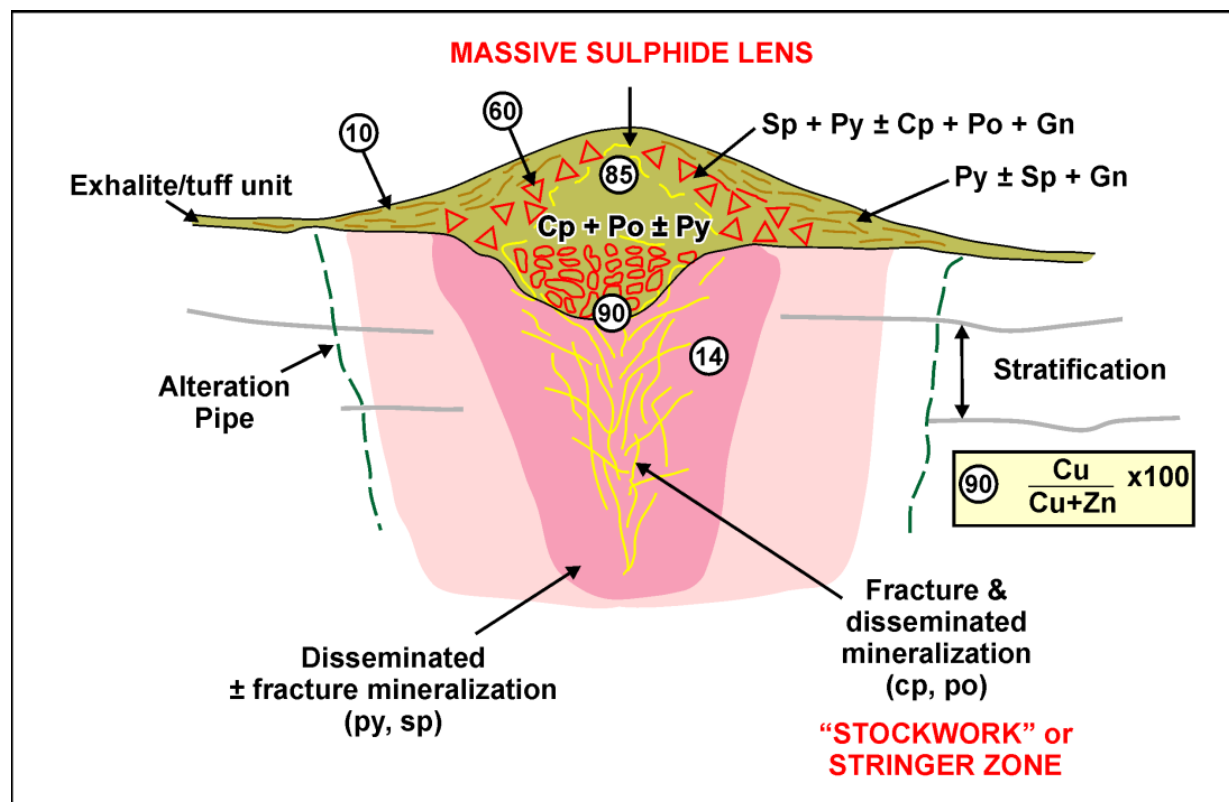
VMS deposits are predominantly stratabound accumulations of sulfide minerals that precipitate from hydrothermal fluids on or below the seafloor in a wide range of ancient and modern geological settings. In modern oceans they are characterized by sulfurous plumes called black smokers.

VMS ore deposits formed in close temporal association with submarine volcanism that may be of any age and are formed by hydrothermal circulation and exhalation of sulfides onto the sea floor. They typically occur in back-arc settings within environments dominated by volcanic or volcanic derived sedimentary rocks, and the deposits are coeval and coincident with the formation of the host rocks. A quiescent period in deposition of sediments is required to limit dilution of the sulfides. These deposits represent major sources of copper, zinc, lead, gold and silver in a high grade, low tonnage ratio.

Generally, VMS deposits contain footwall mineralization consisting of quartz-chalcopyrite stringers (stockwork), overlain by primary bedded (stratiform) sulfides composed of pyrite, chalcopyrite, ± sphalerite, ± galena, ± barite, ± tetrahedrite/ tennantite. In some deposits the stratiform massive sulfide lenses makes up the entire economic deposit, whereas in other deposits large quantities of ore are also mined from the stockwork zone. The stratiform sulfides are typical overlain, or grade laterally into, an iron-rich silica facies that is usually manifested as a banded iron formation (BIF). The stockwork zone beneath these deposits is the conduit through which the hydrothermal fluids rose and consists of vein sulfide mineralization. Hydrothermal alteration forms a pipe around the stockwork zone and grades from an inner chloritized zone to an outer sericitic zone. Due to the plastic nature of the massive sulfides, they are commonly deformed. A schematic model of active VMS formation, alteration and mineralization is presented in Figure 8.1.

There are various classes of VMS type deposits distinguished primarily by their mineral composition and their environment of formation. The deposits found on Vancouver Island and the nearby mainland are typically classed as Kuroko, or bimodal-felsic VMS deposits that are spatially associated with felsic volcanic rocks. These include Britannia and Myra Falls, two of the larger VMS deposits in British Columbia. Kuroko type Zn-Cu-Pb-Ag-Au VMS deposits in British Columbia typically contain on average about 10 million tonnes of ore (BCGS Information Circular 2015-12).

**Figure 8.1 Schematic model for active VMS mineralization showing principal alteration and mineralization types (source: Gibson et al., 2007)**



*Notes: Idealized VMS deposit showing a stratabound lens of massive sulfide overlying a discordant stringer sulfide zone within an envelope of altered rock (alteration pipe). Base metal zonation indicated by numbers in circles with the highest numbers being Cu-rich and the lower numbers more Zn-rich (Py = pyrite, Cp = chalcopyrite, Po = pyrrhotite, Sp = sphalerite, and Gn = galena. Source: Gibson et al. (2007)*

The Britannia deposit, near Squamish, BC, is a Kuroko-type VMS deposit hosted in Early Cretaceous Gambier group rocks which, between 1905 and 1977, yielded approximately 47.8 million tonnes of ore grading 1.1% copper, 0.65% zinc, 6.8 g/t silver and 0.6 g/t gold (Minfile No. 092GNW003). Massive mineralization typically occurs along, or slightly above a dacitic tuff-breccia unit, commonly in, or near cherty andesitic rocks, with stringer mineralization emplaced in the underlying tuff-breccias (Payne et al., 1980). Pyrite was the main sulfide mineral in both types of orebodies and was accompanied by much less abundant chalcopyrite and erratically distributed sphalerite and galena. Tennantite, tetrahedrite, argentite, pyrrhotite and native gold occurred sporadically and sparingly.

There were several massive ore bodies at Britannia, which accounted for about 21% of the mined ore (Payne et al., 1980). These had zoned structures consisting of a chalcopyrite-rich core surrounded by a lower grade copper zone and overlapping pyrite- and silica-rich zones (Sutherland-Brown and Robinson 1971). Zinc-rich ore was present in the upper central parts of some massive orebodies and gold was clearly most abundant in the massive zinc-copper bodies.

Stringer orebodies consisted of veins of chalcopyrite, pyrite, and lesser quartz and accounted for 79% of mined ore. They were typically associated with broad zones of silicified rock containing quartz and quartz–pyrite veins in the footwall of the massive mineralization (Payne et al. 1980). Average grades for the various massive and stringer ore types that were mined are listed below in Table 8.1.

**Table 8.1 Britannia Ore Type Average Grades (from Payne et al., 1980)**

Type	Cu%	Zn%	Pb%	Ag ppm	Au ppm
massive Zn	0.25	5	0.4	34	0.06
massive Zn-Cu	1.5	4.4	0.3	10	9.5
massive Cu	2.2	0.2	0	10	0.2
Total massive	2	1.2	0.1	11	2
stringer	1.1	0.4	0	4	0.6

The Myra Falls VMS deposits on Vancouver Island occur within a series of Middle to Late Devonian Sicker Group volcanogenic rocks. From discovery to 2002, an overall pre-mining mineral resource (all categories) totalled greater than 40 M tonnes averaging 6.1% Zn, 0.5% Pb, 1.8% Cu, 49.0 g/t Ag and 2.1 g/t Au (Chong et al., 2005).

The Myra Formation, which hosts all the ore bodies at Myra Falls, is a succession of rhyolitic, andesitic, and basaltic volcanic and sedimentary rocks. Mineralized zones are massive to semi-massive tabular sulfide lenses, with main ores of chalcopyrite, sphalerite, pyrite, and galena. Some bornite and tetrahedrite, as well as accessory chalcocite, colusite, and gold are also present. There are up to twenty, or more, mineralized lenses varying in size, with the H-W Main lens being one of the largest at 950 m long, 450 m wide and 1 to 60 m thick, totalling 22.1 M tonnes. Lenses lie at various levels within a section of Myra Formation several hundred meters in thickness, however, they are typically confined to intervals of coarse-grained rhyolitic volcanoclastic rocks, sandstones, and mudstones that are overlain by hangingwall andesite. The sulfide lenses are zoned vertically and laterally and accompanied by silicification of the host rocks. Mineral lenses that lie stratigraphically above H-W Main are high in sphalerite, galena, and barite, but low in pyrite.

Some of the VMS-type mineralization found on the Property has a similar style of base and precious metal mineralization, and host rocks of the same age as those of the Myra Falls deposits. As well, the Mount Sicker and Lara VMS deposits, located approximately 3 km and 12 km to the west-northwest of the Property, both contain sizeable, massive sulfide bodies hosted by the same belt of Sicker Group volcanic rocks as that found at Mount Richards.

Exploration for VMS mineralization generally includes the following techniques: geological mapping to identify prospective volcanic and volcanoclastic rocks, which typically show intense hydrothermal alteration close to the mineralized center; geochemical surveys to identify elements (Cu, Zn, Pb, Au, Ag, Ba) indicative of mineralization; geophysical surveys to identify contrasts in magnetic, electrical conductance, and gravity measurements; followed by trenching and drilling to identify, then delineate mineralization.

Gibson et al. (2007) have listed some of the parameters for targeting VMS mineralization:

- 1) Deposits commonly occur in clusters that define VMS districts. VMS districts occur within large volcanic edifices, calderas and crustal structures.
- 2) Some of the largest deposits (> 50 MT) may be associated with a major long-lived crustal structure, or with thick successions of volcanoclastic rocks, or occur in more stable rifted continental margin settings. The large deposits tend to be associated with widespread, low temperature alteration systems, felsic volcanoclastics and thin, but laterally extensive Fe and Fe-Mn formations.
- 3) Deposits associated with mafic dominated terranes tend to be Cu and Cu-Zn endowed. Continental margin or successor rifted arc-hosted deposits with felsic volcanoclastic-sedimentary host rocks have a higher Zn-Pb endowment.

## **8.2 LOW-SULFIDE GOLD-QUARTZ VEIN DEPOSITS**

Although the vein-type occurrences on the Property found to date have been limited in size and grade, there are known gold-rich vein and stockwork deposits in Sicker Group rocks elsewhere on Vancouver Island, and these are potential targets on the Property. Low-sulfide gold-quartz vein deposits have been well described by R. Ashley (2002) in a publication modeling selected mineral deposit types for the USGS. The paragraphs below summarize many of the characteristics Ashley outlines for these types of deposits.

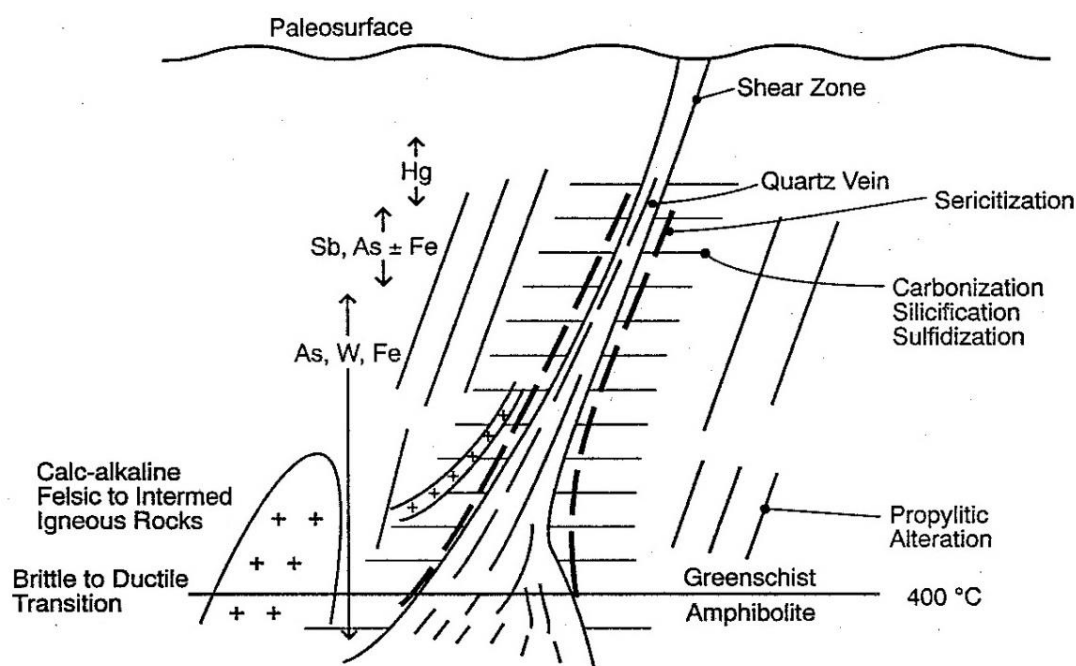
Low-sulfide gold-quartz vein deposits include quartz and quartz-carbonate veins mined primarily for gold. They are commonly found in accreted terranes dominated by greenstone and slate sequences, formed at moderate depths in compressional settings that facilitate transfer of hot gold-bearing fluids from deeper levels. The hydrothermal fluids containing the gold were transported up faults, whereupon the fluids underwent rapid decrease in temperature and pressure causing precipitation of the gold, along with quartz gangue, in fractures.

These veins generally contain no more than a few percent sulfide minerals. Wall rocks, which in some deposits include significant disseminated mineralization, contain abundant carbonate minerals, quartz, sericite, and sulfides. Mineralization is commonly associated with regional shear zones, which may include melange zones containing varied lithologies. Those deposits spatially associated with plutonic rocks tend to have a more varied suites of metals and are more likely to

contain greater amounts of silver, and to yield copper, lead, and zinc as by-products. Arsenic is the minor element most commonly enriched in alteration haloes. Low-sulfide gold-quartz veins are found world-wide in deformed metamorphic rocks of all ages. Individual deposits have yielded from a few tonnes to more than 100 tonnes of gold. In almost all areas where low-sulfide gold quartz veins are exposed, gold released by erosion is concentrated in placer deposits.

Deposits sometimes found at shallower depths in accreted terranes include gold-antimony veins and silica-carbonate mercury veins. Either of these deposit types could conceivably represent the near-surface expression of the hydrothermal systems that produce low-sulfide gold-quartz lodes at depth (Figure 8.2). All these deposits form from carbonic fluids derived from metamorphic dewatering reactions. Polymetallic vein deposits may also be spatially associated, especially where plutons intrude accreted terranes.

**Figure 8.2 Schematic cross-section of shear zone hosted gold-quartz veins, alteration, and associated elements (from Goldfarb et al., 1996)**



The size of low-sulfide gold-quartz deposits vary considerably from region to region and may be the result of particularly favorable regional tectonic and structural features. Most low-sulfide gold-quartz deposits occur in highly deformed, metamorphosed, accreted volcanic-sedimentary terranes of greenschist facies. Many deposits, especially the larger ones, are associated with major regional shear zones. High-angle faults that either splay from, or are cut by, these major shear zones are commonly sites of mineralization. It is important to note that some deposits include mineralized wall rock alteration, which usually results in higher tonnages and lower grades, and many recently mined deposits have exploited bulk-minable mineralized wall rock or densely veined stockwork zones. Because low-sulfide gold-quartz veins are relatively small and high-grade (commonly >15



g/t in historical mines), underground methods were used in most historical mines, and are still used in the majority of active mines worldwide. However, more recently, the increased value of gold, as well as technological advances, have allowed the economic mining of much lower grade (1 g/t or less) by bulk mining techniques.

Alteration zones are always present and are generally more developed in metavolcanic rocks than in slates. Widths of alteration zones vary with lithology, size of the vein system, and abundance of minor faults. Alteration can extend away from deposits for many kilometers along shear zones and fault zones. Carbonic hydrothermal fluids replace calcium, magnesium, and iron silicates of the wall rocks with carbonate minerals, primarily ferroan dolomite, and add potassium mica, quartz, pyrite, and arsenopyrite.

Individual veins are generally <1 to 10 meters wide and less than a few hundred meters long, but ore-bearing zones are typically larger, and include multiple veins. Veins and ore zones are equally persistent laterally and vertically, and most deposits show no notable vertical or along-strike zoning of vein minerals, ore minerals, or alteration minerals.

In most low-sulfide gold-quartz deposits the native gold contains 15 to 20 weight percent silver. The gold-silver ratio averages 5:1 (McCuaig and Kerrich, 1998). The element most consistently enriched along with the precious metals is arsenic, occurring as arsenopyrite and arsenian pyrite. Associated minerals, listed in decreasing order of frequency reported, are pyrite, galena, arsenopyrite, chalcopyrite, sphalerite, pyrrhotite, stibnite, tetrahedrite, and scheelite (Bliss and Jones, 1988). Total sulfide contents are generally less than 5 percent in veins and 10 percent in disseminated zones. High-grade ore frequently consists of coarse crystalline or leaf gold intergrown with quartz, commonly with no associated sulfide minerals.

Some economic mesothermal gold deposits contain up to a few million tonnes of ore and the average grade varies from 5 to 15 g/t gold. The largest gold-quartz vein deposit in British Columbia is the Bralorne-Pioneer which produced in excess of 117,800 kilograms (3.79 M oz) of Au from ore with an average grade of 9.3 g/t Au (BC Geol. Survey GeoFile 2020-11).

Ore-bearing quartz veins are rarely well exposed, owing to presence of ribbon structure, wall-rock fragments, carbonate-rich bands, and vuggy textures that are enhanced by weathering of sulfides. Alteration zones, because they are heterogeneous and carbonate- and sulfide-bearing, also tend to be poorly exposed, especially where associated with shear zones.

Arsenic concentrations in soils overlying unmined deposits reach about 1,000 ppm, and concentrations in soils over surrounding alteration zones range from tens to several hundreds of ppm (Savage et al., 2000). Although gold itself is the primary target element in geochemical soil-sampling exploration programs, arsenic has been used as a pathfinder element. Antimony may also show anomalies. Other exploration techniques include geological mapping to identify prospective host rocks, structural features (faults and shear zones), alteration and sulfide or oxide

minerals, and geophysical surveys to identify concealed fault zones, particularly linear magnetic lows identifying areas of carbonate alteration and magnetite destruction.

Ore bodies are mainly tabular veins in competent lithologies but are composed of veinlets and stringers in less competent rocks. Ore “shoots” can be localized at the intersections of veins/shears/faults or at the intersection of these structures and a reactive or competent rock unit. Concentration at dilatational jogs along structures or within fold hinges are yet more possibilities. The implication of this relationship to structural complexity is that exploration programs for veins in the Mount Richards area should be designed to test major structural features and intersections of these features.

## 9.0 EXPLORATION

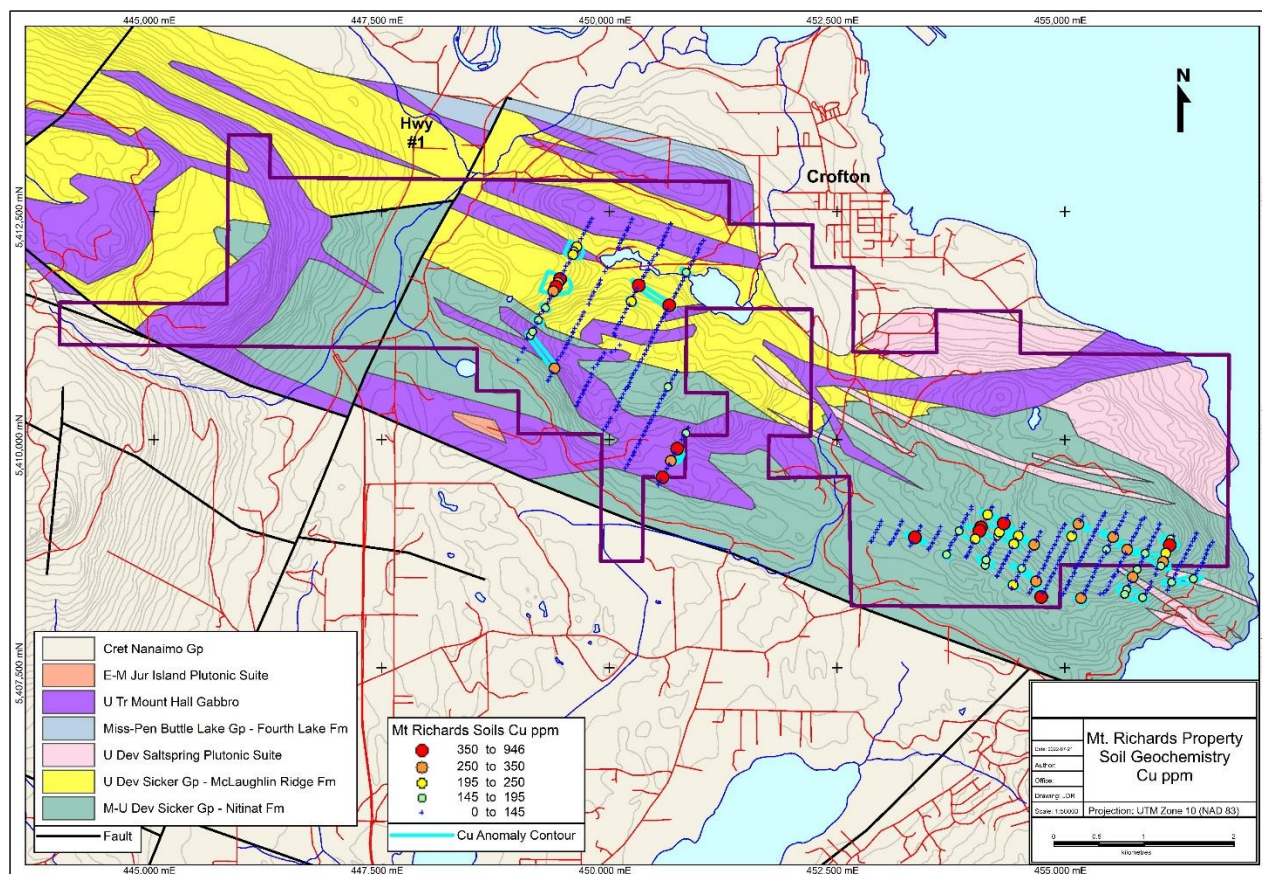
Starlo has undertaken a compilation of all available historical exploration data and input some of the data into GIS software to view the exploration results as a layered assemblage, allowing comparison of data sets, such as the correlation of anomalous copper in soil with various geological units that may be favourable hosts for VMS mineralization. Geophysical results can also be overlain on geology to help determine projections of geological boundaries, or to indicate possible buried intrusions or regional structures that could have implications for mineralizing systems. Future field work will be undertaken to follow up prospective targets developed from the data study.

Assessment reports have documented approximately 1130 soil samples that have been collected property-wide in the past, by various exploration companies, however, some samples were not analyzed for a full suite of elements in certain sampling campaigns, and some soil grids duplicated areas that had already been sampled. As well, EM and magnetic geophysical surveys were undertaken in various parts of the Property in the past, and these have been discussed in Section 6.0.

In 2022, Starlo collected 461 soil samples on relatively wide-spaced lines from two geochemical grids located to the south of Breen Lake and on the south side of Maple Mountain. Figures 9.1 through 9.4 show thematically the results for Cu, Zn, As and Ba in soil samples. Coloured dots of decreasing sizes represent the 98<sup>th</sup>, 96<sup>th</sup>, 94<sup>th</sup> and 88<sup>th</sup> percentile ranges for each element.

The copper plot (Figure 9.1) shows a number of clustered anomalies, some of which appear to be trending northwesterly, possibly distributed along certain stratigraphic horizons which could be indicative of VMS-type mineralization. These apparent anomalous copper trends are outlined in blue on the figure. The blue outlines are also included on plots of the other elements to illustrate their relationships with anomalous copper.

**Figure 9.1 Mt Richards & Maple Mountain areas Cu soil anomalies and geology**



Copper anomalies in the area of Breen Lake are underlain by McLaughlin Ridge Formation felsic to intermediate volcanic and volcanoclastic rocks. Drilling in the areas near the northern group of copper anomalies has intersected narrow bands of sulfide mineralization consisting primarily of pyrite, with local intergrown chalcopyrite and sphalerite, in chlorite-carbonate altered tuffaceous rocks. Copper anomalies located about 2 km south of Breen Lake are underlain by Mount Hall gabbro. Although there are no known showings near these copper anomalies, the nearby Cornucopia occurrence, within possibly similar rocks, is described as sheared schistose meta-volcanics with quartz in fissures carrying copper minerals.

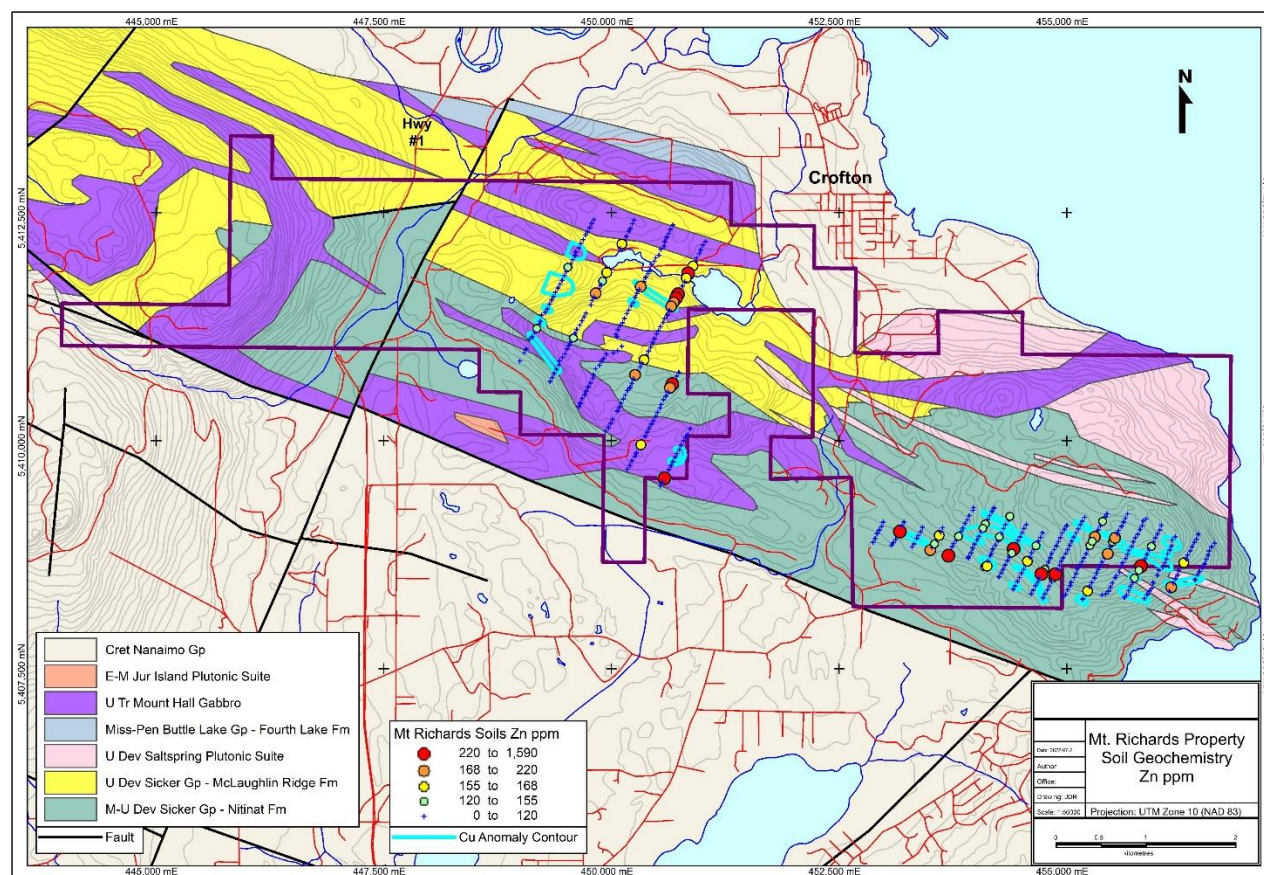
Copper anomalies on Maple Mountain are within an area mapped as Nitinat Formation, however, rocks within this area have been described by Fleming (1986) as pyritic chlorite schist and quartz-feldspar porphyritic dikes that bear some resemblance to McLaughlin Ridge Formation rocks in the Breen Lake area. There are no known showings, however, there is potential for VMS-type mineralization such as that found in other areas where there is a noted relationship between banded sulfides, chlorite-carbonate altered schists and quartz-feldspar porphyry.

Zinc soil anomalies (Figure 9.2) occur in the same general areas as the copper anomalies but in several cases seem to be offset from the copper highs, suggesting that there may be parallel horizons of zinc mineralization, or lateral gradation from copper into zinc-bearing mineral zones.

A strong cluster of anomalous zinc lies to the southeast of Breen Lake and partly coincides with anomalous copper. This anomaly is about 200 m east of the easternmost Falconbridge drill hole, suggesting that mineralization intersected by the drilling probably continues to the east.

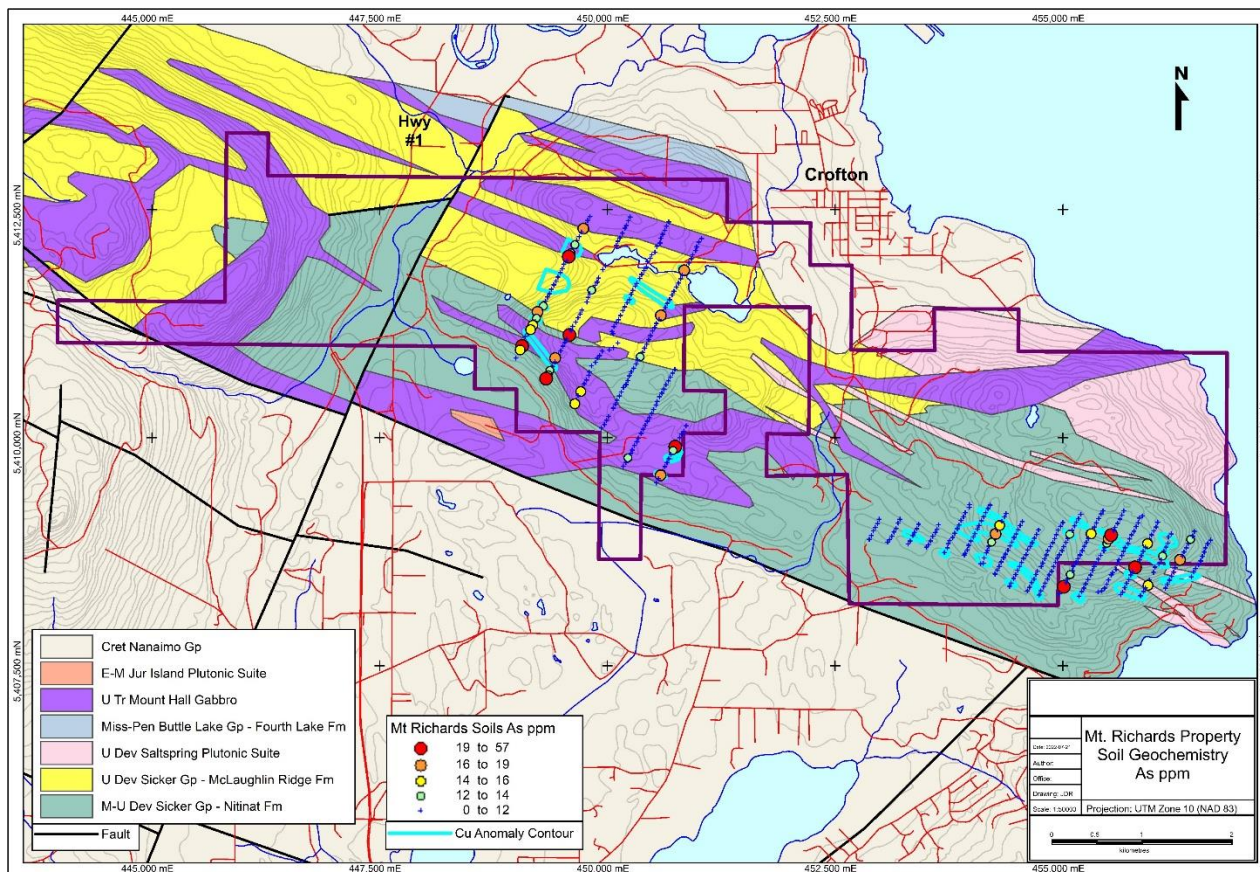
Zinc anomalies on Maple Mountain extend line to line in a west-northwest direction, and these trends partly coincide with, and parallel the copper anomalies, as well as the trend of stratigraphic units. The longest anomalous zinc trend is 540 m long by 50 m wide.

**Figure 9.2 Mt Richards & Maple Mountain areas Zn soil anomalies and geology**



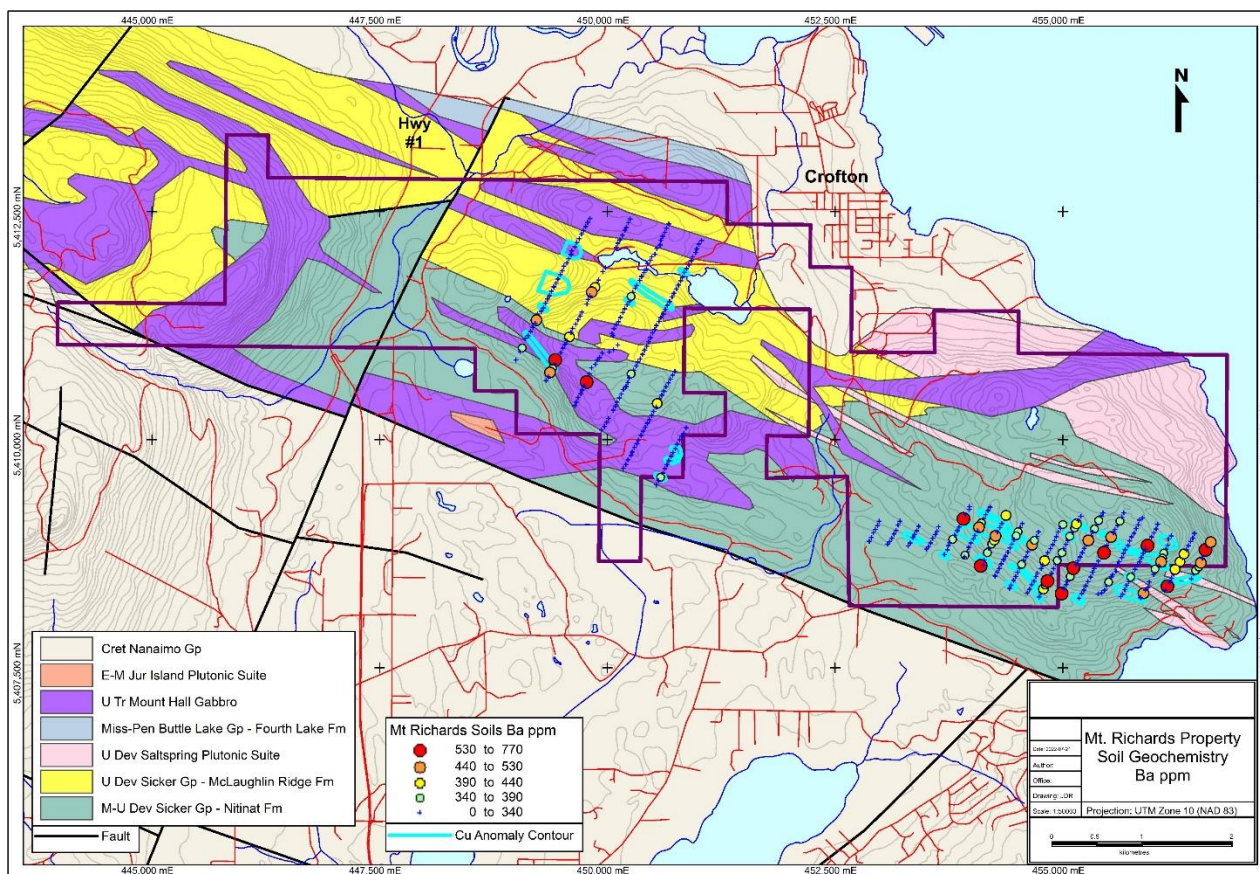
Anomalous arsenic values (Figure 9.3) coincide, in part, with anomalous copper stations or occur near the copper anomalies. Many of the arsenic anomalies are located 900 to 1400 m south of Breen Lake within a broad northwest-trending section of Mount Hall Gabbro, indicating that the mineralization is probably occurring within quartz veins that contain copper minerals. Quartz veins with chalcopyrite at the nearby Cornucopia and Yreka showings are known to contain gold and silver values. Some of the arsenic anomalies on Maple Mountain occur near exposures of quartz-feldspar porphyry dikes of the Salt Spring Plutonic Suite.

**Figure 9.3 Mt Richards & Maple Mountain areas As soil anomalies and geology**



Barium in soil is a common indicator of barite, which is often found within distal parts of VMS mineral horizons. Barium anomalies (Figure 9.4) are mostly found scattered in the Maple Mountain grid, partly coincident with copper trends, as well as adjacent to copper highs, suggesting possible stratiform bands of baritic mineralization. Anomalous barium trends extend west-northwest across grid lines over distances of more than 600 m.

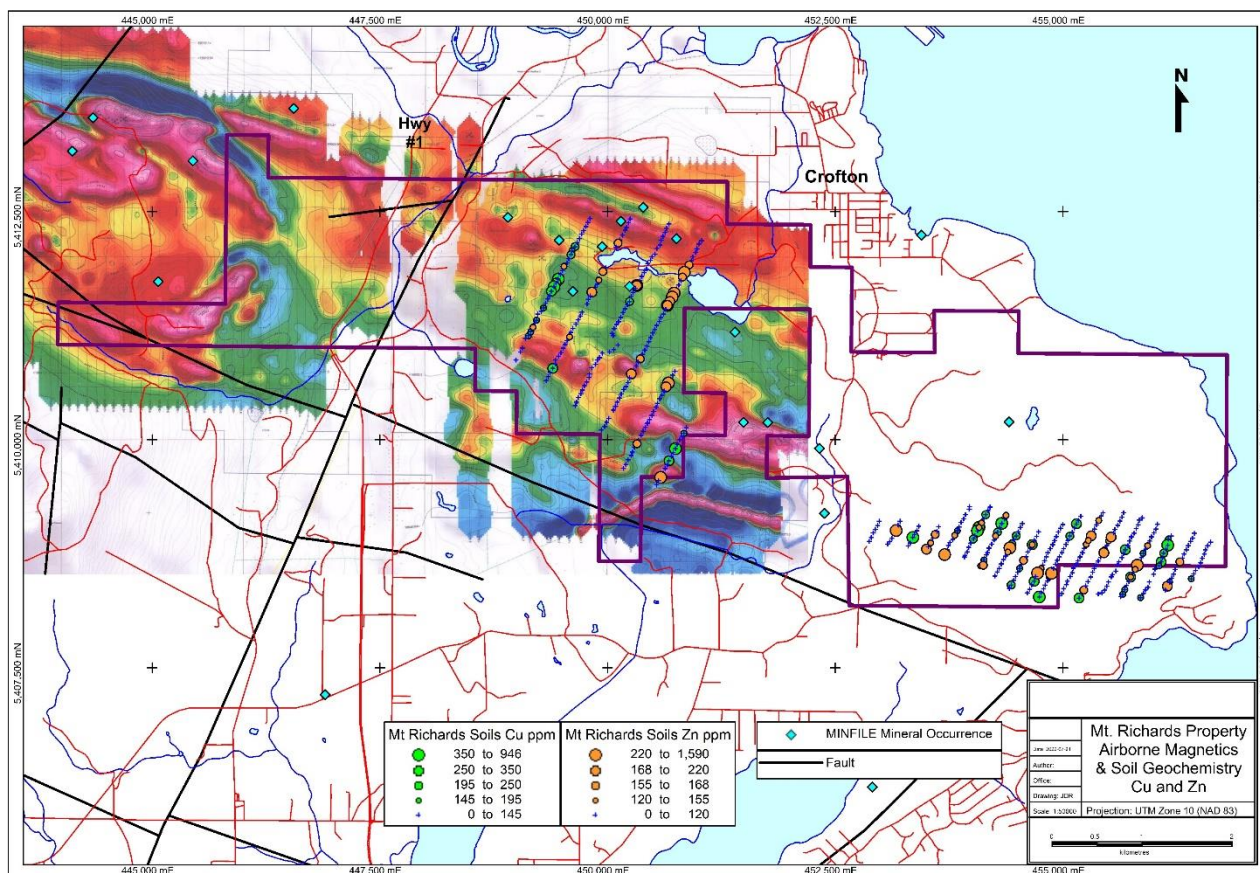
**Figure 9.4 Mt Richards & Maple Mountain areas Ba soil anomalies and geology**



An airborne magnetic survey was flown for Westridge Resources in 2008 that covered 2/3 of the current Property. The magnetic map from that survey has been overlain with Starlo's Cu and Zn soil geochemical results (Figure 9.5). Magnetic highs may be related to formational volcanic units or intrusive bodies that contain magnetite, but discrete highs may be indicative of sulfide-rich VMS bodies. There is a strong correlation of the magnetic highs with areas mapped as Mount Hall Gabbro intrusions. Magnetic lows often define linear fault zones and may also define alteration zones that have had magnetic minerals destroyed by hydrothermal processes. Such fault structures could contain mineralized veins, whereas alteration zones of low magnetic susceptibility could be associated with VMS mineralization.

The area of Falconbridge drilling surrounding Breen Lake covers a weak to moderate magnetic high that trends to the west-northwest. Copper and zinc soil anomalies in this area are primarily within magnetic lows that may reflect alteration zones, whereas arsenic anomalies are typically associated with magnetic highs that could indicate magnetite-bearing gabbroic rocks. At the west end of the Property a mapped gabbro body appears to be associated with a pronounced magnetic low, which suggests possible reversed polarity for this gabbro body relative to other gabbro bodies on the Property. Some of the strongly magnetic results near Highway 1 in the west part of the Property may be caused by cultural effects such as powerlines.

**Figure 9.5 Airborne total magnetic intensity with mineral occurrences & coincident Cu-Zn anomalies (warmer colours represent higher magnetic values) from Sadlier-Brown, 2008**



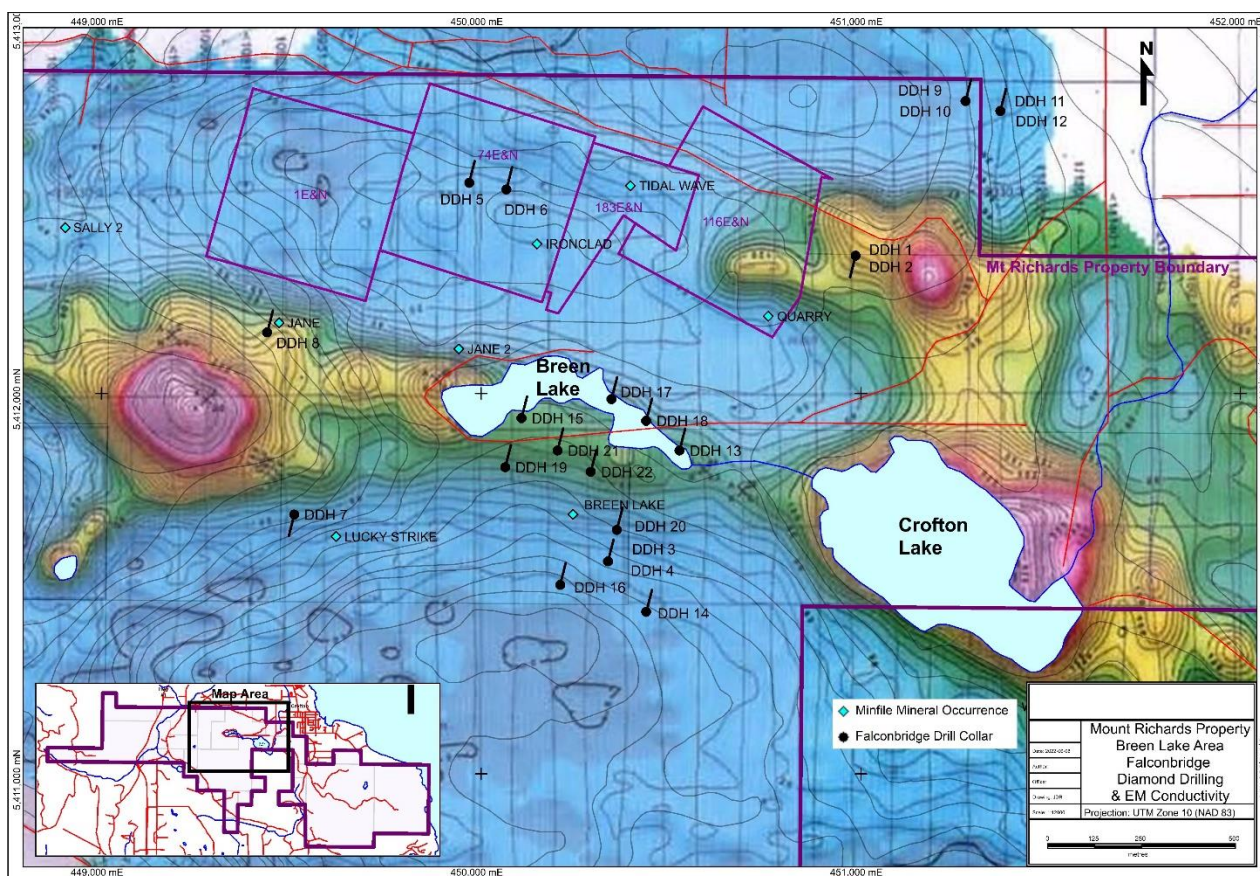
The property-scale magnetic map can be a useful mapping tool to better define stratigraphic units and structures. Promising geophysical signatures that coincide with soil geochemical anomalies and favourable host rocks should be followed up with ground geophysical surveys, geological evaluation and prospecting, followed by drilling of prospective targets. An airborne magnetic survey is recommended for the eastern part of the Property, to add to the known magnetic data available for the rest of the Property.

An airborne electromagnetic (EM) survey was flown for Westridge Resources in 2008 that covered 2/3 of the current Property. The EM conductivity map from that survey in the Breen Lake area has been overlain with Falconbridge's diamond drillhole locations (Figure 9.6).

Rock types that return the highest conductivity values are typically those containing sulfide minerals or graphite. Moderately conductive rock types include shale and clay-altered volcanic or sedimentary rocks. Shears and fault gouge may contain clay minerals that are conductive. All of these rock types were noted in the drill holes. A distinct, moderately to strongly conductive band, 200 to 600 m wide, extends west-northwesterly across the Breen Lake area for over 3.5 km of length. The central part of this band was drilled relatively extensively by Falconbridge and the source of the conductance was reported to be strongly disseminated pyrite, such as 5-20% pyrite

over 10 m, in andesitic, dacitic and rhyolitic volcanic rocks, which contain local bands of massive pyrite up to 40 cm thick (Pattison & Money, 1988). Some of the results of the drilling are discussed in Section 6.0, such as 0.56% zinc, 0.64% copper over 1.0 m in hole West87-20 and 1.14% zinc, 0.103% copper over 1.2 m in hole West87-14.

**Figure 9.6 Breen Lake area airborne EM conductivity and Falconbridge drillhole locations (warmer colours represent higher conductivity values) from Sadlier-Brown, 2008**



The strongest conductivity values are located to the west of the drill area, where ownership issues curtailed drilling at the time, as well as farther to the east under Crofton Lake, where there also has been no drilling. Farther to the north, drillholes 1 and 2 were located 150 m west of a strong conductor to test soil geochemical anomalies. These two holes intersected disseminated pyrite and 25 to 60 cm bands of semi-massive magnetite with trace pyrrhotite. The only mineralized interval in hole 1 was 0.13% Cu over 80 cm.

Starlo has undertaken an evaluation of historical IP, EM and magnetic geophysical targets in conjunction with soil geochemical anomaly patterns and favourable host lithologies. The target picks are displayed on Figure 9.7 and brief descriptions and rationale for each target area are summarized below.



### **Breen Lake Area**

- The majority of known mineral occurrences are in this area, several of which display VMS-type characteristics.
- Strong EM conductors that occur near the Jane occurrence west of Breen Lake, as well as underlying Crofton Lake, have not been drill tested.
- A moderately strong magnetic trend coincides with the conductivity trend and becomes strongly magnetic near the Jane occurrence, where it is coincident with strong conductivity.
- A cluster of moderately to strongly anomalous zinc soil geochemistry values near the west side of Crofton Lake has not been drill tested.
- Host rocks in this area are primarily McLaughlin Ridge intermediate to felsic volcanics and Salt Spring quartz-feldspar porphyry bodies, which are host rocks for the nearby Twin J mineralization.
- This area was previously explored with 22 angle holes that intersected zones of VMS alteration with disseminated and banded pyrite and magnetite, and narrow zones of copper and zinc minerals. Bands and lenses of semi-massive pyrite, with local chalcopyrite and sphalerite in silicified and chlorite-carbonate altered tuff have returned drill intervals such as 0.97% Cu over 0.8 m (hole West87-20) and 1.14% Zn, 0.103% Cu over 1.2 m (hole West87-14).

### **Maple Mountain Area**

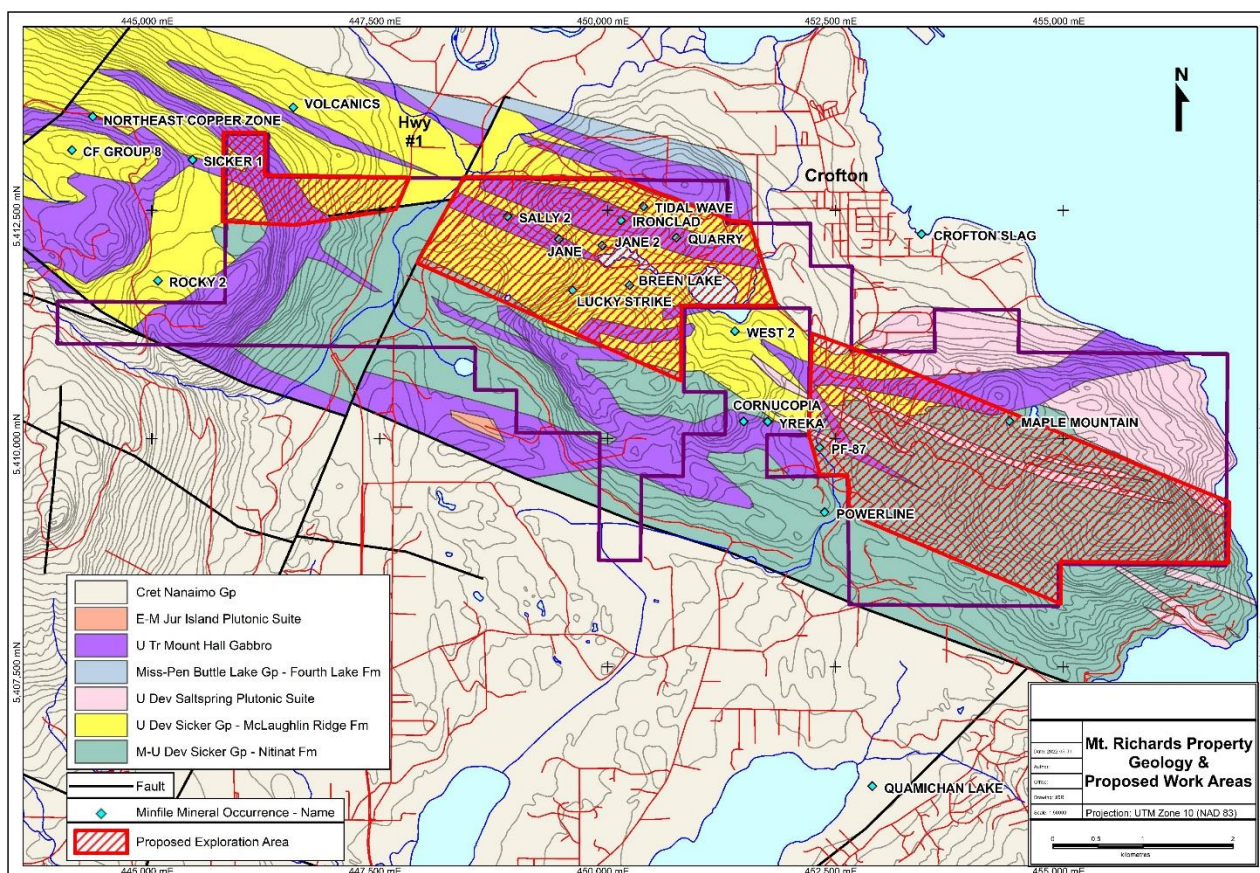
- This area is mapped as mostly Nitinat Fm but may also include areas of McLaughlin Ridge Fm that were not recognized due to limited bedrock exposure.
- The presence of Salt Spring Plutonic Suite porphyry bodies is significant due to their possible relationship with mineralization found nearby.
- Linear, northwest-trending Cu and Zn soil anomalies may reflect stratiform mineralization. These have not been followed up by prospecting or mapping.
- The only drilling in the area, 3 holes at PF-87, intersected disseminations and veins of pyrite with 2-10% chalcopyrite associated with chlorite-carbonate alteration. Isolated 1 m core intervals returned 1243 to 3718 ppm Cu, but low Zn.

### **Little Mount Sicker Area**

- Favourable McLaughlin Ridge lithologies underlie the northwest part of the claim block in this area.
- Strong magnetic values coincide with some areas of McLaughlin Ridge Formation.
- VMS-type mineralization consisting of pyrite-chalcopyrite lenses in felsic tuffaceous rocks is known at the "Northeast Copper" and "Volcanics" showings, located short distances to the northwest of the Property within the same belt of rocks.
- Falconbridge (Lefebure, 1985) reported possible exhalative silica bands with 5-10% pyrite in pyroxene-feldspar tuff traced for 500 m on the Lieberman Option claims, near the

northwest Property corner. Two Falconbridge samples from the pyritic mineralization returned no significant analytical values.

**Figure 9.7 Property Geology with selected exploration target areas based on favourable geological, geophysical and geochemical data**



## 10.0 DRILLING

Starlo has not conducted any drilling on the Property; however, considerable drilling has been undertaken in the past. A summary of available drilling statistics for the Property from 1982 to 1987 is provided in Table 10.1, reported by year. Drilling programs were mostly carried out by Falconbridge during the period 1984 to 1987, primarily exploring the area surrounding Breen Lake.

Some of the drilling results have been reported in assessment reports that are available online in the BC Geological Survey ARIS database, however, some of the results have only been compiled in internal Falconbridge reports, so were not available to the author.

A total of 28 diamond drill holes are mentioned in published reports, however, details about 7 of the holes are not available. The total meterage of the 21 holes that are reported is 5043 m, and the unreported holes may add another 1000 to 1500 meters to that total. Core from the initial holes drilled in 1984 was stored at the Falconbridge office in Delta, B.C., however, it is not known by the

author if any of the core is still available. Exploration results for the past drilling are discussed in Section 6.0 and drill core sampling procedures are described in Section 11.0.

**Table 10.1 Mount Richards Project Drilling Statistics**

Year	No. of Holes	Total Meters	Area	Company
1982	3	107	Little Mt Sicker	Lieberman
1984	3	355	Breen Lake	Falconbridge
1984	5	n/a	Breen Lake	Falconbridge
1985	2	328	Breen Lake	Falconbridge
1985	2	n/a	Breen Lake	Falconbridge
1987	3	1083	S of Crofton Lake	Falconbridge
1987	10	3170	Breen Lake	Falconbridge
Known Total	28	5043 + n/a		

*n/a means not available to the author*

## 11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

Reconnaissance rock samples collected and reported by numerous geologists and prospectors at various locations on the Property from 1970 to 2010 were typically not accompanied by standards, blanks or duplicates because they were intended as indicators of mineralization, or pathfinder minerals, for which exact values were not the objective. These samples typically consisted of grab chips from some of the strongest mineralized areas and are not necessarily representative of overall grades. There were, however, checks on the accuracy of the analyses done in-house by the commercial laboratories, which routinely inserted blanks and standards to make certain that analytical equipment was properly calibrated.

Drill core samples were collected from measured intervals that were described in drill logs, however, sample preparation, analytical and security procedures were typically not documented for the core samples. Quality assurance and use of Standards for checking of analytical accuracy were not commonplace at the time of the drilling programs. Therefore, the results of historical drilling do not satisfy the requirements of 43-101 reporting. That said, the reported results of some of the core analyses do indicate that there are anomalous levels of copper and zinc in pyritic, felsic volcanic rocks that exhibit strong characteristics of VMS-type mineralization, and that these warrant further investigation. If historical drill core is located it may be possible to select specific mineralized intervals to check-analyze, however, since the core has likely not been secured, the reliability of the results cannot be assured. Any results deemed as significant would require re-drilling at the location of the drill hole of interest to validate results.

## **11.1 SAMPLE PREPARATION, TRANSPORTATION AND SECURITY**

The diamond drilling undertaken by Falconbridge (1984-1987) produced NQ (47.6 mm diameter) sized core, and Lieberman's 3 holes drilled in 1982 were smaller packsack (X-ray-size) holes. Besides geological logging of the core, sample intervals were marked, with sample lengths typically between 0.1 and 1.5 m, and occasionally up to 2.0 m, based generally on geological divisions.

Core sample intervals were split in half along the long axis and half of the core was placed into a plastic bag with a sample tag designating the sample number. Bags were tied securely and placed into sacks, which were transported by commercial trucking company to CDN Resources Lab in Delta B.C. in 1984 and to Bondar-Clegg & Co. Analytical Laboratories in North Vancouver, B.C. in 1987.

Soil samples collected by Starlo in 2022 were packed in sealed plastic bags that were placed into sacks and trucked by Starlo personnel to the offices of C.J. Greig & Associates Ltd. in Penticton, B.C. Samples were unbagged and the damp Kraft envelopes containing the soil were placed on drying racks for several days to dry the soil.

## **11.2 LABORATORY ANALYTICAL PROCEDURES**

The drill core preparatory procedures for the various drilling programs at Mount Richards were not reported, but the analytical techniques were similar.

At CDN Resources Lab a representative split was collected from each crushed core sample, which was then pulverized and was treated by standard acid digestion, and with A.A. techniques for Cu and Zn analyses, and fire assay for Au and Ag. At Bondar-Clegg, HN03-HCl hot extraction and analysis by DC Plasma were used to detect nine base metals and Ag. As well, fire assay preparation with AA finish was used for Au analyses and X-Ray Fluorescence was used to give a total analysis for Ba. A number of samples were also sent to X-Ray Assay Laboratories in Don Mills, Ontario for whole rock analyses by XRF methods. The laboratory's in-house quality assurance and quality control procedures were utilized during the assaying of the samples including their own blanks, Standards and duplicates.

Soil samples collected by Starlo in 2022 were initially analyzed at the offices of C.J. Greig & Associates Ltd. in Penticton, B.C. by portable XRF equipment. The dried samples were analyzed with a Thermo Scientific Niton Gold XL3t 500 GOLDDTM handheld X-Ray Fluorescence (XRF) Analyzer unit, operated in the 'benchtop' mode. Prior to each XRF analysis, the sample tag was scanned with a barcode scanner that automatically recorded the sample number in the computer. The sample, in its original sample bag, was then placed on the test stand and centered on the probe window; the test stand lid was then closed and locked. The analyzer was then run in "Soils" mode for 30 seconds, reading three separate "filters" of elements, at 10 seconds per filter. The three "filters" provided analytical values for a total of 33 elements. Data was automatically recorded,

saved directly to the analyzer and simultaneously downloaded to a laptop computer. For every 30 samples analyzed, a Canadian Certified Standard was analyzed for quality control, to check for drift in the readings. XRF data was compiled in an Excel spreadsheet and then merged with the GPS locations for all samples to allow entry of the sample data into MapInfo GIS computer software.

Upon review of the positive XRF results, the 377 soil samples, which included 17 blanks, were later shipped to ALS Laboratory in North Vancouver for analysis by Inductively Coupled Plasma (ICP), Code ME-ICP41, which involves aqua regia digestion of 0.5 g of sample and analysis of 36 elements by ICP. Data reported from an aqua regia digestion should be considered as representing only the leachable portion for each analyte. Gold values were determined by process code Au-ICP21, which involves fire assay of 30 grams of sample and analysis by ICP-AES.

### **11.3 DUPLICATES, STANDARDS AND BLANKS**

The companies that undertook previous drilling did not report the inclusion of random samples of Standards or blanks in their core shipments; however, internal quality control and quality assurance procedures were utilized at the assay laboratories used for core analyses. For each sample batch the lab analyzed Standards and blanks to validate the accuracy of the analytical equipment. There were no reported irregularities with the checks conducted by the laboratories.

The soil sampling undertaken by Starlo utilized blanks inserted for every 25<sup>th</sup> sample in the numbered sequences. Seventeen blanks were submitted and all analytical results from these samples were within acceptable levels of deviation, indicating that lab results show no discrepancies between batches of soil analyses.

## **12.0 DATA VERIFICATION**

### **12.1 DATABASE**

Analytical values for samples from the Property that are quoted in this report, in most cases have not been substantiated by signed analytical certificates that were issued by an accredited laboratory that performed the work. However, the author has no reason to doubt the validity of the analytical results and, as well, the author is of the opinion that core sampling that was conducted by reputable exploration companies in the past would have been undertaken to professional industry standards. Any re-evaluation by Starlo of areas that were previously explored by others should be subject to confirming the reported analytical results through re-drilling of selected holes or, if feasible, re-sampling core from selected holes in storage.

BC Assessment reports that documented previous sampling mostly do not contain copies of the laboratory analytical certificates. Many of the reconnaissance rock samples that have been reported did not specify the type of sampling or the dimensions of the sample so, in those instances, the author has assumed that the samples probably consisted of selected rock chips from some of

the stronger mineralization found on surface. Diamond drilling reports for more recent work included hole data such as UTM coordinates of drill collars, downhole surveys and depths, as well as geological logs, sample intervals and analytical results. Some reports also included drill hole plan maps as well as vertical sections with graphical representations of analytical values.

Although airborne and ground geophysical surveys were undertaken by earlier workers, they were largely superseded by an airborne EM and Magnetometer survey undertaken in 2008 over the central and western parts of the Property that consisted of 418 line-km and overlapped the previous surveys. The survey was conducted by Aeroquest, a professional geophysical contractor, that provided a comprehensive report outlining equipment specifications and operating parameters. The contractor also provided maps showing colour contoured magnetic values and Z Off-Time conductance contours, as well as picking several conductor anomalies of interest. The author has included excerpts from these maps in Section 9.0 of this report.

## **12.2 INDEPENDENT VERIFICATION**

The author visited the Property on November 19, 2022. Three of the principal target areas were visited to view the terrain, potential access routes, extent of bedrock exposures and local zones of alteration and mineralization. The main area of interest surrounding Breen Lake was partly traversed on foot to examine outcrops of altered volcanic rocks with pyrite and possible copper and zinc minerals. Some of the outcrops are comprised of strongly phyllic altered rocks that may have been derived from rhyolitic volcanics. These strongly sericitic rocks contain bands of silica and 5-50% pyrite as disseminations, fine veinlets, and irregular small masses. Minor chalcopyrite and sphalerite may accompany the pyrite (Figure 12.1 a). The outcrops are heavily limonite stained, due to disseminations and fine seams of pyrite (Figure 12.1 b, c & d). The Jane 2 mineral occurrence was searched for, but not located, however, a trench and 3 small rock pits near the Jane occurrence were seen and examined, although they are not well mineralized (Figure 12.2 a & b).

The main areas of interest are largely forest covered, although some fairly recent logging was noted in the Breen Lake area (Figure 12.3 a & b). Road access is good to most areas, although the Breen Lake access road has a locked gate (the key is available from the local landowner). The Mable Mountain area covers a Municipal Forest Reserve that has numerous and extensive hiking, bicycling, and horseback trails but is largely restricted from motor vehicle access. A small concrete water storage reservoir is planned for construction approximately 400 m east of Osborne Bay Road, along Maple Mountain Main Line. It will provide fire protection and increased water pressure for a subdivision and surrounding areas. A few residences and farms were viewed within the claims; however, most areas at higher elevations appear to be uninhabited.

Figure 12.1 Breen Lake area phyllic altered felsic volcanic rocks with silica bands and abundant pyrite disseminations and veinlets

a)



b)



c)



d)

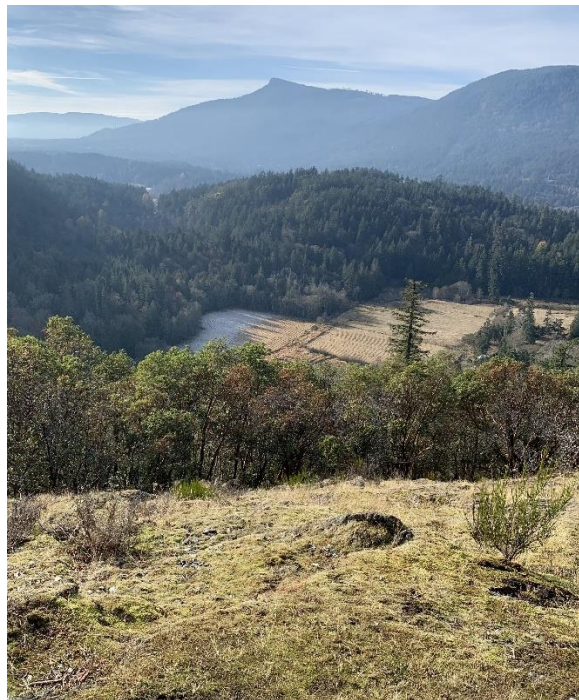


**Figure 12.2 Jane occurrence historical rock pit and view from Jane area looking southwest**

a)



b)



**Figure 12.3 The Property area is largely forested, with local clear-cut logged plots that reveal areas of outcrop**

a)



b)





The author photographed outcrops of altered, pyritic rocks and general vistas of the Property, and visited sites of previous work. There have been a number of drill sites reported, however, no drill sites were seen, or searched out, since most drilling was done 35 to 40 years ago and sites are likely to be overgrown. Historical drill core from holes drilled at various locations on the Property was not available to the author. The Company should endeavor to locate the core, to examine and sample it, if it still exists.

In preparation for the writing of this report, the author reviewed all aspects of exploration work carried out to date on the Property, including results from historical sampling, trenching, drilling, and geochemical and geophysical surveys. The Property hosts at least 10 known mineral showings, several of which have received only limited early-stage exploration work. The most advanced are in the Breen Lake – Crofton Lake area, where some have had a small amount of underground drifting and surface trenching, and 25 drill holes totalling approximately 6000 m. Other prospective areas on the Property have received surface sampling and mapping, as well as geophysical surveys and minor diamond drilling in 3 small-diameter holes.

The Property is considered to have excellent exploration potential, based mainly on the presence of VMS-style mineral showings that are similar to the style of mineralization found at the Lenora, Tyee and Richard III Mines located 3 km to the west-northwest, and the Myra Falls mine, located about 160 km to the northwest. Gold- and silver-bearing veins in shear zones have been discovered over narrow widths indicating additional potential for discovery of precious metal vein-type deposits.

Some of the showings are coincident with soil geochemical anomalies that remain open in several directions, and local geophysical testing has indicated prospective targets at depth. There has been drill testing of some of these targets, but there remains a relative lack of detailed exploration beyond the limits of the historically explored showing areas, both on surface and at depth. In addition, a better understanding and modelling of geological and structural features should be developed to help guide exploration and develop drill targets, in conjunction with geophysical work to better define drill targets at depth.

The data review and Property inspection by the author indicate that there is significant alteration and VMS-style mineralization present, and that further exploration is warranted.

## **13.0 MINERAL PROCESSING AND METALLURGICAL TESTING**

There has been no mineral processing or metallurgical testing of mineralization from the Property undertaken by Starlo.

## **14.0 MINERAL RESOURCE ESTIMATES**

The Property currently has no defined Mineral Resources. There is insufficient data to determine such an estimate.

## **15.0 ADJACENT PROPERTIES**

Within the Property area there is potential for discovery of various styles of mineralization such as those found on nearby properties. Significant deposits in the area include VMS mineral bodies containing Cu, Zn, Ag and Au mineralization that have been mined in the past at three separate deposits located 3 km west of the Property boundary.

Production data reported in the Minfile No. 092B 001 mineral inventory indicate that, between 1898 and 1909, a total of 229,221 tonnes of mineralization was mined from three deposits, with recovered grades of 4.0% Cu, 4.8 g/t Au and 100.1 g/t Ag (Table 6.1). The three deposits were later mined intermittently as a single operation (the Twin J mine) between 1942 and 1952, and during that period a total of 48,082 tonnes were produced with recovered grades of 4.0% Zn, 0.8% Cu, 0.3% Pb, 1.3 g/t Au and 41.7 g/t Ag.

Twin J was examined by J.S. Stevenson in the 1940's and the following description is derived from his paper published in 1948 (Stevenson, 1948). Mineralization in the mine consists of syngenetic, stratabound, volcanogenic massive sulfide (VMS) deposits hosted by rocks of the McLaughlin Ridge Formation. There are two main zones about 50 m apart consisting of long, lenticular bodies lying along two main drag folds in a band of meta-sedimentary rocks. The North Zone measures about 500 meters along strike, 37 meters down dip and from 0.3 to 3 meters in thickness. The South Zone measures 640 meters along strike, 45 meters down dip and is about 6 meters in thickness.

The Author has been unable to verify the Twin J information and the information is not necessarily indicative of the mineralization on the Property that is the subject of this Technical Report.

Distinctive geological and geophysical characteristics of the nearby known mineral occurrences will help to guide further exploration at Mount Richards.

## **16.0 OTHER RELEVANT DATA AND INFORMATION**

There is no other relevant data or information required for disclosure in this NI 43-101 technical report.

## 17.0 INTERPRETATION AND CONCLUSIONS

Previous exploration programs within the Property area have focused on discovery of VMS-style mineralization or high-grade precious metal veins, similar to some of the deposits found on nearby properties. Significant mineralization has been discovered in two areas of the Property: Breen Lake and Little Sicker Mountain. Historical work has primarily been concentrated in the Breen Lake area, leaving extensive regions of the property under-explored.

Of the two main exploration areas, **Breen Lake**, in the central part of the Property, has received the greatest amount of drilling to date. This drilling has primarily tested geophysical and geological targets for massive sulfide mineralization which, in many VMS deposits, is concentrated in bodies that occupy a relatively small area. As such, these targets may require close-spaced geophysical surveying to provide adequate definition for planning of drill holes.

Falconbridge drilled 22 holes from 1984 to 1987, primarily along a 3.5 km-long, west-northwest trending, EM-conductive zone with local coincident magnetic and IP chargeability anomalies. Falconbridge was encouraged by intercepts of VMS-style alteration containing narrow bands of semi-massive pyrite with minor copper and zinc minerals in silicified tuff. The IP chargeability highs appeared to reliably indicate areas of sulfides, suggesting that further IP surveying is warranted outside the small area previously surveyed.

The airborne EM conductor in the Breen Lake area is strongest near its east and west ends, but where it passes through the Jane showing on the west it was only partially tested by drilling because Falconbridge did not own all of the claims in that area. To the east it extends under Crofton Lake, and this target also has not been drilled. Although a number of Falconbridge drill holes intersected subeconomic Cu-Zn mineralization, Sadlier-Brown & Ruks (2010) noted that the intercepts appear to be offset to the north of the airborne EM anomaly. This may imply that there is potential for stronger mineralization at depth further to the south of the drilling and beneath the conductive zone. It should be noted that any carbonaceous sedimentary lithologies that may be present would have very high conductivity, which could mask any response from sulfides.

In the **Little Sicker Mountain** area, the most significant showing has been described by Falconbridge as a possible exhalative horizon consisting of several bands of silica with 5-10% pyrite found in pyroxene-feldspar tuff at the contact with porphyritic basalt. This horizon was traced for 500 m, along which intermittent sampling returned mostly low assays, however, one grab sample returned a value of 1910 ppm Zn. Numerous shear zones in the area were found to carry significant amounts of pyrite and minor chalcopyrite. These could be footwall feeder veins indicative of nearby VMS-style mineralization, but there is no indication that they were followed up at the time.

At Little Sicker Mountain, favourable Sicker Group rocks are primarily found on the lower part of the east slope. Variable magnetic highs and lows appear to be related to a large Mount Hall Gabbro body on the upper slopes to the west, however, there are more subtle magnetic highs in the area

mapped as Sicker Group rocks that should be investigated. Falconbridge collected 102 rock samples in this region, but there is no report of any soil sampling, which the author suggests would be an effective way to test for potential near-surface mineralization in the Sicker Group rocks in this area.

Other areas of the Property have also indicated mineral potential. In particular, clusters of anomalous soil geochemical anomalies have been revealed on Maple Mountain from sampling programs by Canamax and, most recently, by Starlo. These copper, zinc and barium anomalies are within an area mapped as Nitinat Formation, however, rocks within this area have been described by Fleming (1986) as pyritic chlorite schist and quartz-feldspar porphyritic dikes that bear some resemblance to McLaughlin Ridge Formation rocks in the Breen Lake area. Detailed geological mapping and follow up of the geochemical anomalies are recommended.

Airborne magnetic results that cover about two-thirds of the Property show very strong response from regionally distributed gabbro bodies, however, subtle, moderately magnetic zones may reflect sulfides and should be correlated with favourable geology, geochemistry and chargeability highs to help define possible mineral targets. Linear magnetic lows may be indicative of faults or intense alteration zones that could also be targets of interest.

Geological mapping and modeling have indicated that the McLaughlin Ridge Formation is the primary potential host unit for VMS mineralization on the Property, however, the extent of this unit may be greater than indicated by regional mapping, especially in the Maple Mountain area. Detailed mapping of selected areas on Maple Mountain and Little Sicker Mountain are warranted. In particular, areas of sericite or chlorite alteration and silicification should be noted, as well as fine grained sedimentary units that may be indicative of a restricted, possibly fault-bounded, quiescent basin environment where VMS mineralization could have been deposited without disturbance. Iron formation and barite horizons are also important indicators in a VMS system that are often found laterally distant from massive sulfide bodies.

At the Myra Falls mine, more than 20 lenses of massive sulfides are found within a section of Myra Formation several hundred meters in thickness, suggesting that at Mount Richards the lithologies underlying McLaughlin Ridge Formation should also be considered prospective for mineralization. The deposits at Myra Falls are typically confined to intervals of coarse-grained rhyolitic volcanoclastic rocks, sandstones, and mudstones, which are similar to lithologies in some parts of the McLaughlin Formation on the Property.

It is the author's opinion that the style of mineralization found on the Property, plus coincident geochemical and geophysical anomalies, of which some have not been drill tested, indicate good potential for the discovery of VMS-style mineralization similar to the nearby Mount Sicker and Lara deposits. Further exploration is definitely warranted.

## 18.0 RECOMMENDATIONS

On the Property there has been a relative lack of concentrated exploration beyond the limits of the historically worked showing areas, both on surface and at depth. In addition, there appears to have been a lack of a coherent property-scale stratigraphic and structural modelling that might help guide exploration and develop drill targets, as well as a relative lack of geochemical and geophysical work in some areas of the property, which again may help in guiding exploration and developing targets.

The following recommendations are made by the author:

- **GIS Database:** All historical exploration data, as well as topographic and geologic data, should be compiled in a GIS database to help determine the most prospective areas for concentration of further work.
- **Geological Mapping:** Mapping should be undertaken over the entire Property to outline the geological framework, with more detailed mapping in the following primary mineralized zones; the Breen Lake VMS showings, the Little Sicker Mountain showings of possible VMS mineralization, and areas possibly underlain by felsic volcanic rocks or Salt Spring porphyry in the Maple Mountain area.
- **Emphasis should be placed on defining felsic volcanic units within McLaughlin Ridge and Nitinat Formations that may be related to VMS systems, as well as determining the projections of major fault zones, and the location of intrusive bodies, including dykes and stocks. Gossanous or altered zones should be mapped and categorized as to type of alteration. Mineralized zones should be mapped in detail to determine trends and possible mineral controls.**
- **Soil Geochemical Sampling:** Soil sample lines should be established, initially spaced about 200 m apart with 50 m stations, primarily oriented north-easterly, to test Sicker Group units in all areas of the Property where there is no record of previous soil sampling.
- **Stream Sediment Geochemical Sampling:** Stream sediment sampling can effectively evaluate large swaths of terrain that have not been previously soil sampled by collecting sediment from any small streams that occupy channels cutting the northwest trending mountainous terrain on the Property. Sample collection traverses could follow the base of slope along the north and south sides of the mountain ridges. Anomalies defined by sediment samples should be followed-up by focused soil sampling, targeting the upper parts of anomalous drainages.
- **Prospecting:** Areas of anomalous soils or stream sediments should be prospected for possible mineral showings, accompanied by rock sampling and geological evaluation.
- **Airborne versatile time-domain electromagnetic (VTEM) and magnetic survey:** An airborne VTEM and magnetic survey should be flown over any parts of the Property that have not been previously surveyed, and merged with historical data, to provide a geophysical framework that will aid in delineation of host lithologic units during geologic mapping and to help identify key

geological structures, particularly those that may offset mineralized horizons. The geophysical data should be merged with soil geochemical and geological data to define prospective exploration targets.

- Electromagnetic (EM) or Induced Polarization (IP) geophysical survey: A program of ground-based EM or IP is recommended as a targeting tool to help identify and define sulfide-bearing lithologic units, structures, or alteration zones that commonly surround mineral bodies. Lines should initially be spaced at 200 meters, with in-fill lines at spacings as close as 50 meters over areas showing strong chargeability and low to high resistivity responses (these responses might be expected in areas containing sulfide mineralization and alteration, such as silicification causing high resistivity or certain clay alteration minerals causing low resistivity). EM and IP have previously identified targets in the Breen Lake area, where drilling confirmed strong pyrite-sericite-chlorite-carbonate alteration with narrow zones of stratiform zinc and copper mineralization.
- Diamond Drilling: GIS compilation of historical data may reveal promising targets that warrant drill testing in various areas of the Property. Geological models developed in conjunction with exploration results from geochemical and geophysical programs are also expected to define favourable drill targets. Based on the currently known soil geochemical and geophysical targets on the Property, preliminary drilling in a Phase II program could total as much as 5000 meters in 10 to 20 holes.

A Phase I proposed exploration budget is presented in Table 18.1, including data compilation and a two-week program of geological, geochemical and geophysical work to explore the Property. This program is not dependant on the issue of an exploration permit; however, the company should communicate with land owners regarding access on private property.

**Table 18.1 Phase I proposed exploration budget**

Activity	Scope	Cost (\$CDN)
Geological Mapping	1 geologist, 12 field days, 3 office days	\$9,000
Geochemical Sampling	450 soils, 30 silts, 24 field man-days	\$12,000
Airborne EM-Mag Survey - Maple Mtn	150 line-km @ \$300/km	\$45,000
Assaying	500 samples @ \$45/sample	\$22,500
Shipping and Transport	samples and supplies	\$1,000
Travel, Mob-demob	3 personnel and gear	\$2,500
Room & Board	36 md @ \$200/md	\$7,200
Claims and Permitting	administration	\$1,800
Data Compilation/ Report Preparation	1 geologist 25 office days	\$14,000
	<b>Total Estimated Cost:</b>	<b>\$115,000</b>

In summary, the presence on the Property of a 1 km x 1 km area containing more than 5 known VMS-type occurrences, in addition to extensive areas of coincident copper and zinc soil geochemical anomalies, and continuation of the favourable stratigraphy over several kilometers, suggest good possibility of discovering significant mineralization. Further geological, geochemical, and geophysical exploration is warranted and if further compelling evidence is found then diamond drilling should be conducted to test areas at depth.

## 19.0 REFERENCES

Ashley, R. (2002): Chapter K, Geoenvironmental Model for Low-Sulfide Gold-Quartz Vein Deposits; in Seal II, R.R and Foley, N.K. (eds.), Progress on Geoenvironmental Models for Selected Mineral Deposit Types, U.S. Geol. Surv., OF Report 02-195, pp 176-195.

B.C. Ministry of Energy Mines and Petroleum Resources (2007\*): Minfile Summary 092B 001, 002, 003; MEMPR Website Summary Report.

Bliss, J.D., and Jones, G.M. (1988): Mineralogic and grade-tonnage information on low-sulfide Au-quartz veins: U.S. Geological Survey Open-file Report 88-229, 99 p.

Booth, K. (1987): 1986 Geological Report on the PF Option, British Columbia Ministry of Energy, Mines and Petroleum Resources, Assessment Report No. 16,029.

Chandler, T.E. & Lear, S. (1985): Drilling Assessment Report on the West 9, 10, 11 Mineral Claims of the West Group, British Columbia Ministry of Energy, Mines and Petroleum Resources, Assessment Report No. 13,853.

Chandler, T.E. & Martyn, D. (1985): Questor Surveys Limited Geophysical Survey of the West #1 - #8 Mineral Claims Area, British Columbia Ministry of Energy, Mines and Petroleum Resources, Assessment Report No. 13,532.

Chong, A., Becherer, M., Sawyer, R., Wasteneys, H., Baldwin, R., Bakker, F., and McWilliams, I. (2005): Massive sulphide deposits at Myra Falls Operations, Vancouver Island, British Columbia. In Geological field trips southern British Columbia, Geological Association of Canada, Cordilleran Section, Vancouver.

Climate Data. (2022): *Duncan Climate (Canada)*. Retrieved from <https://en.climate-data.org/north-america/canada/british-columbia/duncan-871523/>

Cui, Y., Miller, D., Schiarizza, P., and Diakow, L.J. (2017): British Columbia digital geology. British Columbia Ministry of Energy, Mines and Petroleum Resources, British Columbia Geological Survey Open File 2017-8, 9p. Data version 2019-12-19.

Dolmage, V. (1947): Lucky Strike Group of Mineral Claims, British Columbia Ministry of Energy, Mines and Petroleum Resources, Assessment Report No. 0019.

Eastwood, G.E.P. (1980a): Sicker Project - Mount Richards Area (92B/13E); in Geological Fieldwork 1979, B.C. Ministry of Energy, Mines and Petroleum Resources, Paper I980-1, pages 49-51.

Eastwood, G.E.P. (1980b): Geology of the Mount Richards Area, Vancouver Island, British Columbia; B.C. Ministry of Energy, Mines and Petroleum Resources, Preliminary Map 40.

Fleming, D.B. (1986): 1986 Geochemical Assessment, Crofton Lake Property, British Columbia Ministry of Energy, Mines and Petroleum Resources, Assessment Report No. 14,497.

Gibson, H.L., Allen, R.L., Riverin, G., and Lane, T. E. (2007): The VMS Model: Advances and Application to Exploration Targeting, Paper 49, Ore Deposits and Exploration Technology, in "Proceedings of Exploration 07: Fifth Decennial International Conference on Mineral Exploration" edited by B. Milkereit, 2007, p. 713-730.

Goldfarb, R.J., Berger, B.R., Klein, T.L., Pickthorn, W.J., and Klein, D.P. (1996): Low sulfide Au quartz veins; in du Bray, E.A. (ed.), Preliminary compilation of descriptive geoenvironmental mineral deposit models: U.S. Geological Survey Open-File Report 95-831, pp.261-267.

Government of British Columbia. (nd): *Geology of BC*. Retrieved from <https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/british-columbia-geological-survey/geology>

Government of British Columbia. (2022): *Mineral Titles Online*. Retrieved from <https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/mineral-titles/mineral-placer-titles/mineraltitlesonline>

Grette, J.F. (1979): Geology and Soil Geochemistry, Croft 2 Claims, Victoria Mining Division, British Columbia Ministry of Energy, Mines and Petroleum Resources, Assessment Report No. 7,233.

Groves, D.I., Goldfarb, R.J., Gebre-Mariam, M., Hagemann, S.G. and Robert, F. (1998): Orogenic gold deposits: proposed classification in the context of their crustal distribution and relationship to other gold deposit types. *Ore Geol. Review*, 13, 7-27.

Juras, S.S. (1987): Geology of the Polymetallic Buttle Lake Camp, with Emphasis on Price Hillside, Central Vancouver Island, British Columbia, Canada; Ph.D. Thesis, University of British Columbia.

Lefebure, D. (1985): Geology and Lithochemistry of the Lieberman Option, British Columbia Ministry of Energy, Mines and Petroleum Resources, Assessment Report No. 13,907.

McCuaig, T.C., and Kerrich, R. (1998): P-T-t-deformation-fluid characteristics of lode gold deposits: evidence from alteration systematics: *Ore Geology Reviews*, v. 12, p. 381-453.

Marshall, D., Nicol, C.-A., Greene, R., Sawyer, R., Stansell, A., Easterbrook, R. (2018): Precious Metal Enrichment at the Myra Falls VMS Deposit, British Columbia, Canada. *Geosciences* 2018, 8, 422. <https://doi.org/10.3390/geosciences8110422>



Massey, N.W.D. (1995a): Geology and Mineral Resources of the Duncan Sheet, Vancouver Island 92B/13; B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 1992-4.

Massey, N.W.D. (1995b): Geological Compilation, Vancouver Island, B.C. Ministry of Energy, Mines and Petroleum Resources, Open File 1994-6, 1: 250,000.

Massey, N.W.D., MacIntyre, D.G., Desjardins, P.J. and Cooney, R.T. (2005): Digital Geology Map of British Columbia: Whole Province. British Columbia Ministry of Energy and Mines, British Columbia Geological Survey, Geofile 2005-1, 1:250,000 scale.

Massey, N.W.J.; Friday, S.J.; Tercier, P.E.; Potter, T.E. (1987a): Geology of the Duncan and Chemainus River Area., B.C. Ministry of Energy Mines and Petroleum Resources, O.F. 1988-8.

Massey, N.W.J.; Friday, S.J.; Tercier, P.E.; Potter, T.E. (1987b): Geology of the Duncan Area., B.C. Ministry of Energy Mines and Petroleum Resources, Geoscience Map 1991-3.

Mining Data Solutions. (2018): *Myra Falls Mine*. Retrieved from <https://miningdataonline.com/property/64/Myra-Falls-Mine.aspx#Documents>

Money, D.P. (1987): 1987 Drilling Report on the PF Option, British Columbia Ministry of Energy, Mines and Petroleum Resources, Assessment Report No. 16,319.

Municipality of North Cowichan. (2019): *Completion of Crofton Alternate Water Supply Project Celebrated*. Retrieved from <https://www.northcowichan.ca/EN/meta/news/news-archives/2019-archive/completion-of-crofton-alternate-water-supply-project-celebrated.html>

Payne, J.G., Bratt, J.A. and Stone, B.G. (1980): Deformed Mesozoic volcanogenic Cu-Zn sulphide deposits in the Britannia district, British Columbia: *Economic Geology*, v. 75, p. 700-721.

Pattison, J.M. & Money, D.P. (1988): 1987 Drilling Report on the West Claims, Project #094/107, British Columbia Ministry of Energy, Mines and Petroleum Resources, Assessment Report No. 17,007.

Ruks, T.W. (2015): Stratigraphic and Paleotectonic Studies of Paleozoic Wrangellia and Its Contained Volcanogenic Massive Sulfide (VMS) Occurrences, Vancouver Island, British Columbia, Canada, Ph.D. Thesis submitted to the University of British Columbia, Vancouver, Canada, August, 2015.

Ruks, T. and Mortensen, J. K. (2007): Geological Setting of Volcanogenic Massive Sulphide Occurrences in the Middle Paleozoic Sicker Group of the Southeastern Cowichan Lake Uplift, (NTS 092B/13), Southern Vancouver Island; in *Geological Fieldwork 2006*, B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 2007-1, p. 381–393.

Ruks, T., Mortensen, J.K. and Cordey, F. (2009): Preliminary results of geological mapping, uranium-lead zircon dating, and micropaleontological and lead isotopic studies of volcanogenic massive sulphide-hosting stratigraphy of the Middle and Late Paleozoic Sicker and Lower Buttle Lake Groups on Vancouver Island, British Columbia (NTS 092B/13, 092C/16, 092E/09, /16,

092F/02, /07); in Geoscience BC Summary of Activities 2008, Geoscience BC, Report 2009-1, p.103–122.

Ruks, T., Mortensen, J.K. and Cordey, F. (2010): New results of geological mapping, micropaleontological and lead isotopic studies of volcanogenic massive sulphide–hosting stratigraphy of the middle and late Paleozoic Sicker and Buttle Lake groups on Vancouver Island, British Columbia (NTS 092B/13, 092C/16, 092E/09, /16, 092F/02, /05, /07); in Geoscience BC Summary of Activities 2009, Geoscience BC, Report 2010-1, p. 149–170.

Rushton, H.G., MacFarlane, P.W. & Douglas, D.C. (1970): Sirius Claims 1-27, Victoria Mining Division, British Columbia Ministry of Energy, Mines and Petroleum Resources, Assessment Report No. 2,397.

Sadlier-Brown, T.L. (2008): A Report on an Airborne Electromagnetic and Magnetic Survey of the Fortuna Claim Group, British Columbia Ministry of Energy, Mines and Petroleum Resources, Assessment Report No. 29,947.

Sadlier-Brown, T.L. & Ruks, T.W. (2010): A Report on the Geology of the Fortuna Claim Group, British Columbia Ministry of Energy, Mines and Petroleum Resources, Assessment Report No. 31,677.

Savage, K.S., Tingle, T.N., O'Day, P.A., Waychunas, G.A. & Bird, D.K. (2000): Arsenic speciation in pyrite and secondary weathering phases, Mother Lode Gold District, Tuolumne County, California, Applied Geochemistry, Volume 15, Issue 8, 2000, Pages 1219-1244, ISSN 0883-2927, <https://www.sciencedirect.com/science/article/pii/S0883292799001158>

SGS Sustainability Group (2016): Bonsall Creek Watershed Management Program, in Municipality of North Cowichan website, <https://www.northcowichan.ca/assets/Departments/Planning~and~Land~Use/docs/Bonsall%20Creek%20WMP%20-%20FINAL%20PLAN.pdf>

Stevenson, J.S. (1948): Geology of the Twin J Mine; Structural Geology of Canadian Ore Deposits, Volume 1, The Canadian Institute of Mining and Metallurgy.

Sutherland-Brown, A., and Robinson, J.W. (1971): Britannia Mine: Geology, Exploration and Mining in British Columbia: British Columbia Department of Mines and Petroleum Resources, 1970, p. 233-246.

Taylor, W.A. (1975): Crown Land Grants, A History of the Esquimalt and Nanaimo Railway Land Grants, The Railway Belt and the Peace River Block, Crown Land Registry Services, BC Ministry of Environment, Lands and Parks.

Yorath, C.J., Sutherland Brown, A., and Massey, N.W.D. (1999): Lithoprobe, southern Vancouver Island, British Columbia: geology, in Geological Survey of Canada, Bulletin 498, 1999, 145 p.

\*All Assessment Reports are available on-line at

<http://aris.empr.gov.bc.ca/>

BC Geological Survey Minfile descriptions are available on-line at

<http://minfile.gov.bc.ca/searchbasic.aspx>

BC Ministry of Energy and Mines, Exploration Assistant is available online at

[http://webmap.em.gov.bc.ca/mapplace/minpot/ex\\_assist.cfm](http://webmap.em.gov.bc.ca/mapplace/minpot/ex_assist.cfm)

All BC GSB publications are available on-line at

<http://www.empr.gov.bc.ca/MINING/GEOSCIENCE/PUBLICATIONSCATALOGUE/Pages/default.aspx>

## 2.0 DATE AND SIGNATURE PAGE

This report titled “NI 43-101 Technical Report on the Mount Richards Project” and dated March 8, 2023 was prepared and signed by the author:

Jeffrey D. Rowe is the author responsible for all sections of this report.

Dated at Surrey, BC  
March 8, 2023

/s/ "Jeffrey D. Rowe"  
Jeffrey D. Rowe, P.Geo.  
(signed and sealed original on file)

### **3.0 CERTIFICATE OF QUALIFIED PERSON**

I, Jeffrey D. Rowe, am a professional geologist residing at 111-6109 Boundary Dr. W, Surrey, British Columbia, Canada, V3X 2A4, and do hereby certify that:

1. I am the author of the report entitled "NI 43-101 Technical Report on the Mount Richards Project", dated March 8, 2023;
2. I am a Registered Professional Geoscientist (P.Geo.), Practicing, with Engineers and Geoscientists of British Columbia (licence # 19950).
3. I obtained a B.Sc. degree in geological sciences in 1975 from the University of British Columbia;
4. I have practiced my profession for over 40 years since graduation, concentrating in early through advanced stage precious and base metal exploration throughout the Americas;
5. I visited the Mount Richards Property on November 19, 2022;
6. I have had no previous involvement with the Mount Richards Property until contracted to write this Technical Report;
7. I am responsible for all sections of this report entitled "NI 43-101 Technical Report on the Mount Richards Project", dated March 8, 2023;
8. I am independent of each of Starlo Ventures Ltd. and its wholly owned subsidiary 1335137 B.C. Ltd., as independence is described in Section 1.5 of NI 43-101. I have not received, nor do I expect to receive, any interest (direct, indirect, or contingent), in the Mount Richards Property described herein, or in Starlo Ventures Ltd., or 1335137 B.C. Ltd. for the services rendered in the preparation of this report;
9. I was retained by Starlo Ventures Ltd. to prepare an exploration and technical summary and provide recommendations on the Mount Richards Property, in accordance with National Instrument 43-101. This report is based on my review of project files and information provided by Starlo Ventures Ltd. personnel;
10. I have read National Instrument 43-101 and Form 43-101F1 and, by reason of education and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101. This report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1;
11. As of the date of this certificate, to the best of my knowledge, information and belief, this report contains all scientific and technical information that is required to be disclosed in order to make this report not misleading;
12. I, the undersigned, prepared this report entitled "NI 43-101 Technical Report on the Mount Richards Project", dated March 8, 2023, in support of the public disclosure of the exploration potential of the Mount Richards Property by Starlo Ventures Ltd.

Effective Date: March 8, 2023

Signed this 8th day of March, 2023 in Surrey, British Columbia:

/s/ "Jeffrey D. Rowe"

Jeffrey D. Rowe, B.Sc., P.Geo. (EGBC licence # 19950)  
(signed and sealed original on file)