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# **TECHNICAL REPORT**

## **Sunset Copper Star Mineral Property Vancouver Island British Columbia Canada**

NTS 92K/03W - BCGS 092K013

Sunset Showing

50° 09' 58" N Latitude 125° 23' 58" W Longitude

UTM 10 328641E, 5559856N (NAD83)

Nanaimo Mining Division

### **Prepared for:**

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D.G. MacIntyre, Ph.D., P.Eng.

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# 1 Summary

The Sunset Copper Star Property (the “Sunset Copper Star Property” or the “Property”) is located on Vancouver Island, British Columbia, Canada, approximately 19 kilometres northwest of the city of Campbell River. The Property consists of two contiguous mineral titles covering an area of 1138.15 hectares. These mineral titles were acquired by electronic staking in October and November 2018 and are held by Craig Lynes on behalf of Rich River Exploration Ltd. (“Rich River”). Volatus Capital Corp. (“Volatus” or the “Company”) has optioned the Property from Mr. Lynes and is the operator.

Access to the Sunset Copper Star Property is via the Browns Bay forest service road (“FSR”) that connects to Highway 19 southwest of the Property. Historical work done on the Property dates back to 1899-1901 when three adits were driven on the Sunset veins. Very little work has been done on the Property since this time period. New logging roads have improved access to the Property. This road construction has exposed several new showings of high grade copper mineralizations.

The area covered by the Property is mainly underlain by the upper part of the Karmutsen Formation stratigraphy, comprising mainly thick massive flows with local intercalations of amygdaloidal basalt and pods of autoclastic breccias, pillowed and massive flows with thin intercalations of volcanoclastic and limey sandstones all cut by thin dolerite/gabbro sills.

Three documented mineral occurrences are found on the Sunset Copper Star Property. These are the Star, Sunset, and FS stratiform showings. Historical work has focused on the Sunset showing where several exploratory tunnels have been driven along a north trending shear that contains high grade copper mineralization.

Work done on the Sunset Copper Star Property in 2018 included the collection of 66 rock, 190 soil and 22 silt geochemical samples. The survey area was also prospected and several new copper showings were located. All of this work was done by Rich River on behalf of Volatus and was supervised by Mr. Lynes. The geochemical sampling took place in November 2018. Samples collected by Rich River were shipped to ALS Minerals laboratories in North Vancouver. The purpose of the geochemical sampling done in 2018 was to characterize the grade of copper mineralization found on the Property and to look for new areas of potential copper mineralization by collecting soil samples at closely spaced intervals along a network of logging roads in the northern part of the Property.

Most of the mineralized samples were collected from veins and shear zones within amygdaloidal subaerial to submarine basaltic volcanic rocks of the Triassic Karmutsen

Group. A number of samples containing high grade Cu mineralization were collected from adits and waste dumps at the Sunset showing. Several new showings and areas of anomalous Cu in soils were located in the northern part of the Property.

Following up on the work done in 2018, the author recommends a Phase 1 exploration program focussed on additional soil sampling. In particular, the extent of anomalous soils located in the northern part of the Property needs to be determined. It is recommended that a soil sampling grid with line spacing of 50 metres and sample interval of 25 metres be established to cover a cluster of soil anomalies located along a logging road. The projected surface trace of the FS Stratiform showing should also be prospected and soil sampled as this and other interflow sedimentary horizons may have potential to host massive sulphide lenses. The objective of these surveys is to try to determine the extent of subsurface mineralization beyond the current known showings. Depending on the results of the recommended soil surveys a Phase 2 program would involve additional work in the form of IP or EM ground geophysics. The projected cost for the recommended Phase 1 work program is \$104,000.



*Photo 1. View north from the Browns Bay FSR. The Sunset adits are located on the steep hill in the distance. Photo taken by the author, November 12, 2018.*

## 2 Introduction

This technical report has been prepared at the request of Volatus Capital Corp., a private company seeking listing on the Canadian Securities Exchange (the “CSE” or the “Exchange”). The author has been asked to review all data pertaining to the Property and to prepare a

technical report that describes historical work completed on the Property, review the results of recent geochemical sampling and makes recommendations for further work if warranted.

The author prepared all sections of this report unless otherwise noted in the text.

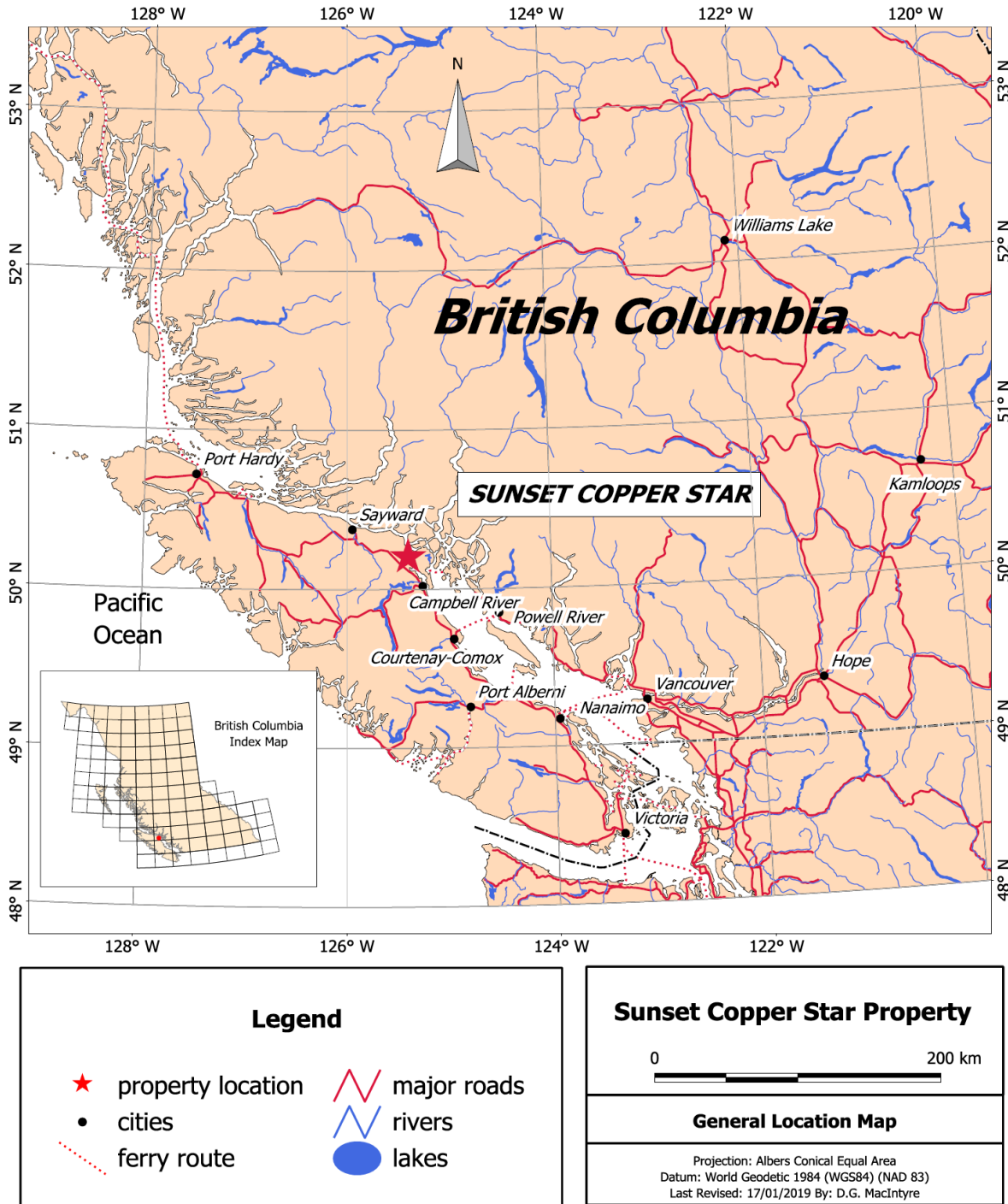


Figure 1. Location map, Sunset Copper Star Property, Vancouver Island, British Columbia.



This technical report has been prepared in compliance with the requirements of National Instrument 43-101 *Standards of Disclosure for Mineral Projects* and Form 43-101F1 *Technical Report* and is intended to be used as supporting documentation to be filed with the Canadian Securities Commissions and the CSE. The purpose of this filing is to support the listing of Volatus on the CSE.

In preparing this report, the author has reviewed the geological, geophysical and geochemical reports, maps and miscellaneous papers listed in the References section. Of particular value are a number of publically available assessment reports filed by previous operators on the Sunset Copper Star Property. This information is available as free, downloadable Adobe Portable Document Format (PDF) files from the B.C. Ministry of Energy and Mines Assessment Report Indexing System (ARIS). These reports contain detailed information on the results of geological mapping, prospecting, diamond drilling and geochemical sampling conducted on the Property since its initial discovery. The author is satisfied that the information contained in these reports was collected and processed in a professional manner following industry best practices applicable at the time, and that the historical data gives an accurate indication of the nature, style and possible economic value of known mineral occurrences on the Property.

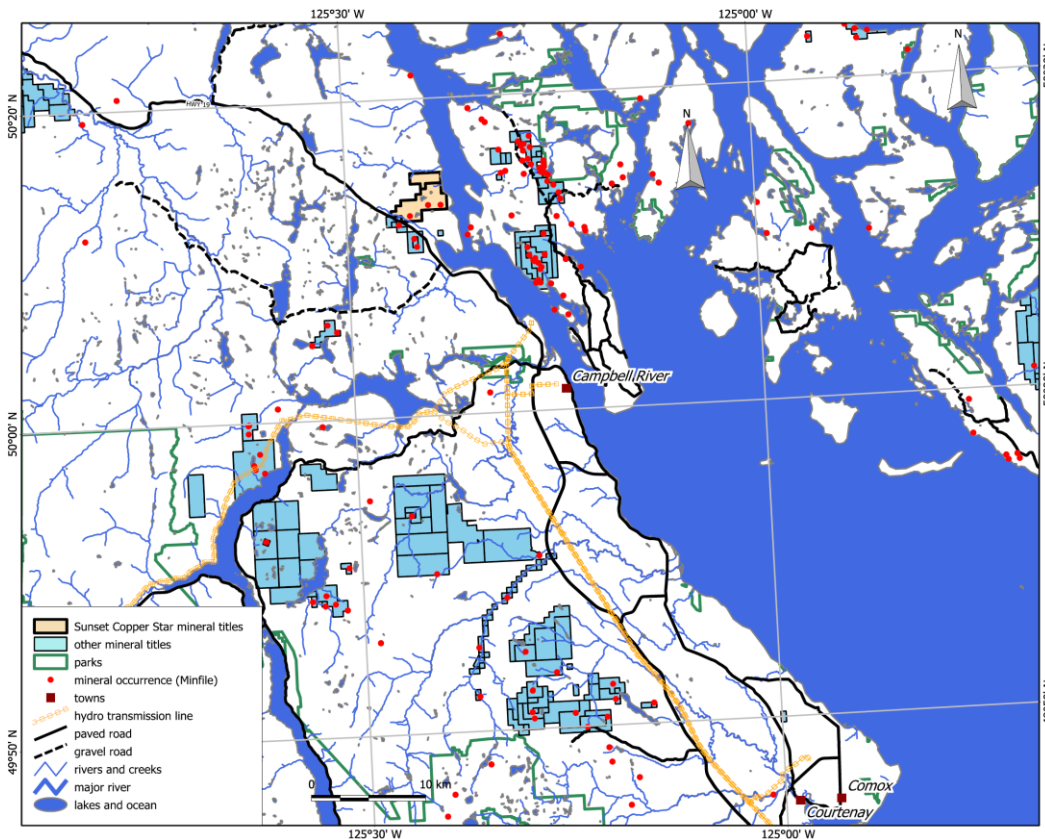


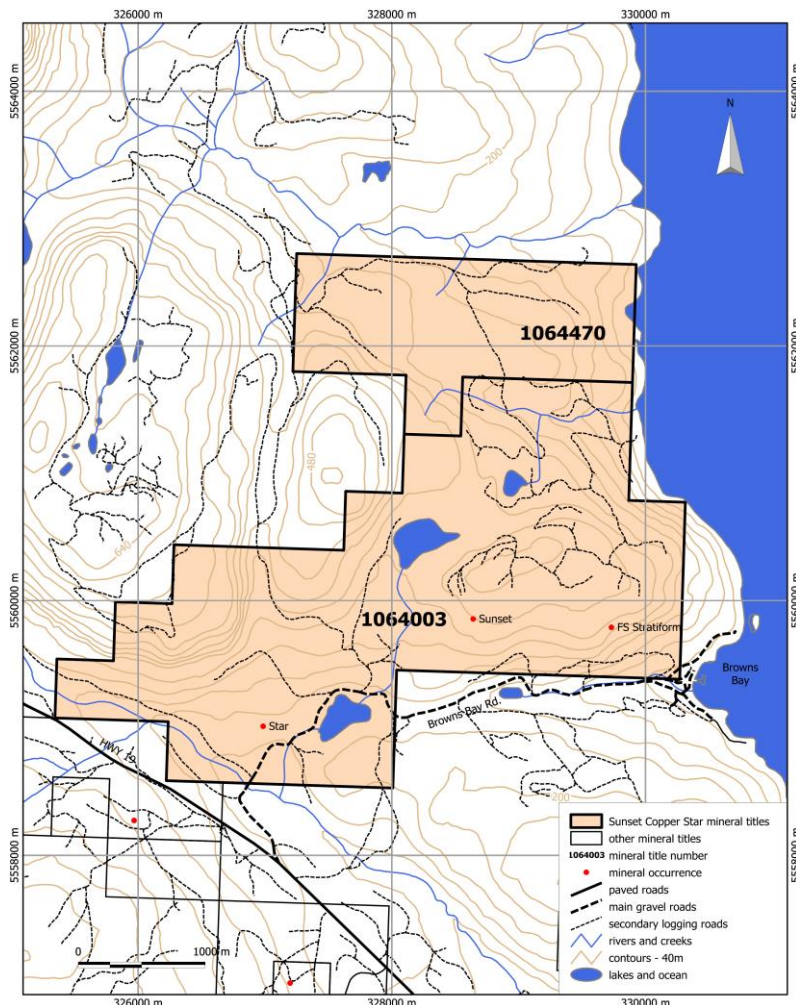
Figure 2. Access and infrastructure map, Sunset Copper Star Property. Map prepared by D.G. MacIntyre from government geospatial data, January 2019.

The author visited the Sunset Copper Star Property on November 12, 2018. The purpose of this visit was to examine mineralization at the Sunset showing and to verify the presence of high grade copper mineralization in outcrop at this site.

Units of measure in this report are metric; monetary amounts referred to are in Canadian dollars.

### 3 Reliance on other Experts

The author has not relied on the opinion of non-qualified persons in the preparing of this report. All opinions expressed in this report are those of the author based on personal observations and a review of historical work done on the Property including work done in November 2018 by Rich River on behalf of Volatus.



*Figure 3. Mineral Titles Map, Sunset Copper Star Property. Map prepared by D.G. MacIntyre from MTO geospatial data, January 2019.*

## 4 Property Description and Location

The Sunset Copper Star Property is located on Vancouver Island, British Columbia, Canada, approximately 19 kilometres northwest of the city of Campbell River (Figures 1 and 2).

The Property covers hilly terrain northwest of Browns Bay (Figure 3). The Sunset showing is located at 50°09'58"N Latitude 125°23'58"W Longitude. The Zone 10 NAD 83 Universal Transverse Mercator (UTM) coordinates for this point are 328641E, 5559856N (NAD83). The Property is on NTS map sheet 92K/03W and BCGS map sheet 092K013.

**Table 1. List of Mineral Titles, Sunset Copper Star Property**

| Title Number | Claim Name           | Owner         | Issue Date  | Good To Date | Area (ha) |
|--------------|----------------------|---------------|-------------|--------------|-----------|
| 1064003      | SUNSET - COPPER STAR | 116233 (100%) | 2018/OCT/23 | 2019/OCT/23  | 869.23    |
| 1064470      | NORTHERN SUNSET      | 116233 (100%) | 2018/NOV/13 | 2019/NOV/13  | 268.92    |

1138.15

### 4.1 Mineral Titles

The Sunset Copper Star Property consists of two (2) contiguous mineral titles that are located within the Nanaimo Mining Division (Table 1). The area covered by these titles is shown in Figure 3 and is calculated to be 1138.15 hectares in total. The map shown in Figure 3 was generated by the author from geospatial data downloaded from the Government of British Columbia, GeoBC website on January 5, 2019. These spatial layers are the same as those used by the Mineral-Titles-Online (MTO) electronic staking system managed by the Mineral Titles Branch of the British Columbia Ministry of Energy, Mines and Petroleum Resources and are updated on a daily basis. The MTO system is used to locate and record mineral titles in British Columbia. This system uses a grid cell selection system that was introduced in 2005. Title boundaries are based on lines of latitude and longitude. There is no requirement to mark claim boundaries on the ground as these can be determined with reasonable accuracy using a GPS. The Sunset Copper Star Property claims have not been surveyed.

Mineral Title details listed in Table 1 were downloaded from the MTO web site and are current as of January 5, 2019. All mineral titles are in the Nanaimo Mining Division.

## 4.2 Claim Ownership

Information posted on the MTO website indicates that all of the claims listed in Table 1 are owned 100% by Craig Lynes. Mr. Lynes holds these claims on behalf of Rich River. Volatus has optioned the Property from Rich River and is the operator.

## 4.3 Underlying Option Agreement

The mineral titles listed in Table 1 are under option to Volatus as outlined in an agreement (the “Agreement”) signed on November 16, 2018 between Volatus, Craig Lynes and Rich River (the “Optionor”). Volatus provided the author with a copy of the Agreement. Volatus acquired a 51% interest in the Property upon paying \$5,000 to the Optionor upon execution and delivery of the Agreement (“Stage I Option Consideration”). In order to acquire the remaining 49% interest in the Sunset Copper Star Property, subject to a 3% Net Smelter Return (NSR) Royalty, Volatus must spend \$500,000 on exploration, make payments of \$155,000 and issue 600,000 common shares to the Optionor on or before the third anniversary of Company’s listing on the CSE.

Volatus will issue common shares as follows:

- 100,000 common shares to be issued upon listing of Volatus’ common shares on the Exchange;
- 100,000 common shares on or before the first anniversary of listing;
- 100,000 common shares on or before the second anniversary of listing; and
- 300,000 common shares on or before the third anniversary of listing.

All share issuances made according to the above are to be made to the Optionor.

Volatus will make the following cash payments and work commitments:

- \$5,000 cash upon listing of Volatus’ common shares on the Exchange;
- \$20,000 cash and \$100,000 exploration expenditure on or before the first anniversary of listing;
- \$30,000 cash and \$100,000 exploration expenditure on or before the second anniversary of listing; and
- \$100,000 cash and \$300,000 exploration expenditure on or before the third anniversary of listing.

All cash payments will be made to the Optionor.

Volatus will also pay the Optionor a 3% NSR royalty. Volatus can purchase the first 1% of the NSR royalty for \$750,000 and the remaining 2% for an additional \$1,000,000.

If at any time Volatus does not incur the required exploration expenditures, make any cash payment or issue common shares in accordance with the Agreement, all rights, title and interest in and to the Property will be transferred back to the Optionor free and clear of all liens, charges and encumbrances.

#### **4.4 Required Permits and Reporting of Work**

Acquisition of mineral titles in British Columbia is done electronically through MTO. The electronic map used by MTO allows you to select single or multiple adjoining grid cells. Cells range in size from approximately 21 hectares (457 metres x 463metres) in the south at the 49<sup>th</sup> parallel to approximately 16 hectares in the north at the 60<sup>th</sup> parallel. This is due to the longitude lines that gradually converge toward the North Pole. Clients are limited to 100 selected cells per submission for acquisition as one mineral title. The number of submissions is not limited, but each submission for a claim must be completed through to payment before another can commence. No two people can select the same cells simultaneously, since the database is live and updated instantly; once you make your selection, the cells you have selected will no longer be available to another person, unless the payment is not successfully completed within 30 minutes.

In British Columbia, the owner of a mineral title acquires the right to the minerals which were available at the time of title acquisition as defined in the Mineral Tenure Act of British Columbia. Surface rights and placer rights are not included. Mineral titles are valid for one year and the anniversary date is the annual occurrence of the date of recording (the “Issue Date”).

A mineral title has a set expiry date (the “Good To Date”), and in order to maintain the title beyond that Good To Date, the recorded holder (or an agent) must, on or before the Good To Date, register either exploration and development work that was performed on the title, or a payment instead of exploration and development (“PIED”). Failure to maintain a title results in automatic forfeiture at the end (midnight) of the Good To Date; there is no notice to the title holder prior to forfeiture.

When exploration and development work or a PIED is registered, the title holder or agent may advance the title forward to any new date. With PIED the minimum requirement is 6 months, and the new date cannot exceed one year from the current Good To Date; with work, it may be any date up to a maximum of ten years beyond the current anniversary year. All recorded holders of a mineral title must hold a valid Free Miners Certificate (“FMC”) when either work or PIED is registered on a mineral title.

The following are the current exploration expenditure or PIED amounts required to maintain a mineral title in good standing for one year:

**Mineral Title - Work Requirement:**

- \$5 per hectare for anniversary years 1 and 2;
- \$10 per hectare for anniversary years 3 and 4;
- \$15 per hectare for anniversary years 5 and 6; and
- \$20 per hectare for subsequent anniversary years.

**Mineral Title - PIED**

- \$10 per hectare for anniversary years 1 and 2;
- \$20 per hectare for anniversary years 3 and 4;
- \$30 per hectare for anniversary years 5 and 6; and
- \$40 per hectare for subsequent anniversary years.

Only work and associated costs for the current anniversary year of the mineral title may be applied toward that title. A report detailing work done and expenditures made must be filed with the B.C. Ministry of Energy and Mines within 90 days of filing of a Statement of Work. After the report is reviewed by ministry staff it is either approved or returned to the submitter for correction. Failure to produce a compliant report could result in loss of assessment credit and forfeiture of the mineral titles to which the credit was applied.

At the time of writing, Mr. Lynes had not filed a Statement of Work for the exploration work done on the Property in November 2018.

Prior to initiating any physical work such as drilling, trenching, bulk sampling, camp construction, access upgrading or construction and geophysical surveys using live electrodes (IP) on a mineral property, a Notice of Work permit application must be filed with and approved by the British Columbia Ministry of Energy and Mines. The filing of the Notice of Work initiates engagement and consultation with all other stakeholders including First Nations.

## **4.5 Environmental Liabilities**

Other than three short exploratory tunnels there has not been any significant mining related physical disturbances on the Sunset Copper Star Property to date. Roads built for logging activities are not the responsibility of the mineral title holder. The author is not aware of any environmental issues or liabilities related to historical exploration or mining activities that would have an impact on future exploration of the Property.

## **5 Accessibility, Climate, Local Resources, Infrastructure and Physiography**

### **5.1 Access**

As shown in Figure 3 a number of logging roads connect with the Browns Bay FSR that is located immediately south of the Property. These logging roads are still active and in good condition providing access to the northern part of the Property. The Browns Bay FSR connects to paved Highway 19 near the southwest corner of the Property (Figure 3).

### **5.2 Climate and Vegetation**

The Property is located along the eastern side of the Vancouver Island Mountain Range. Rainfall on this side of the mountains, though less than on the Pacific Coast side, can be considerable. Severe winter storms can result in back country roads being blocked and washed out. Most heavy rainfall occurs between October and April with November being the wettest month with nearly 250 mm average monthly rainfall at Sayward. Mean daily maximum temperatures are highest in July and August averaging 25° Celsius. Mean daily minimum temperatures in December through February are typically 1 ° Celsius. Snowfall is variable with some heavy snowfall associated with periods of Arctic outflow from the interior of British Columbia during the winter months.

The Property is in the Coastal Western Hemlock biogeoclimatic zone which is more commonly known as the Temperate Rainforest of B.C. The forests within this zone such as those in the Adam River drainage are highly productive and are dominated by western hemlock and pacific silver fir tree species. There are also varying amounts of western red cedar, yellow cedar and Pacific yew. The hemlock forests have been logged, sometimes twice, and a wide network of old alder covered roads mark the earlier logging efforts. Old overgrown road metal quarries are located along some of these roads. Much of the area has been replanted. Off road, the landscape is rugged and the forest litter deep and difficult to traverse.

### **5.3 Local Resources**

The nearest population center and place to acquire supplies and services for mineral exploration and development is the city of Campbell River (pop. 35,000 in 2016) which is located 92.2 kilometres southeast from the junction with the Kim Creek FSR on Highway 19. This city is tourist oriented but also provides support for the local logging industry. Campbell River has all the necessary amenities to support resource development. It is the nearest location of police, hospitals, groceries, fuel, helicopter services, hardware and

other service and supply businesses. There are diamond drilling companies located in Campbell River but the nearest analytical laboratories are located in Vancouver.

The Property is within an active logging area. As a result, there are heavy equipment and operators available for hire in the area. Most of these operators live in Sayward or Campbell River.

## 5.4 Infrastructure

Highway 19 which is located immediately southwest of the Property is the main transportation corridor between Campbell River and Port Hardy on Vancouver Island (Figures 2 and 3). As mentioned above a network of logging roads connects to this highway via the Browns Bay FSR providing good access to most of the Property.

The nearest BC Hydro transmission line is located at Campbell River (Figure 2) and services a pulp mill operation just north of the city.

Kelsey Bay at Sayward, north of the Property, was once used as a major deep water port and could provide a suitable location for a shipping terminal for any future mining operation.

## 5.5 Physiography

The Property lies within the Vancouver Island Mountains physiographic region and has a moderately rugged topography with elevations ranging from sea level to over 400 metres in the central part of the Property. The Property covers the northeast facing slope of a northwest trending ridge that separates the Adam and Eve Rivers (Figure 3). There is extensive outcrop on the Property especially on steep south facing slopes.

# 6 History

The first recorded work on the Property took place around the turn of the century between 1899 and 1902 when 139 metres of underground workings were completed on the Sunset veins. These workings consisted of 3 adits plus winzes, sub-drifts, cross-cuts and raises (Minister of Mines Annual Report, 1899, 1901).

In 1969, Casco Holdings Ltd. did geochemical sampling in the vicinity of the Star Cu showing. This work involved collecting rock dust samples using a hand held drill that could penetrate to a depth of 30 cm (Mark and Mitchell, 1969). Five short lines were sampled at 7.6 metre intervals. Of the 29 samples collected, 11 returned copper values greater than 0.2%. The best values were for 3 samples collected over 15 line metres just northeast of the



Star showing. These samples returned values of 0.37, 0.47 and 0.60% Cu respectively (Mark and Mitchell, 1969).

Surprisingly, there are no public records of any work done on the Sunset showings until 1973 when Four Seasons Manufacturing completed a program of geochemical sampling and ground electromagnetic and magnetic surveys on their FS claims (Armstrong 1973, 1973a). A total of 464 soil samples were collected. This sampling defined a 60 metre X 300 metre Cu soil anomaly on strike with known mineralization exposed in 3 adits. A 2.3 kilogram composite grab sample of mineralized quartz vein was also collected and is reported to have assayed 2.69 per cent copper, 14.4 grams per tonne silver and trace gold (Armstrong, 1973). The VLF-EM survey failed to detect any significant conductors although some weakly conductive zones roughly correlate with anomalous soil samples.

In 1982, T. Osborn and I. G. Sutherland completed a program of rock sampling and prospecting on the T.O.I.S. claims (Osborne and Sutherland, 1983). The results of this work were not provided in their 1983 assessment report.

## **7 Geological Setting and Mineralization**

### **7.1 Regional Geology**

#### **7.1.1 Vancouver Group**

The Sunset Copper Star Property is underlain by rocks of the Vancouver Group, which includes the Karmutsen, Quatsino, and Parsons Bay Formations (Figure 4). The Karmutsen Formation is the most extensive and is primarily comprised of low potash tholeiitic basalt of remarkably consistent structure and thickness that constitutes the lower third of the Vancouver Group. Regionally, the lower 2500 to 3000 metres of the Karmutsen consists of closely packed pillow lava grading upward into magnesian pillow basalts. The next 600 to 1000 metres consist of pillow breccia and aquagene tuff, typically with unsorted beds 0.5 to 2 metres, thick. The upper 3000 metres is composed of meter to decimetre thick, both amygdaloidal and massive basalt flows. In the upper third of the unit, thin discontinuous bioclastic, micritic, cherty or tuffaceous limestone is locally overlain by closely packed pillows, which are in turn overlain by pillow breccia, and then thick massive flows.

The volcanic rocks have been regionally metamorphosed to upper zeolite facies. Albitized feldspars, amygdules and veins of pumpellyite, prehnite, epidote, calcite, and chlorite are widely noted. Adjacent to contacts with later intrusives, higher grade amphibolite bearing assemblages are locally developed.

The Quatsino Formation overlies the Karmutsen Formation, and is known to vary in thickness from as much as 500 metres to thinner than 150 metres. It is a distinct, easily recognizable unit, that is locally ductilely deformed. The formation consists of grey limestone beds. Where undeformed it is coarsely bioclastic, light grey, indistinctly bedded and non fissile. Where deformed near plutons it becomes a light grey, finely recrystallized limestone. Fossils indicate that the Quatsino Formation is upper Triassic in age (Muller et al, 1974, Nixon, 2007).

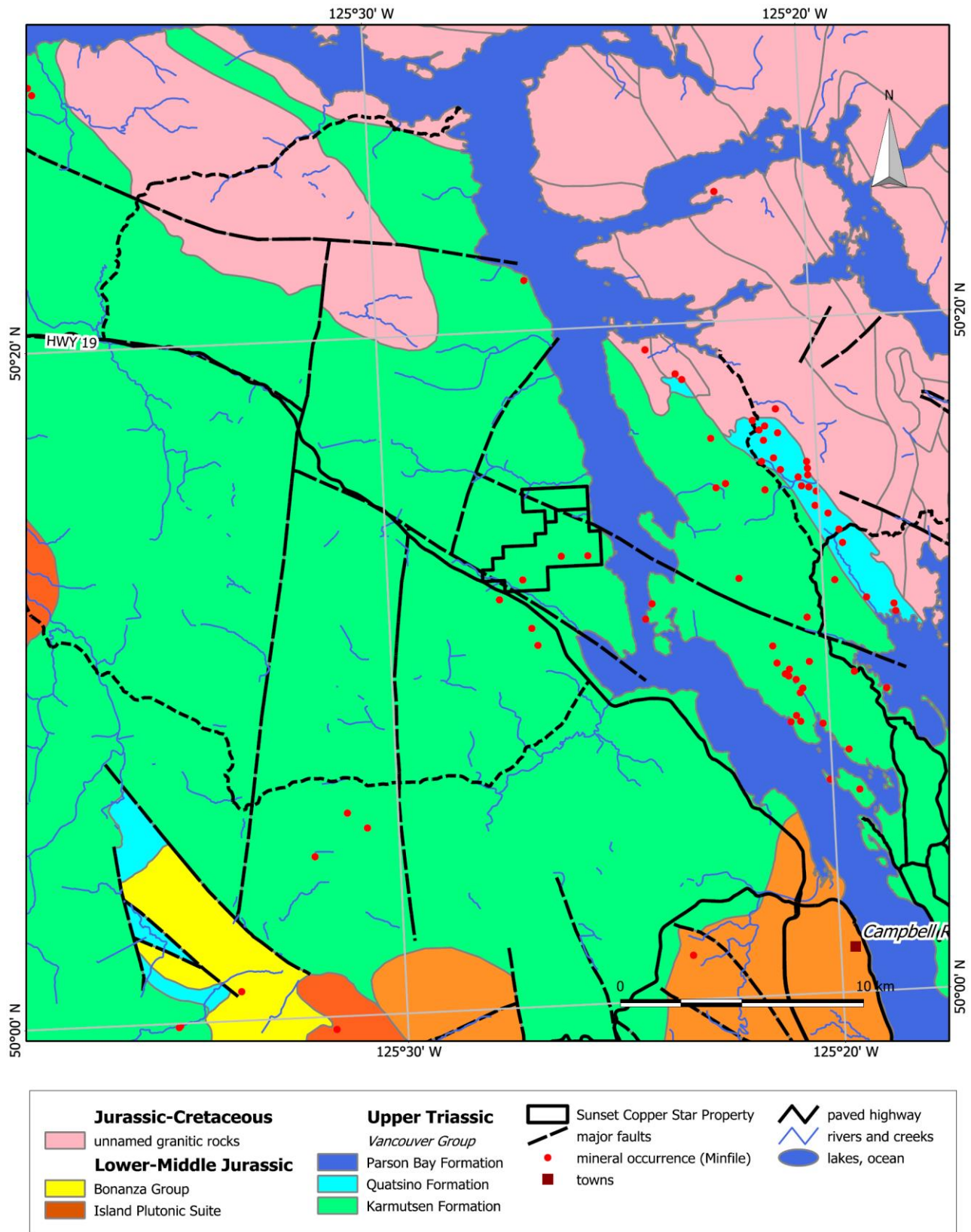


Figure 4. Regional geologic setting, Sunset Copper Star Property. Map created by D.G. MacIntyre, January 2019 from B.C. digital geology data (Massey et al., 2003).

The Parsons Bay Formation is considered to overlie the Quatsino Formation. According to Carlisle (1972), it is characterized by thinly laminated alternating fissile and non fissile black carbonaceous limestone with extremely fine grained siliceous matrix.

### 7.1.2 Jurassic Plutonic Rocks

Jurassic granodiorite to diorite underlies the area to the south near Campbell River and the Coast Mountains to the northwest of the Property. The intrusive rocks near Campbell River are part of the Island Plutonic Suite. These intrusions consist mainly of granodiorite to quartz diorite and give mid Jurassic K-Ar ages. These intrusions are believed to be contemporaneously with the andesitic volcanics of the Bonanza Group.

### 7.1.3 Structure

The Sunset Copper Star Property lies within a thick succession of gently dipping to flat lying massive basaltic flows of the Karmutsen Formation. This succession is cut by high angle faults that trend northwest and northeast (Figure 4). Movement on these faults is believed to be normal but locally there may be a dextral transverse component as well. Dip directions of the massive basalt flows within each fault panel differ somewhat suggesting some jostling of fault blocks. The majority of dips of flow tops and intercalated bedding that were observable are more northerly than easterly.

**Table 2. Mineral occurrences, Sunset Copper Star Property.**

| Minfile No. | Name          | Easting | Northing | Deposit Type             | Mineralization                 |
|-------------|---------------|---------|----------|--------------------------|--------------------------------|
| 092K 050    | Sunset        | 328641  | 55598569 | Cu+/-Ag quartz veins     | Chalcopyrite, Bornite, Pyrite  |
| 092K 067    | Star          | 326985  | 5559013  | Volcanic red bed Cu      | Chalcopyrite, Bornite, Pyrite  |
| 092KL 123   | FS Stratiform | 329731  | 5559790  | Sedimentary volcanogenic | Chalcopyrite, Bornite, Pyrite, |

## 7.2 Property Geology and Mineral Occurrences

The geology and location of mineral occurrences for the Sunset Copper Star Property is shown in Figure 5. This geology is based on historical reports that are discussed in the History Section of this report. As shown in Figure 5, all of the current Property is underlain by massive basalt flows of the Karmutsen Formation. For the most part these flows are flat lying and are separated by thin intercalations of limey sedimentary rock.

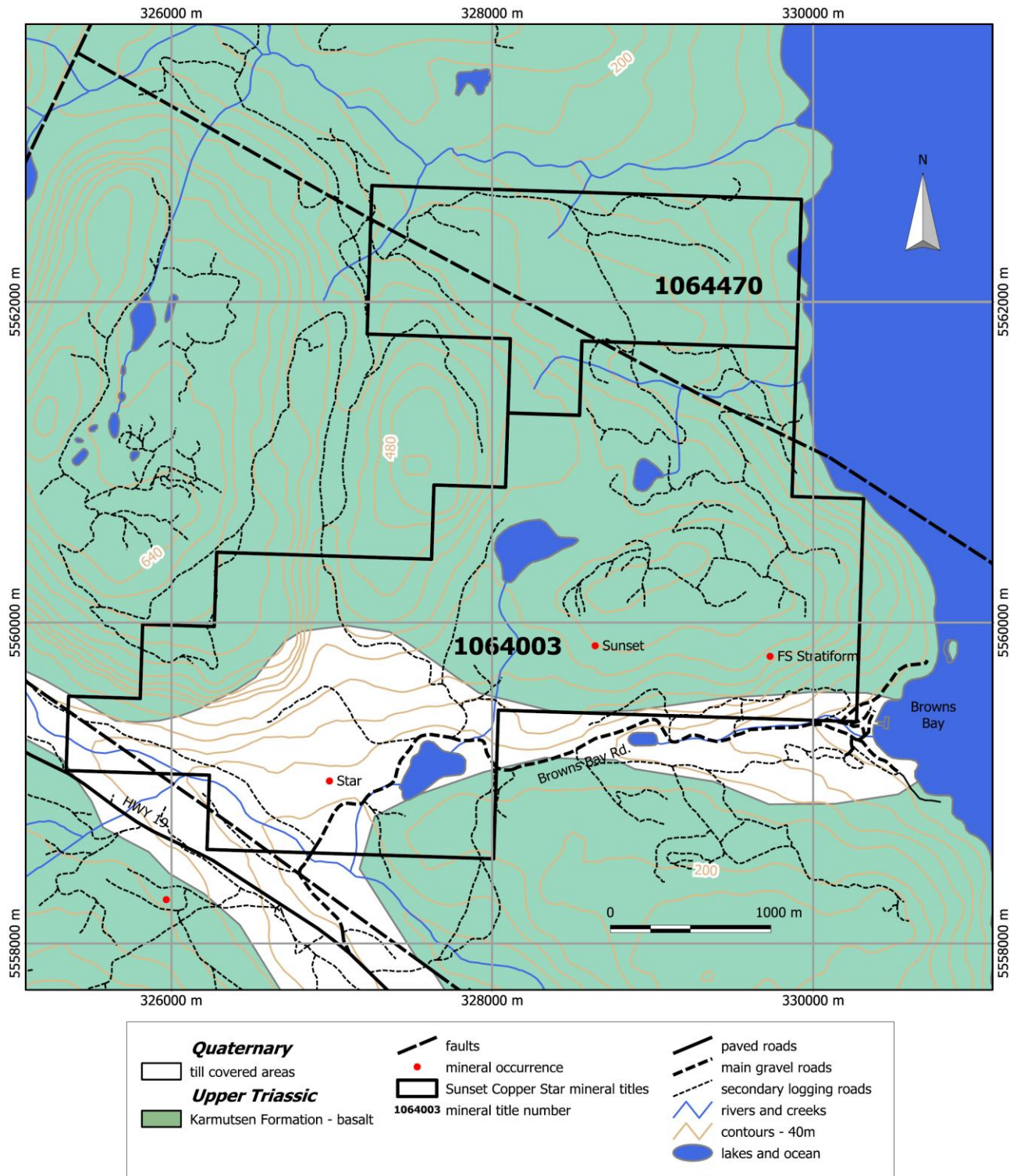


Figure 5. Property geology and location of mineral occurrences. Map created by D.G. MacIntyre, January 2019 from B.C. digital geology data (Massey et al., 2003).

Locally the basalt flows are pillowed indicating a submarine depositional environment. Amygdaloidal textures are also common. A thin bed of limestone was noted on the former FS claims and reportedly contains fine disseminations of bornite (Armstrong, 1973).

### **7.2.1 Mineral Occurrences**

The Sunset Copper Star Property covers 3 documented mineral showings – the Star, Sunset and FS Stratiform. Of these the Sunset is the most significant. This showing is comprised of bornite and chalcopyrite-bearing quartz veins that occur over an area of 15 to 23 metres. Several bornite mineralized veins vary in width from 2.5 to 92 cm. Azimuths vary from 330 to 345 degrees and dips are either vertical or very steep to the southwest. Three short exploratory tunnels expose the northwest trending vein on a steep southeast facing slope.

## **8 Deposit Types**

The Sunset showing is classified as a typical Cu<sup>+</sup>/<sub>-</sub>Ag quartz vein. The FS Stratiform showing is hosted by limey sedimentary rocks at the base of massive basaltic flows and is classified as sedimentary volcanogenic. The Star showing is classified as a red bed copper showing hosted by basalt.

In the author's opinion the Sunset showing is appropriately classified as a vein showing, specifically the Cu-Ag quartz vein type (I06) as described by Lefebure (1996) in the B.C. Mineral Deposit Profiles. This deposit type is characterized by quartz-carbonate veins containing patches and disseminations of chalcopyrite with varying amounts of bornite, tetrahedrite, covellite and pyrite. Malachite and azurite are common secondary minerals. These veins are typically emplaced along faults and commonly postdate major deformation and metamorphism. This type of vein can also be related to emplacement of felsic intrusions although none outcrop on the Property.

## **9 Exploration**

In November 2018, Rich River, under the supervision of Mr. Lynes collected 190 soil samples, 22 silt samples and 66 rock samples, all part of a prospecting program conducted on the Sunset Copper Star Property (Figure 6). The geochemical sampling and prospecting were done along existing logging roads and in the vicinity of known showings. This work covered a large part of the northern and central parts of the Property. This section describes the results of this work. All of the work done on the Property was on behalf of Volatus.

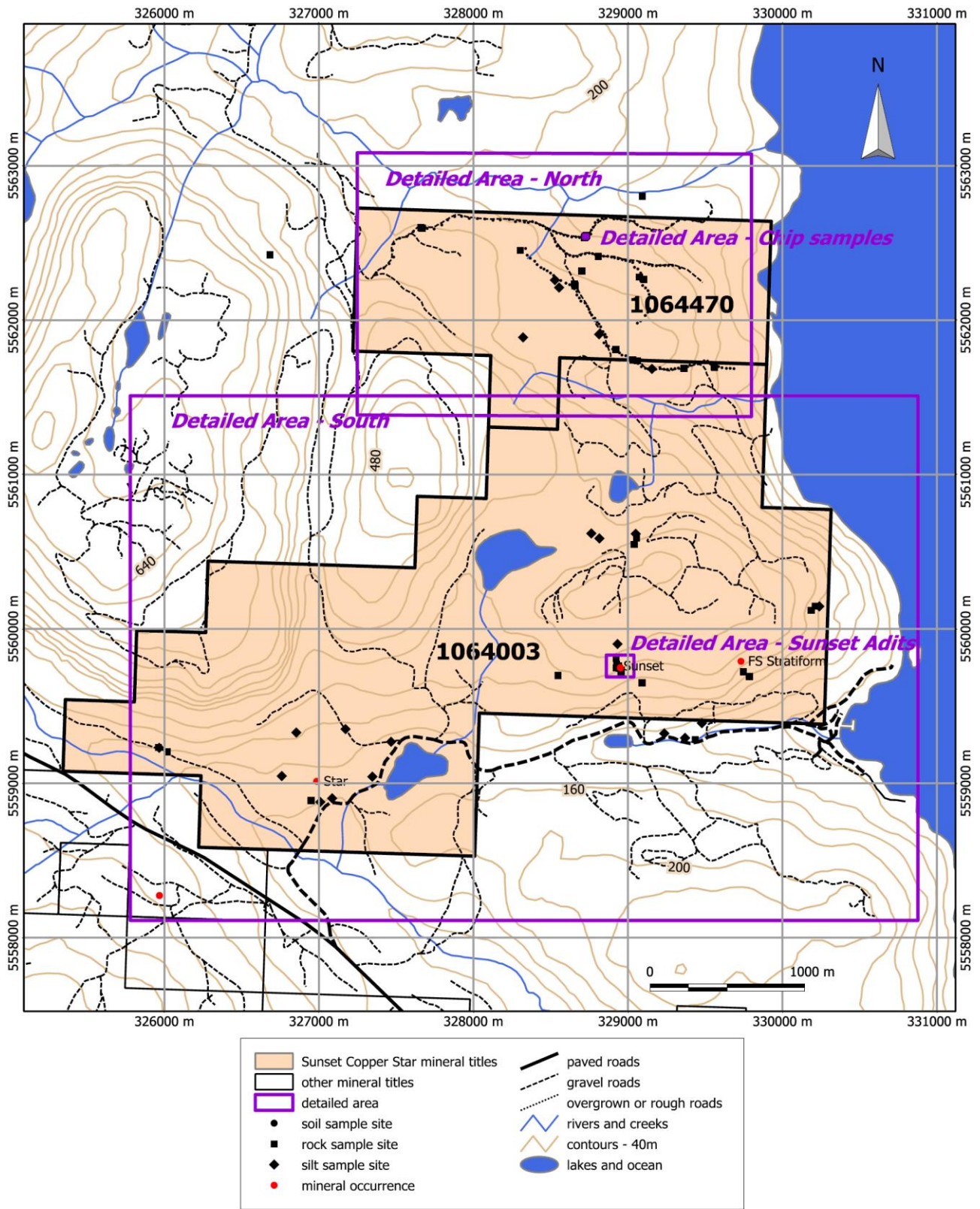


Figure 6. Location of 2018 geochemical samples and detailed map areas, Sunset Copper Star Property. Map prepared by D.G. MacIntyre, January 2019.

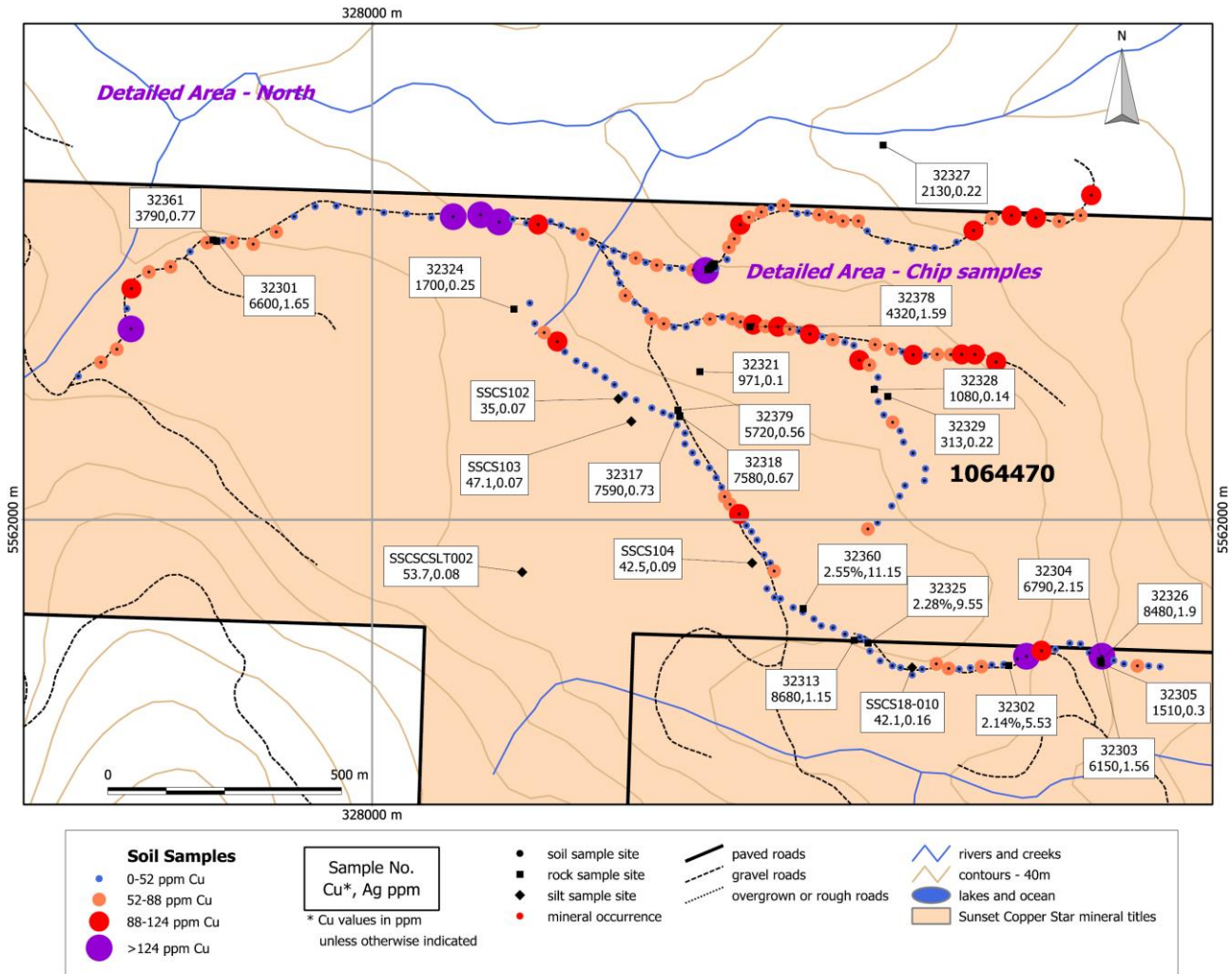


Figure 7. Proportional symbol plot showing results for Cu (ppm) in soils and results for rock and silt samples, north half of the Sunset Copper Star Property. Map produced by D.G. MacIntyre using analytical results from ALS laboratories, January 2019.

Rock, soil and silt samples collected by Rich River in 2018 were shipped to ALS Minerals laboratories in North Vancouver and were analyzed for 36 elements using an Aqua Regia digestion and an Inductively Coupled Plasma Mass Spectrometry (ICP-MS) finish. Ore grade samples returning values greater than the upper detection limit of the ICP-MS method were also analyzed by Inductively Couple Plasma Atomic Emission Spectrometry (ICP-AES) to quantify the concentration of ore grade material.

### 9.1 Soil Samples

The location of the 190 soil samples collected in 2018 is shown in Figure 7. Samples were collected along existing logging roads at roughly 50 metre intervals. Proportional symbol size and colour is used to highlight anomalous samples. Table 3 is a summary of statistics for these samples. The main elements of interest on the Property are Cu and Ag. For Cu, soil



samples returned values ranging from 6.5 to 267 ppm Cu, with a mean value of 52.25 ppm Cu. As shown in Figure 7 there is a cluster of anomalous samples along the logging road that parallels the north boundary of the Property and a number of weaker single sample soil anomalies on connecting roads. Two moderately anomalous soil samples occur in an area of new copper showings located on the easternmost spur road but overall anomalous soil samples do not necessarily correlate with the occurrence of mineralized rock samples. For example, soil samples collected near rock samples 32360, 32325 and 32313, all of which returned high copper values, only contained background Cu concentrations (Figure 7). Ag values for soil samples did not define any obvious target areas with random anomalies spread throughout the area of sampling.

**Table 3. Summary statistics for 2018 soil samples (N=190).**

| Element | Min   | Max   | Median | Ave.   | 95 <sup>th</sup> pct | 98 <sup>th</sup> pct | N>d.l. |
|---------|-------|-------|--------|--------|----------------------|----------------------|--------|
| Ag ppm  | 0.01  | 0.37  | 0.06   | 0.08   | 0.18                 | 0.22                 | 190    |
| Al %    | 0.7   | 9.74  | 3.31   | 3.56   | 6.46                 | 7.93                 | 190    |
| As ppm  | 0.3   | 15.3  | 2.7    | 3.13   | 5.90                 | 6.87                 | 190    |
| Au ppm  | 0.05  | 0.05  | 0.05   | 0.05   | 0.05                 | 0.05                 | 1      |
| B ppm   | 0     | 0     | 0      | 0.00   | 0.00                 | 0.00                 | 0      |
| Ba ppm  | 10    | 100   | 20     | 23.68  | 45.50                | 50.00                | 190    |
| Be ppm  | 0.08  | 1.21  | 0.34   | 0.35   | 0.62                 | 0.73                 | 190    |
| Bi ppm  | 0.03  | 0.74  | 0.14   | 0.16   | 0.42                 | 0.53                 | 190    |
| Ca %    | 0.18  | 2.49  | 0.46   | 0.57   | 1.33                 | 1.68                 | 190    |
| Cd ppm  | 0.03  | 0.36  | 0.1    | 0.12   | 0.29                 | 0.33                 | 190    |
| Ce ppm  | 2.89  | 26.7  | 8.79   | 9.94   | 20.16                | 22.39                | 190    |
| Co ppm  | 2.4   | 171.5 | 9.65   | 15.69  | 42.95                | 86.41                | 190    |
| Cr ppm  | 20    | 259   | 49     | 55.41  | 100.10               | 131.84               | 190    |
| Cs ppm  | 0.16  | 2.68  | 0.59   | 0.66   | 1.34                 | 1.70                 | 190    |
| Cu ppm  | 6.5   | 267   | 43.75  | 52.25  | 113.83               | 152.50               | 190    |
| Fe %    | 2.5   | 12.85 | 4.685  | 5.05   | 8.31                 | 9.31                 | 190    |
| Ga ppm  | 6.18  | 26.1  | 11     | 11.70  | 18.77                | 20.61                | 190    |
| Ge ppm  | 0.05  | 0.14  | 0.06   | 0.06   | 0.09                 | 0.10                 | 129    |
| Hf ppm  | 0.05  | 0.94  | 0.18   | 0.23   | 0.60                 | 0.71                 | 190    |
| Hg ppm  | 0.02  | 0.45  | 0.12   | 0.14   | 0.26                 | 0.37                 | 190    |
| In ppm  | 0.015 | 0.095 | 0.036  | 0.04   | 0.07                 | 0.08                 | 190    |
| K %     | 0.01  | 0.09  | 0.02   | 0.02   | 0.05                 | 0.06                 | 190    |
| La ppm  | 1.4   | 13.4  | 3.7    | 4.16   | 7.36                 | 7.94                 | 190    |
| Li ppm  | 0.6   | 30.9  | 7.35   | 7.95   | 14.66                | 17.45                | 190    |
| Mg %    | 0.06  | 1.39  | 0.265  | 0.30   | 0.60                 | 0.71                 | 190    |
| Mn ppm  | 73    | 5480  | 305.5  | 565.09 | 1577.00              | 3492.00              | 190    |
| Mo ppm  | 0.23  | 37.9  | 0.725  | 1.03   | 1.78                 | 2.10                 | 190    |
| Na %    | 0.01  | 0.04  | 0.02   | 0.02   | 0.03                 | 0.03                 | 180    |
| Nb ppm  | 0.53  | 5.43  | 2.83   | 2.90   | 4.49                 | 4.78                 | 190    |
| Ni ppm  | 4.5   | 88.3  | 13.25  | 15.30  | 31.78                | 37.59                | 190    |
| P ppm   | 140   | 6030  | 690    | 976.42 | 2846.50              | 3898.80              | 190    |
| Pb ppm  | 0.8   | 37.5  | 5.5    | 7.57   | 21.16                | 25.27                | 190    |
| Rb ppm  | 0.6   | 6.9   | 2.3    | 2.60   | 5.30                 | 6.04                 | 190    |
| Re ppm  | 0.001 | 0.001 | 0.001  | 0.00   | 0.00                 | 0.00                 | 45     |

| Element | Min   | Max   | Median | Ave.   | 95 <sup>th</sup> pct | 98 <sup>th</sup> pct | N>d.l. |
|---------|-------|-------|--------|--------|----------------------|----------------------|--------|
| S %     | 0.01  | 0.22  | 0.04   | 0.04   | 0.08                 | 0.09                 | 189    |
| Sb ppm  | 0.08  | 1.05  | 0.23   | 0.27   | 0.60                 | 0.67                 | 190    |
| Sc ppm  | 1.5   | 24.8  | 6.4    | 7.40   | 15.04                | 20.47                | 190    |
| Se ppm  | 0.2   | 6     | 1.1    | 1.35   | 3.25                 | 4.04                 | 186    |
| Sn ppm  | 0.2   | 2.8   | 0.8    | 0.90   | 1.80                 | 2.10                 | 190    |
| Sr ppm  | 4.6   | 207   | 9.9    | 12.26  | 19.22                | 24.48                | 190    |
| Ta ppm  | 0.01  | 0.12  | 0.03   | 0.04   | 0.07                 | 0.08                 | 187    |
| Te ppm  | 0.01  | 0.33  | 0.03   | 0.05   | 0.12                 | 0.20                 | 184    |
| Th ppm  | 0.3   | 3     | 0.8    | 0.92   | 1.70                 | 2.00                 | 190    |
| Ti %    | 0.082 | 0.895 | 0.3725 | 0.39   | 0.66                 | 0.79                 | 190    |
| Tl ppm  | 0.02  | 0.11  | 0.03   | 0.04   | 0.07                 | 0.08                 | 170    |
| U ppm   | 0.1   | 1.26  | 0.375  | 0.43   | 0.82                 | 0.97                 | 190    |
| V ppm   | 63    | 444   | 158.5  | 166.22 | 262.40               | 318.20               | 190    |
| W ppm   | 0.05  | 0.24  | 0.08   | 0.09   | 0.17                 | 0.18                 | 121    |
| Y ppm   | 1.12  | 19    | 4.45   | 5.37   | 10.93                | 14.57                | 190    |
| Zn ppm  | 14    | 207   | 40     | 45.91  | 84.00                | 105.30               | 190    |
| Zr ppm  | 1.7   | 36.1  | 7.1    | 8.72   | 21.13                | 25.74                | 190    |

*d.l.* = detection limit

## 9.2 Silt Samples

The location of the 22 silt samples collected on the Property in 2018 is shown in Figures 7 and 8. Most samples returned low to weakly anomalous Cu and Ag values. Two samples, SSCS18-001 and SSCSCSLT001, returned statistically anomalous values for Cu of 311 and 117.5 ppm respectively. The first of these was collected up slope and on strike with the Sunset vein (Figure 8). The latter was collected near a new showing located near the eastern limit of the Property (Figure 8).

## 9.3 Rock Samples

A total of 66 rock samples were collected from the Property in 2018. The location of these samples is shown in Figures 7, 8, 9 and 10. Sample descriptions, location coordinates and results for Cu and Ag are given in Table 4. Copper values are reported in ppm for samples returning less than 10,000 ppm Cu. Samples that returned greater than 10,000 ppm were reanalyzed using a different analytical technique suitable for ore grade material. Of the 66 samples submitted for assay, 14 returned values greater than 10,000 ppm Cu.

A number of new showings were located in the northern part of the Property along a new logging road as shown on Figure 7. Several samples returned values greater than 2% Cu (32360, 32325, 32302). These showings are described as quartz-epidote veins with malachite staining and minor chalcopyrite. A cluster of mineralized samples (32303, 32304, 32305, 32326) with Cu values ranging from 8480 to 1510 ppm comprise a new showing – the Northern Sunset East Zone. Hand trenching and a 1 metre chip sample across massive

stockwork epidote veins with minor copper, pyrite and malachite returned 1510 ppm Cu. The zone sampled was observed to trend at 235 degrees and dip 55 degrees to the northwest.

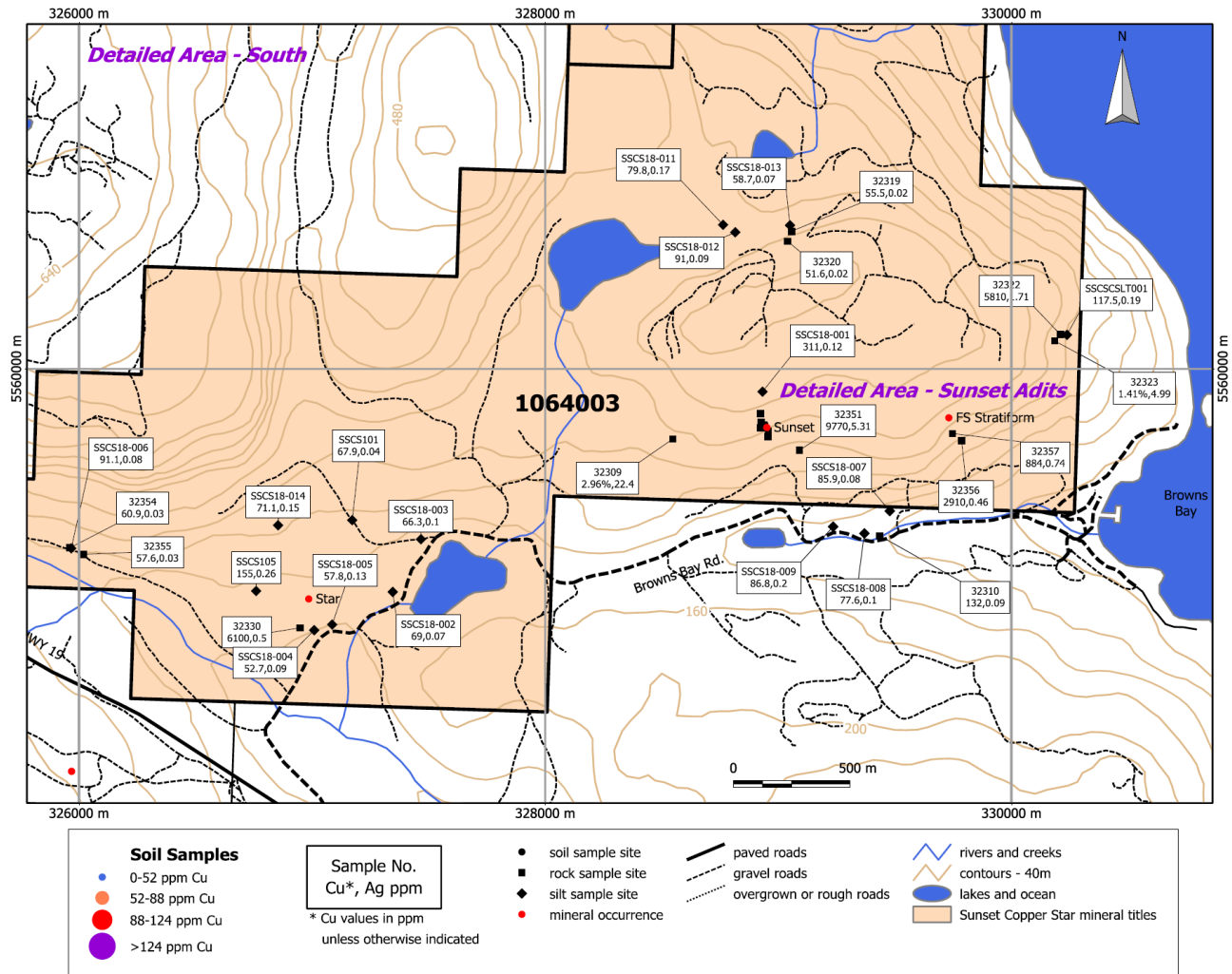


Figure 8. Location of rock and silt samples and results for Cu and Ag, south detailed area. Map prepared by D.G. MacIntyre from ALS laboratory results and company supplied GPS sample site coordinates, January 2019.

One sample of chlorite altered basalt collected from an old blast pit at the Star showing (Figure 8) is reported to have contained native copper. This sample (32330) returned 6100 ppm Cu.

Two samples (32322 and 32323) of chlorite altered basalt with malachite staining that were collected from outcrop in a creek gully near the eastern limit of the Property returned 5810 ppm and 1.41% Cu respectively. This appears to be a new showing.

The best result for Cu for the rocks samples collected in 2018 was 12.2% for a sample of massive chalcocite from the upper adit at the Sunset showing (Sample 32312, Figure 9). The

same sample returned the highest Ag value at 72.0 ppm. Other samples collected from waste dumps near the Sunset adits also returned high Cu and moderately high Ag values (Figure 9). These results are consistent with the reported occurrence of high grade Cu-Ag mineralization at these localities.

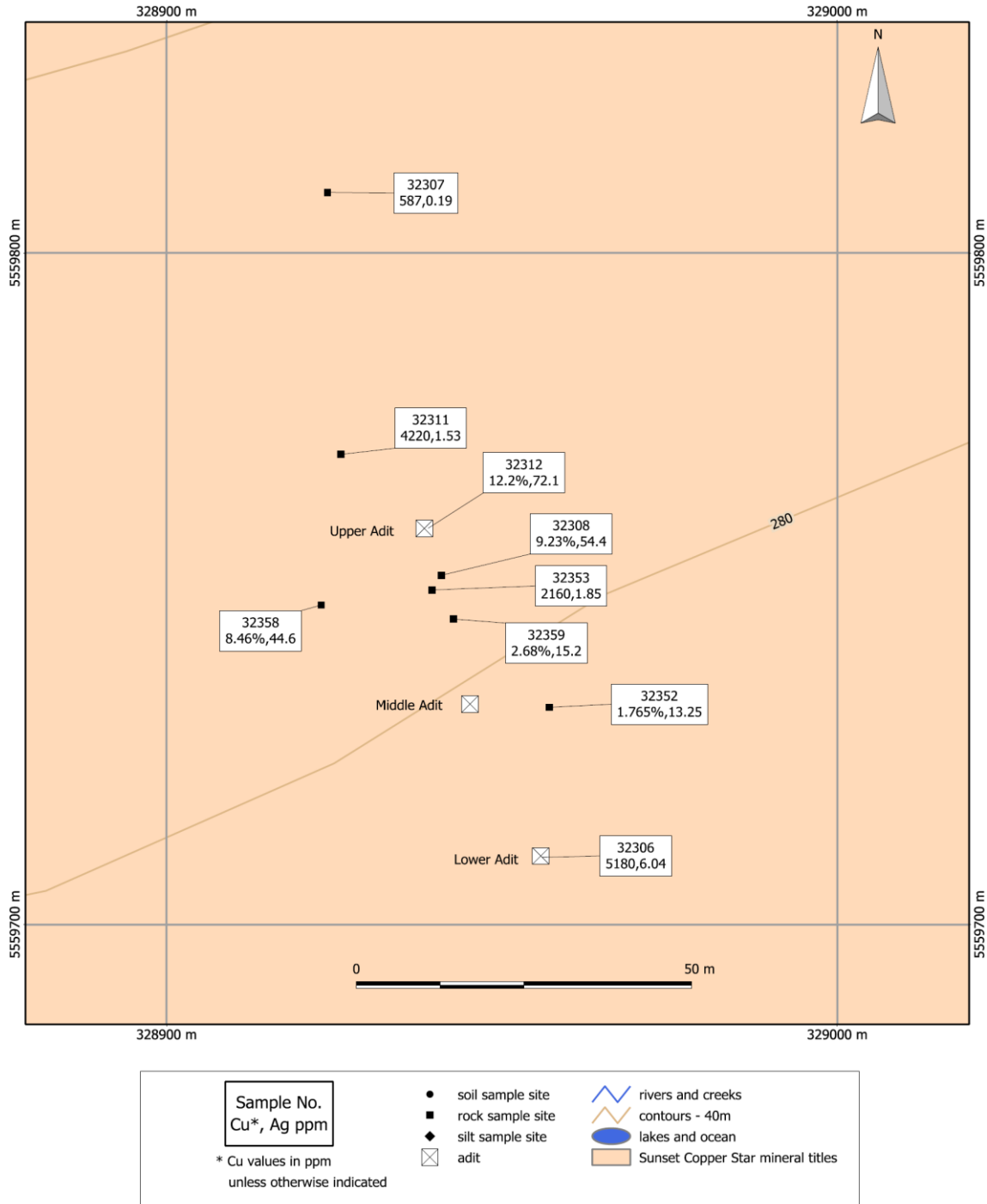


Figure 9. Rock sample locations and results for Cu and Ag, Sunset adits detailed area. Map prepared by D.G. MacIntyre from ALS laboratory results and company supplied GPS sample site coordinates, January 2019.

Two grab samples (32314 and 32315) collected from a trench along the northern logging road return 1.225% and 3.72% Cu respectively (Figure 10). To test the continuity of this mineralization chip samples were collected at 1 metre intervals along a 16 metre long northwest trending sample line. The results of this chip sampling are shown diagrammatically in Figure 10. The best results were for samples 32375 and 32369 which returned 1135 ppm Cu and 0.98 ppm Ag and 758 ppm Cu and 0.37 ppm Ag respectively.

**Table 4. Rock sample descriptions and results for Cu and Ag.**

| Area         | Sample | Easting | Northing | Description   | Cu*   | Ag ppm |
|--------------|--------|---------|----------|---|-------|--------|
| Fig. 7 North | 32301  | 327668  | 5562596  | Grab 10cm quartz epidote vein with blebs of chalcocite.   | 6600  | 1.65   |
| Fig. 7 North | 32302  | 329362  | 5561688  | Grab 10cm quartz epidote vein in outcrop. Malachite stain and minor chalcopyrite.   | 2.14% | 5.53   |
| Fig. 7 North | 32303  | 329560  | 5561694  | 25cm chip malachite stained epidote quartz vein. Mass epidote.  | 6150  | 1.56   |
| Fig. 7 North | 32304  | 329560  | 5561694  | 40cm chip across fine grained basalt with stringer and minor disseminated chalcopyrite malachite stain.   | 6790  | 2.15   |
| Fig. 7 North | 32305  | 329560  | 5561693  | 1m chip across massive stockwork epidote veins fracture filling minor chalcopyrite malachite stain. Hand trench 2m x4m vein zone 235 degree strike/-55 degree dip   | 1510  | 0.3    |
| Fig. 7 North | 32313  | 329031  | 5561742  | Grab from blast quarry borrow pit. Quartz veins in sub/outcrop with blebs chalcocite and weak malachite stain.  | 8680  | 1.15   |
| Fig. 7 North | 32316  | 326683  | 5562422  | Grab of stockwork epidote vein in outcrop road cut. Stringer/blebs chalcocite with malachite stain. 2m x 8m trench.   | 1.36% | 3.55   |
| Fig. 7 North | 32317  | 328658  | 5562221  | Grab of malachite stained 40m x 60m angular boulder subcrop blast pit. Numerous boulders disseminated plus fracture chalcocite with veinlet quartz. Disseminated blebs native copper near structures with copper. | 7590  | 0.73   |
| Fig. 7 North | 32318  | 328658  | 5562223  | Grab malachite stain chloritic volcanic near native copper find. Fracture veinlets with chalcocite malachite stain. Fractures close together.   | 7580  | 0.67   |
| Fig. 7 North | 32321  | 328701  | 5562317  | Malachite stain outcrop   | 971   | 0.1    |
| Fig. 7 North | 32324  | 328303  | 5562451  | Grab semi angular quartz float. Chlorite epidote alteration weak malachite stain.   | 1700  | 0.25   |
| Fig. 7 North | 32325  | 329061  | 5561736  | Grab angular float subcrop near borrow pit. Quartz epidote veins 30cm chunk chalcocite malachite azurite chrysocolla stain. Local rock.   | 2.28% | 9.55   |
| Fig. 7       | 32326  | 329558  | 5561698  | Northern Sunset East Zone. Quartz epidote vein. Mass epidote 30cm chalcopyrite - chalcocite   | 8480  | 1.9    |

| Area         | Sample | Easting | Northing | Description   | Cu*    | Ag ppm |
|--------------|--------|---------|----------|---|--------|--------|
| North        |        |         |          | bornite covelite? Trench location.  |        |        |
| Fig. 7 North | 32327  | 329093  | 5562802  | Grab road rip rap from new road bed. Weak malachite stain - native copper from borrow pit? Fresh blast rock.  | 2130   | 0.22   |
| Fig. 7 North | 32328  | 329074  | 5562279  | Grab fresh blast rock from flooded borrow pit. Weak malachite/azurite stain and fine grained native copper.   | 1080   | 0.14   |
| Fig. 7 North | 32329  | 329103  | 5562264  | Grab quartz in basalt. Pink Cu iron stain, chloritic, no visible copper.  | 313    | 0.22   |
| Fig. 7 North | 32360  | 328922  | 5561810  | Grab of malachite-stained float, abundant in road surface here. Disseminated chalcopyrite, chalcocite, bornite, 5% average.   | 2.55%  | 11.15  |
| Fig. 7 North | 32361  | 327660  | 5562599  | Road base boulder, 45 cm at blast pit edge. Quartz-epidotized breccia/vein in amygdaloidal basalt, itself weakly to strongly epidotized. Arsenopyrite or tetrahedrite (grey metallic) 5% in 1 to 6 cm vein. 1.5 cm thick at best part.  | 3790   | 0.77   |
| Fig. 7 North | 32362  | 328718  | 5562535  | Chip sample start location. 1 m long chip samples centred across chalcocite-mineralized outcrop. 0-1 m  | 107.5  | 0.06   |
| Fig. 7 North | 32378  | 328808  | 5562413  | Minor chalcocite and malachite in epidotic quartz fractures in non-amygdaloidal basalt. 20/-90 typical strike of fractures  | 4320   | 1.59   |
| Fig. 7 North | 32379  | 328654  | 5562235  | Native copper in fresh-blasted boulders at blasted outcrop. Native copper is mostly in amygdules, but also as random blebs in plae green, chloritized amygdaloidal basalt. Chalcocite in veins in nearby float.   | 5720   | 0.56   |
| Fig. 7 North | 32380  | 328677  | 5562254  | Angular float. Basalt with 2% disseminated native copper to at least 10 cm outside of quartz vein, considerable amounts of native copper in large blebs and veinlets within quartz vein, to 1 cm blobs of pure copper. Red-stained (hematite?) silicate associated with native copper in vein (Cu replacement of epidote?). | 1.285% | 1.51   |
| Fig. 7 North | 32382  | 328650  | 5562230  | Outcrop of amygdaloidal basalt with native copper within/replacing amygdules. Weak malachite on basalt surface. Orientation or controls not discernable, outcrop needs clean-up due to logs piled on it by forrest workers.   | 2840   | 0.27   |
| Fig. 7 North | 32383  | 328766  | 5562035  | Road rock float. Siliceous epidote-altered basalt, and weakly veined basalt with chalcopyrite in fractures found on road. Common here, and not uncommon along at least 500 m of road surface heading southeast.   | 1.055% | 4.15   |
| Fig. 7 North | 32384  | 329652  | 5561698  | Patchy disseminated chalcopyrite wisps and blebs in dark bluish amygdaloidal basalt   | 319    | 0.08   |

| Area         | Sample | Easting | Northing | Description  | Cu*   | Ag ppm |
|--------------|--------|---------|----------|--|-------|--------|
| Fig. 8 South | 32309  | 328547  | 5559699  | Grab subcrop quartz in creek below adit. Brecciated quartz minor Po?   | 2.96% | 22.4   |
| Fig. 8 South | 32310  | 329435  | 5559284  | Grab float altered brecciated volcanic with hematite stain. 10% pyrite   | 132   | 0.09   |
| Fig. 8 South | 32319  | 329056  | 5560590  | Quartz epidote angular float in creek. Structure along strike of adits no visible copper stain +/- 10m   | 55.5  | 0.02   |
| Fig. 8 South | 32320  | 329040  | 5560547  | Grab quartz epidote vein float. No visible copper stain in creek on strike of adits +/- 12m  | 51.6  | 0.02   |
| Fig. 8 South | 32322  | 330210  | 5560147  | Grab altered chloritic volcanic minor malachite stain in creek draw gully  | 5810  | 1.71   |
| Fig. 8 South | 32323  | 330185  | 5560120  | Grab malachite stained volcanic stringer and disseminated covellite? Chalcosite?   | 1.41% | 4.99   |
| Fig. 8 South | 32330  | 326949  | 5558889  | Prospect Star area. Found Star showing. Native copper in chloritic volcanic rock. Old blast pit.   | 6100  | 0.5    |
| Fig. 8 South | 32351  | 329091  | 5559651  | Malachite and disseminated fine-grained chalcocite in quartz-carbonate vein/breccia. 1% chalcocite. Epidote alteration, silicification of host basalt. Angular float.  | 9770  | 5.31   |
| Fig. 8 South | 32354  | 325961  | 5559232  | Epidote-altered vein/breccia float, common in creek bed. No sulphides. Au?   | 60.9  | 0.03   |
| Fig. 8 South | 32355  | 326019  | 5559204  | Chlorite altered amygdaloidal basalt with epidote filled fractures/veins. Trace pyrite.  | 57.6  | 0.03   |
| Fig. 8 South | 32356  | 329786  | 5559692  | Quartz vein float. 1% chalcocite. Epidote, breccia.  | 2910  | 0.46   |
| Fig. 8 South | 32357  | 329747  | 5559723  | Outcrop. Several epidote-quartz breccia veins and epidote-coated slickensides. Strike 060/-90. Trace bornite.  | 884   | 0.74   |
| Fig. 8 South | 32381  | 329030  | 5560635  | Outcrop of dark green crystalline basalt, weakly amygdaloidal. 1 to 3 % disseminated fine magnetite grains. Highly magnetic. Brittle, hard.  | 145   | 0.02   |
| Fig. 8 South | 32385  | 326934  | 5558889  | Native copper disseminated in chloritic yet siliceous amygdaloidal basalt. Very angular, possibly local float or blast rock, resting on outcrop. Five out of six 20 cm boulders here have 1 to 3 % native copper. 1 m boulder next to site with extensive malachite stains.  | 8670  | 0.76   |
| Fig. 8 South | 32386  | 326948  | 5558890  | Outcrop with native copper, source of 32385 float. Blasted outcrop with numerous boulders containing native copper and malachite stains. Native copper replacing rims of amygales, as disseminated angular nuggets, and up to 50% replacing the contents of amygdules. Amygdaloidal basalt alteration is identical to the native copper-bearing basalt at samples 32379 and 32382. | 9050  | 0.8    |

| Area                     | Sample | Easting | Northing | Description   | Cu*    | Ag ppm |
|--------------------------|--------|---------|----------|---|--------|--------|
| Fig. 9<br>Sunset<br>Adit | 32306  | 328956  | 5559710  | Prospect Sunset area found adit. Quartz with epidote.   | 5180   | 6.04   |
| Fig. 9<br>Sunset<br>Adit | 32307  | 328924  | 5559809  | Grab 1m wide quartz vein brecciated wallrock fragments in vein, minor rust.   | 587    | 0.19   |
| Fig. 9<br>Sunset<br>Adit | 32308  | 328941  | 5559752  | Grab white bull quartz with blebs of chalcocite and malachite stain. From large block at portal of #2 adit?   | 9.23%  | 54.4   |
| Fig. 9<br>Sunset<br>Adit | 32311  | 328926  | 5559770  | 10cm quartz vein in outcrop above #3 adit en echelon gash vein with stringer chalcocite   | 4220   | 1.53   |
| Fig. 9<br>Sunset<br>Adit | 32312  | 328939  | 5559759  | Grab 10cm high grade massive chalcocite inside #2 drift small 1m crosscut. Portal of #2 adit, uppermost adit.   | 12.2%  | 72.1   |
| Fig. 9<br>Sunset<br>Adit | 32352  | 328957  | 5559732  | Dump rock from adit. Selected mineralized vein cobbles. 30% quartz-carbonate veining in dump rock. Some breccias/vein cobbles. Sampled material has heavy chalcocite network veinlets in quartz-carbonate vein.               | 1.765% | 13.25  |
| Fig. 9<br>Sunset<br>Adit | 32353  | 328940  | 5559750  | 1 m chip across vein/breccia. Trace malachite. Country rock breccia fragments to 12 cm thick, 0.5 m long within vein. 005 degree strike, vertical dip.  | 2160   | 1.85   |
| Fig. 9<br>Sunset<br>Adit | 32358  | 328923  | 5559748  | Considerable amounts of malachite-chalcocite-rich quartz and brecciated volcanic float in creek bed. 15 m west, along contour to upper adit, so unlikely adit is source. Chalcocite is up to 25% of 25 cm thick vein in parts | 8.46%  | 44.6   |
| Fig. 9<br>Sunset<br>Adit | 32359  | 328943  | 5559745  | 40 cm chip sample between large vein and adit portal. Slickensides, black-chloritic, chalcocite, weak malachite.  | 2.68%  | 15.2   |
| Fig. 10<br>Chip          | 32314  | 328726  | 5562541  | 20cm grab of stockwork epidote quartz vein with stringer chalcocite and malachite stain   | 1.225% | 4.19   |
| Fig. 10<br>Chip          | 32315  | 328726  | 5562541  | High grade grab chalcocite in epidote quartz zone. 16m x 2m trench  | 3.72%  | 12.3   |
| Fig. 10<br>Chip          | 32363  | 328719  | 5562536  | 1-2 m   | 84.3   | 0.02   |
| Fig. 10<br>Chip          | 32364  | 328720  | 5562536  | 2-3 m   | 48.2   | 0.01   |
| Fig. 10<br>Chip          | 32365  | 328721  | 5562537  | 3-4 m   | 1100   | 0.49   |
| Fig. 10<br>Chip          | 32366  | 328722  | 5562538  | 4-5 m   | 673    | 0.27   |
| Fig. 10<br>Chip          | 32367  | 328723  | 5562539  | 5-6 m   | 398    | 0.13   |



| Area         | Sample | Easting | Northing | Description  | Cu*   | Ag ppm |
|--------------|--------|---------|----------|--|-------|--------|
| Fig. 10 Chip | 32368  | 328724  | 5562540  | 6-7 m  | 277   | 0.09   |
| Fig. 10 Chip | 32369  | 328725  | 5562541  | 7-8 m. Highly mineralized boulders removed from this location. | 758   | 0.37   |
| Fig. 10 Chip | 32370  | 328726  | 5562542  | 8-9 m  | 100   | 0.02   |
| Fig. 10 Chip | 32371  | 328726  | 5562543  | 9-10 m   | 36.3  | 0.02   |
| Fig. 10 Chip | 32372  | 328727  | 5562544  | 10-11 m  | 51.7  | 0.02   |
| Fig. 10 Chip | 32373  | 328728  | 5562545  | 11-12 m  | 65.5  | 0.02   |
| Fig. 10 Chip | 32374  | 328729  | 5562545  | 12-13 m  | 101.5 | 0.03   |
| Fig. 10 Chip | 32375  | 328730  | 5562546  | 13-14 m  | 1135  | 0.98   |
| Fig. 10 Chip | 32376  | 328731  | 5562547  | 14-15 m  | 60.8  | 0.01   |
| Fig. 10 Chip | 32377  | 328732  | 5562548  | 15-16 m. End of chip sample series                             | 244   | 0.36   |

\* = values in ppm unless otherwise indicated

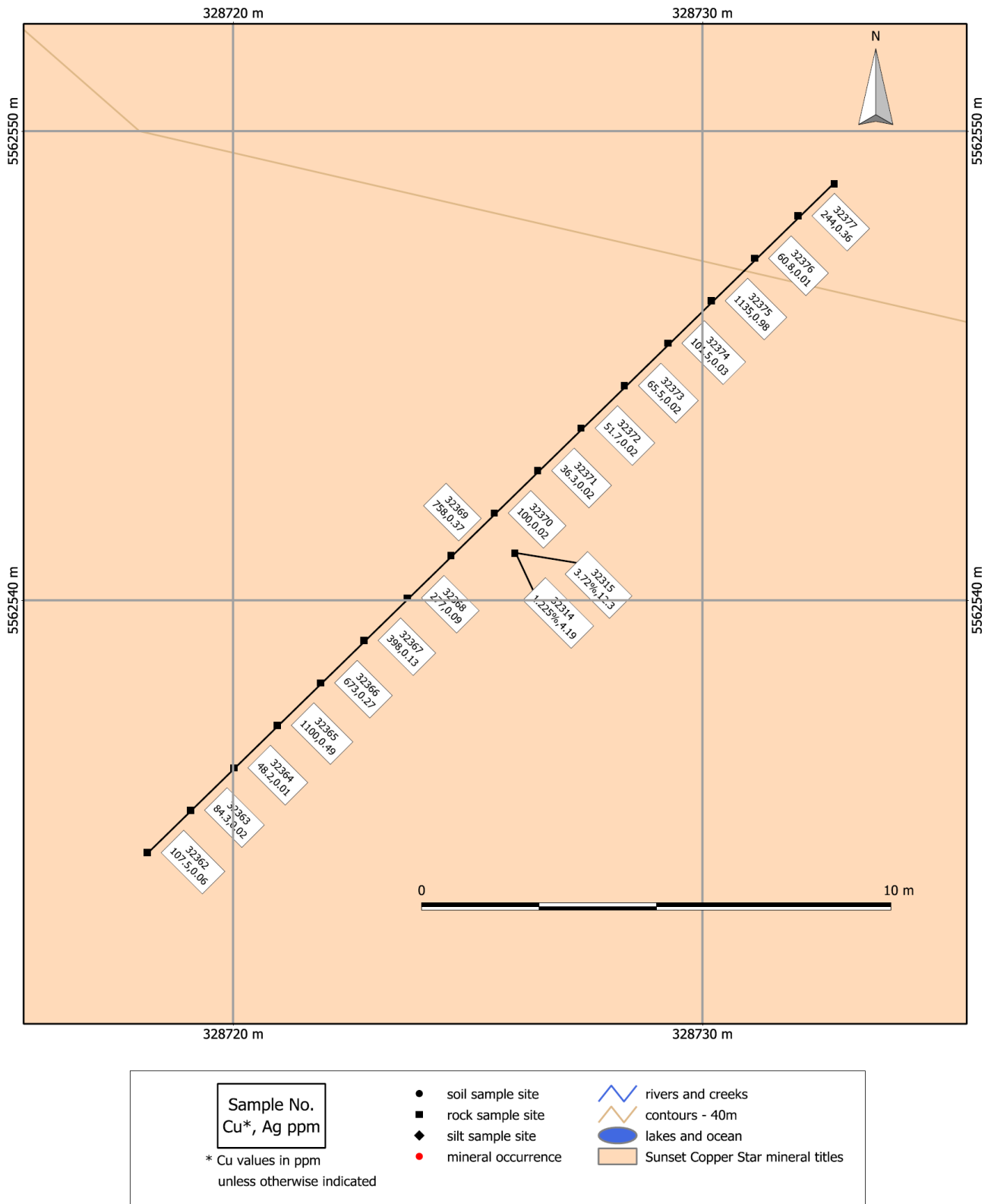


Figure 10. Sketch map showing results of detailed chip sampling. See Figure 6 for location of area sampled. Map prepared by D.G. MacIntyre, January 2019.

## 10 Drilling

There is no record of any diamond drilling being done on the Sunset Copper Star Property.

## 11 Sample Preparation, Analyses and Security

The following information describes the sample preparation, analyses and security procedures used for geochemical surveys conducted on the Property in 2018 by Rich River.

All soil and silt sample sites were marked in the field with labelled pink flagging tape. Field notes for each sample site were logged and recorded. The locations were determined using a handheld GPS. Where possible, soil samples were collected from the B soil horizon. The samples were placed in kraft paper bags and stored securely prior to shipping to the ALS Minerals laboratory (“ALS”) in North Vancouver.

Rock samples collected in 2018 were placed in labelled plastic bags, with a label also placed within the bag. Field notes and GPS location coordinates were recorded for each sample sites. Both grab samples and chip samples were collected. The rock samples were shipped directly to the ALS.

The security procedures followed by personnel working on the Property in 2018 are deemed to be appropriate for the type of sampling being done. Samples were not left unattended and were kept secure in vehicles and hotel rooms until they could be shipped directly to ALS. The author is confident that the samples were kept secure and that they were not tampered with prior to arriving at the ALS Minerals laboratory.

ALS is an ISO17025:2005 accredited analytical laboratory. At the lab, samples are crushed to 70% less than 2 millimetres in size. A 250 gram subsample is riffle split off and pulverized to better than 75% passing 75 microns. A prepared sample (0.50 grams) is digested with aqua regia in a graphite heating block. After cooling, the resulting solution is diluted with deionized water, mixed and analyzed by inductively coupled plasma-atomic emission spectrometry (ICP-AES) for 51 elements (ME MS41 package). The upper and lower ranges of values that can be determined by this method are given in Table 9. Ore grade samples containing >10,000 ppm Cu were also analyzed by ICP-AES to quantify the Cu content to a percentage level (Cu-OG46 assay procedure). For these a prepared sample is digested in 75% aqua regia for 120 minutes. After cooling the resulting solution is diluted to 100 ml with de-ionized water, mixed and analyzed by ICP-AES. The results are reported in percent rather than ppm. The upper limit for this method is 20% for Cu.

ALS performs quality assurance procedures that include repeat sampling and insertion of blank and/or standard samples for the purpose of data verification. ALS runs standards and provides re-samples at varying intervals for each sample shipment analysed. In the author's opinion the analytical procedures used to determine the concentrations of base and precious metals in the samples submitted was appropriate. The quality control employed by ALS indicates a high level of precision and accuracy in the analytical results.

**Table 5. Upper and Lower limits for ICP-AES analyses (ALS ME MS41 package)**

| ANALYTES & RANGES (ppm) |             |    |             |    |             |    |             |
|-------------------------|-------------|----|-------------|----|-------------|----|-------------|
| Ag                      | 0.01-100    | Cs | 0.05-500    | Mo | 0.05-10,000 | Sr | 0.2-10,000  |
| Al                      | 0.01-25%    | Cu | 0.2-10,000  | Na | 0.01%-10%   | Ta | 0.01-500    |
| As                      | 0.1-10,000  | Fe | 0.01%-50%   | Nb | 0.05-500    | Te | 0.01-500    |
| Au*                     | 0.2-25      | Ga | 0.05-10,000 | Ni | 0.2-10,000  | Th | 0.2-10,000  |
| B                       | 10-10,000   | Ge | 0.05-500    | P  | 10-10,000   | Ti | 0.005%-10%  |
| Ba                      | 10-10,000   | Hf | 0.02-500    | Pb | 0.2-10,000  | Tl | 0.02-10,000 |
| Be                      | 0.05-1,000  | Hg | 0.01-10,000 | Rb | 0.1-10,000  | U  | 0.05-10,000 |
| Bi                      | 0.01-10,000 | In | 0.005-500   | Re | 0.001-50    | V  | 1-10,000    |
| Ca                      | 0.01%-25%   | K  | 0.01%-10%   | S  | 0.01%-10%   | W  | 0.05-10,000 |
| Cd                      | 0.01-1,000  | La | 0.2-10,000  | Sb | 0.05-10,000 | Y  | 0.05-500    |
| Ce                      | 0.02-500    | Li | 0.1-10,000  | Sc | 0.1-10,000  | Zn | 2-10,000    |
| Co                      | 0.1-10,000  | Mg | 0.01%-25%   | Se | 0.2-1,000   | Zr | 0.5-500     |
| Cr                      | 1-10,000    | Mn | 5-50,000    | Sn | 0.2-500     |    |             |

## 12 Data Verification

The author visited the Property on November 12, 2018. During this visit rock sample sites at the Sunset adit were examined (Photo 2). These were clearly marked and appropriately labelled. The rock sample sites were located in bedrock exposed in the walls of the adit. Grab samples were also taken from waste dumps at the 3 adits that were used to explore the Sunset vein back in the period 1899-1901. This material was well mineralized with visible malachite and azurite staining on fracture surfaces (Photo 3). Chalcopyrite and pyrite were observed in sheared and brecciated quartz veins and as disseminations. The material being collected at the sample sites that were examined was representative of the extent and intensity of mineralization observed at each site. The analytical results for these samples are consistent with the intensity of mineralization observed in outcrop. The author also independently took GPS readings at each site as a check on the location accuracy being recorded by field personnel. The results were nearly identical. Overall the density and distribution of sample sites was adequate for the purpose of showing the extent and grade of mineralization exposed on surface.



*Photo 2. Craig Lynes at the lower Sunset adit. Photo taken by the author, November 12, 2018.*



*Photo 3. Green malachite staining at sample site 32306, lower Sunset adit. This sample site returned 5100 ppm Cu and 6.04 ppm Ag. Photo taken by the author, November 12, 2018.*

## **13 Mineral Processing and Metallurgical Testing**

There is no record of any mineral processing or metallurgical testing having been done on samples from the Sunset Copper Star Property.

## **14 Mineral Resource and Mineral Reserve Estimates**

There has not been sufficient drilling to determine the subsurface extent and overall grade of mineralization on the Sunset Copper Star Property. Therefore, there are no mineral resource estimates for the Property.

## **15 Adjacent Properties**

There are no significant mineral properties adjacent to the Sunset Copper Star Property.

## **16 Other Relevant Data and Information**

The author has reviewed all public and private reports pertaining directly to the Property. The author is not aware of any additional sources of information that might significantly change the conclusions presented in this technical report.

## 17 Interpretation and Conclusions

Work done on the Sunset Copper Star Property in 2018 has confirmed the presence of a number of high grade Cu $\pm$ -Ag showings hosted by Upper Triassic Karmutsen basalt. These showings are best classified as Cu-Ag vein showings (B.C. Mineral Deposit Profile I06) and may be related to emplacement of a granodioritic intrusion in mid Jurassic time. Although this intrusion is not exposed on surface it may underlie the Property at depth. Alternatively, the Sunset Copper Star Property showings could be related to hydrothermal activity directly associated with eruption of Karmutsen volcanics. Clearly, the showings on the Property are emplaced along fractures or faults that have subsequently been disrupted by post mineral shearing. The timing of this shearing is currently unknown but could be quite recent.

The showings found to date, although of relatively high grade, are not of sufficient size to support a mining operation. Future work on the Property needs to focus on locating an area where the density of veining is sufficient to support a small open pit operation or alternatively to locate a vein that is of sufficient width and continuity to support an underground mining operation. One target that should be considered is the possibility that sedimentary layers within the volcanic succession might host volcanogenic massive sulphide lenses. The Karmutsen volcanics exposed on the Property are pillowed which indicates eruption in a submarine environment. This is a favourable environment for the formation of volcanogenic massive sulphide deposits which are associated with seafloor hot spring activity. The FS Stratiform showing is described as disseminated copper mineralization in limy sedimentary rocks. This sedimentary horizon might be a potential host for stratiform massive sulphide lenses. According to previous descriptions this sedimentary horizon is flat lying to gently dipping and occurs within a sequence of massive pillow basalt flows. Attempts should be made to follow the surface trace of this unit and any other sedimentary horizons within the volcanic sequence. This could involve detailed mapping and close space soil sampling.

Soil sampling has detected an area of anomalous concentrations of Cu along the northernmost logging road. The significance of these anomalies is difficult to determine as the samples were only taken along the road and the extent of anomalous soils beyond the road is unknown. This area should be covered by a soil sampling grid.

## 18 Recommendations

In the author's opinion the discovery of new showings on the Sunset Copper Star Property in 2018 warrants additional follow up work. New logging roads continue to expose new

occurrences of Cu-Ag veins. Following up on the work done in 2018, the author recommends a Phase 1 exploration program focussed on additional soil sampling and prospecting targeting the projected surface trace of interflow sedimentary layers near the FS Stratiform showing and the area of new showings and anomalous soil samples located in the northern part of the Property. It is recommended that soil sampling grids with line spacing of 50 metres and sample intervals of 25 metres be established in the aforementioned target areas. Given the density of underbrush it may be necessary to cut lines in order to facilitate sampling. Depending on the results of the recommended soil sampling surveys a Phase 2 program would involve additional work in the form of IP or EM ground geophysics. The projected costs for the recommended work program are given in Table 6.

**Table 6. Projected costs for proposed exploration program, Sunset Copper Star Property**

| Phase 1                     |     |             |                   |           |
|-----------------------------|-----|-------------|-------------------|-----------|
| Expense                     |     | Units       | Unit cost         | Total     |
| Mob/Demob                   | 10  | person days | 500               | \$5,000   |
| Line cutting                | 20  | person days | 500               | \$10,000  |
| Soil sampling               | 60  | person days | 500               | \$30,000  |
| Geophysics                  | 64  | person days | 500               | 32,000    |
| Camp costs – food & lodging | 120 | person days | \$100             | \$12,000  |
| Soil sample Analyses        | 300 | analyses    | \$30              | \$9,000   |
| Report preparation          | 10  | days        | \$600             | \$6,000   |
|                             |     |             | Total             | \$104,000 |
| Phase 2                     |     |             |                   |           |
| Expense                     |     | Units       | Unit cost         | Total     |
| Geophysical surveys         | 400 | Person days | \$500             | \$200,000 |
| Per diem costs              | 240 | Person days | \$100             | \$24,000  |
| Analytical                  | 300 | analyses    | \$30              | \$9,000   |
| Geologists/camp manager     | 30  | Person days | \$600             | \$18,000  |
| Report preparation          | 10  | days        | \$600             | \$6,000   |
|                             |     |             | Total             | \$257,000 |
|                             |     |             | Total Phase 1 + 2 | \$361,000 |

## 19 References

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## 20 Certificate of Author

I, Donald George MacIntyre, Ph.D., P.Eng., do hereby certify that:

1. I am an independent consulting geologist providing services through D.G. MacIntyre and Associates Ltd. a wholly owned company incorporated December 10, 2004 in the Province of British Columbia (registration no. BC0710941). My residence and business address is 4129 San Miguel Close, Victoria, British Columbia, Canada, V8N 6G7.
2. I graduated with a B.Sc. degree in geology from the University of British Columbia in 1971. In addition, I obtained M.Sc. and Ph.D. degrees specializing in Economic Geology from the University of Western Ontario in 1975 and 1977 respectively.
3. I have been registered with the Association of Professional Engineers and Geoscientists of British Columbia since September, 1979, registration number 11970. I am a Fellow of the Geological Association of Canada and a member of the British Columbia Association for Mineral Exploration.
4. I have practiced my profession as a geologist, both within government and the private sector, in British Columbia and parts of the Yukon for over 35 years. Work has included detailed geological investigations of mineral districts, geological mapping, mineral deposit modeling and building of geoscientific databases. I have directly supervised and conducted geologic mapping and mineral property evaluations, published reports and maps on different mineral districts and deposit models and compiled and analyzed data for mineral potential evaluations.
5. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirement to be a “qualified person” for the purposes of NI 43-101.
6. I am responsible for all sections of the technical report titled “Technical Report: Sunset Copper Star Mineral Property, Vancouver Island, British Columbia, Canada” dated January 29, 2019 (the “Technical Report”). The effective date of this Technical Report is January 29, 2019. Sections not written by myself are noted in the text. I visited the Sunset Copper Star Property on November 12, 2018.
7. I have not had prior involvement with the property that is the subject of the Technical Report.
8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report the omission of which would make the Technical Report misleading.
9. I am independent of the issuer applying all of the tests in Section 1.5 of NI 43-101.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 29th day of January, 2019



D.G. MacIntyre, Ph.D. P.Eng.