TECHNICAL REPORT

Red Metal Ridge Mineral Property Vancouver Island British Columbia Canada

NTS 92L/08E - BCGS 092L040

Center of Property

 $50^\circ21^\circ\,07^{\prime\prime}$ N Latitude $126^\circ08^\circ\,43^{\prime\prime}$ W Longitude

UTM 9 703079E, 5581654N

Nanaimo Mining Division

Prepared for:

Crest Resources Inc. #200-551 Howe St. Vancouver, B.C., Canada V6C 2C2

Prepared by:

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

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1 Summary

The Red Metal Ridge Mineral Property (the "Red Metal Ridge Property" or the "Property") is located on Vancouver Island, British Columbia, Canada, approximately 74 kilometres northwest of the town of Campbell River and 12 kilometres southwest of the town of Sayward. The Property consists of six contiguous mineral titles covering an area of 1381.50 hectares. These mineral titles were acquired by electronic staking in January 2018 and are held by Craig Lynes on behalf of Rich River Exploration Ltd. ("Rich River"). Crest Resources Inc. ("Crest") has optioned the Property from Mr. Lynes and is the operator.

Access to the Red Metal Ridge Property is via logging roads that connect to Highway 19 which cuts through the property.

Historical work done on the property dates back to the late 1960's when the area was first opened up by logging activity. Road construction exposed outcrops with visible copper mineralization. From 2003 to 2013 M. Schau did extensive work on the property including geologic mapping, prospecting and geochemistry. Despite M. Schau's work, only limited diamond drilling has been done to date on the Red Metal Ridge Property, and as such the property is still in the early stages of exploration.

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 volcaniclastic and limey sandstones all cut by thin dolerite/gabbro sills.

The Red Metal Ridge Property covers 13 mineral showings, 11 of which are documented in the Minfile database

Work done on the Red Metal Ridge Property in 2018 included the collection of 32 rock samples and 341 soil samples. This work was done by Rich River Exploration on behalf of Crest and was supervised by Mr. Lynes. The sampling took place April 1-9, 2018. Samples collected by Rich River were shipped to ALS Minerals laboratories in North Vancouver. The purpose of the geochemical sampling done in 2017 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 that transect the property.

Most of the mineralized samples were collected from veins and shear zones within amygdaloidal subaerial basaltic volcanic rocks of the Triassic Karmutsen Group. A number of samples containing high grade Cu mineralization were collected from a borrow pit at the Éclair showing with one sample returning 14.95% Cu. Soil samples collected in the vicinity of the Eclair showing were also strongly anomalous in Cu with the highest value being 1380 ppm.

Following up on the work done in 2018, the author recommends a Phase 1 exploration program focussed on additional soil sampling and a coincident magnetometer survey. In particular, the extent of anomalous soils located near the Puff and Eclair showings needs to be determined. It is recommended that a soil sampling grid with line spacing of 100 metres and sample interval of 25 metres be established to cover the area that would include the Puff, Eclair and Cruller showings. Given the density of underbrush it may be necessary to cut lines in order to facilitate sampling. A magnetometer survey on the same grid would also be useful. Similarly, the area north of the Linzer showing should also be covered by a soil sampling and magnetometer grid. The objective of these surveys is to try to determine the extent of subsurface mineralization beyond the current known showings, all of which are located in road cuts or quarries along logging roads. Depending on the results of the recommended soil/magnetometer 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. Eclair quarry locality and 2018 sample site. Photo taken by the author, April 25, 2018.

2 Introduction

This technical report has been prepared at the request of Crest Resources Inc. ("Crest" or "the Company"), a private company seeking listing on the Canadian Securities Exchange (the "CSE" or "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, reviews 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, Red Metal Ridge Property, southwest British Columbia.

This technical report has been prepared in compliance with the requirements of National Instrument 43-101 and Form 43-101F1 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 Crest Resources Inc. 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 Red Metal Ridge 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, Red Metal Ridge Property. Map prepared by D.G. MacIntyre from government geospatial data download May 8, 2018.

The author visited the Red Metal Ridge Property on April 25, 2018. The purpose of this visit was to examine mineralization at the Eclair 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.

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3 Reliance on other Experts

The writer 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 writer based on personal observations and a review of historical work done on the property including work done in April 2018 by Rich River on behalf of Crest.



Figure 3. Mineral Titles Map, Red Metal Ridge Property. Map prepared by D.G. MacIntyre from MTO geospatial data, May 8, 2018.

4 **Property Description and Location**

The Red Metal Ridge Property is located on Vancouver Island, British Columbia, Canada, approximately 74 kilometres northwest of the City of Campbell River and 12 kilometres southwest of the Village of Sayward (Figures 1 and 2).

The Property covers a northwest trending ridge between the Adam and Eve Rivers (Figure 2). The center point of the Property is at 50°21 07" N Latitude 126°08 43" W Longitude. The Zone 9 NAD 83 Universal Transverse Mercator (UTM) coordinates for this point are 703079E, 5581654N (NAD83)" W Longitude. The Property is on NTS map sheet 92L/8E and BCGS map sheet 092L40.

					Area
Title Number	Claim Name	Owner	Issue Date	Good To Date	(ha)
1057632	RED METAL RIDGE	116233 (100%)	2018/JAN/12	2019/JAN/12	515.50
1057633	RED METAL - WEST RIDGE	116233 (100%)	2018/JAN/12	2019/JAN/12	226.77
1057926	RED METAL - NORTH RIDGE	116233 (100%)	2018/JAN/25	2019/JAN/25	206.13
1057928	RED METAL - SOUTH RIDGE	116233 (100%)	2018/JAN/25	2019/JAN/25	185.65
1057930	RED METAL - EAST RIDGE	116233 (100%)	2018/JAN/25	2019/JAN/25	185.58
1057931	RED METAL - SW RIDGE	116233 (100%)	2018/JAN/25	2019/JAN/25	61.86
					1381.48

Table 1. List of Mineral Titles, Red Metal Ridge Property

4.1 Mineral Titles

The Red Metal Ridge Property consists of six (6) 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 1381.48 hectares in total. The map shown in Figure 3 was generated by the author from geospatial data downloaded from the Government of BC, GeoBC website on May 8, 2018. 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 B.C. 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 Red Metal Ridge claims have not been surveyed.

Mineral Title details listed in Table 1 were downloaded from the MTO web site and are current as of May 23, 2018. 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 A. Lynes. Mr. Lynes holds these claims on behalf of Rich River Exploration Ltd. ("Rich River"). Crest Resources Inc. ("Crest") has optioned the Property from Rich River and is the operator.

Maps generated by the MTO system show that the Red Metal Ridge mineral titles overlap Land Act Survey Parcels District Lots 222 and 456 established in 1905 and 1909 respectively. The author is not aware of any issues related to the overlap with these lots that would have a negative impact on any future exploration and development of the Property.

4.3 Underlying Option Agreement

The mineral titles listed in Table 1 are under option to Crest as outlined in an agreement (the "Agreement") signed on the January 5, 2018 between Crest, Craig Lynes and Rich River ("the "Optionor"). Crest provided the author with a copy of this option agreement. Crest will acquire a 51% interest in the Property upon paying \$5,000 to the Optionor upon execution and delivery of the Agreement ("Stage I interest"). In order to acquire the remaining 49% interest in the Red Metal Ridge Property, subject to a 3% Net Smelter Return (NSR) Royalty, Crest 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 Crest's listing on the Canadian Securities Exchange.

The purchaser will issue common shares as follows:

- 100,000 common shares to be issued upon listing;
- 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.

The purchaser will make the following cash payments and work commitments:

- \$5,000 cash upon listing of the Optionee's 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.

Crest will also pay the Optionor a 3% net smelter return (NSR) royalty. Crest can purchase the first 1% of the NSR for \$750,000 and the remaining 2% for an additional \$1,000,000.

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 463 metres) in the south at the 49th parallel to approximately 16 hectares in the north at the 60th 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 expiry date, the recorded holder (or an agent) must, on or before the expiry 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 expiry 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 expiry 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;

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- \$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 ("SOW"). 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 April 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 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

There has not been any mining or other exploration related physical disturbances on the Red Metal Ridge Property to date. Roads built for logging activities are not the responsibility of the mineral tenure 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 paved Highway 19 which passes through the property. These logging roads are still active and in good condition

providing easy access to the property. The main access road is the Kim Creek Forest Service road ("FSR") which connects to Highway 19 at around 18.7 kilometres west from Sayward Junction. The junction with the Kim Creek FSR is located 440 metres past the bridge that crosses the Adam River on Highway 19. The Eclair showing is located 3.5 kilometres southeast along the Kim Creek FSR.

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 B.C. 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 Tree Farm License (TFL) 39, Block 2 - Weyerhaeuser's West Island Timberlands (WI), which is managed by the Weyerhaeuser B.C. Coastal Group. This license has been active since about 1910. The Adam River drainage area is an active logging area with logs being transported to Sayward and shipped down the coast on log booms. 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 transects 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 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 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 a lower elevation of 180 metres along the Adam River Valley rising to a high point of about 800 metres in the northwest corner of the property. The property covers the northeast facing slope of a northwest trending ridge that separates the Adam and Eve Rivers (Figure 3). The northwest flowing Adam River is joined by north to northeast flowing creeks such as Kim Creek and Rooney Creek that cut through earlier glacial fluvial deposits that cover most of the Property. Outcrop on the Property is largely restricted to road cuts and borrow pits along major logging roads.

6 History

Copper mineralization in the form of chalcopyrite-bornite-malachite-azurite hosted by Triassic age Karmutsen basalt flows was first discovered in the Adams River area in the late 1960's by prospectors examining road cuts along newly built logging roads. The history of work done in the area now covered by the Red Metal Ridge Property is summarized in Table 2. The following is a description of the work done from 1969 to 2017 as reported in the assessment reports listed in Table 2.

Company	Year	Type of work	Assessment Report	Results
Newconex Canadian Exploration	1969	16 chip samples for copper, 503 soil/silt samples for copper	1859	Located copper showings near Rooney Lake, best 0.23% Cu/20', grid values low. (092L 170)
Armeda Copper	1970	Magnetometer work/geochemical- soil sampling	2379	Possible conjoint anomaly NW of Rooney Lake
Sayward Explorations Ltd	1972	Prospecting, verified previous results, reported on 6 diamond drill holes (1748') in area south of Rooney Lake	3795	Mineral showings 092L163, 092L249 added to Minfile database
Germa Minerals	1989	Geology, soil sampling, VLF	18255	Work east of Rooney Lake, minor geochemical anomalies
Schau	2002	Geology, Geochemistry, and petrophysics	26930	Local high grade skarn at contact and mineralized dykes (Kringle)
Schau	2002	Geology, Geochemistry, and petrophysics	27070	Dyke breccia and shear zone in Puff quarry
Schau	2004	Geology, Geochemistry, and petrophysics	27463	Three new showings: Pastry, Macaroon, and Oreo
Schau	2005	Prospector's report	27736	Krisp copper showing along highway
Schau	2006	Prospectors report/ Kringle north	28328	New showings
Schau	2007	Prospectors report/ Kringle center	28747	New high grade showings
Schau	2007	Petrography, magnetic susceptibility and density studies	28927	Petrological studies, and new showings. Details of Veins and alkalic alterations

Table 2. History of Exploration. Table modified from Schau, 2013

Company	Year	Type of work	Assessment Report	Results
		(Kringle south)		
Schau	2008	Alteration studies (Kringle north)	30121	Petrological studies and new showings
Schau	2009	Geology (Dykes) in northern Kringle	31039	Petrological studies and new showings
Schau	2010	Geochemical and biogeochemical studies at Klejne	31516	Assessed viability of biogeochemical methods in this environment
Schau	2010	Assays and Lithochemistry, Kim Creek, Kringle consolidated	31856	New copper showings, as veins and disseminations in basalt
Schau	2011	Petrography, Lithochemistry, Assays and Geochemistry on The Kringle Consolidated Claim Group	32553	New copper showing, gold bearing vein
Schau	2012	Petrography, Lithochemistry and Magnetic Studies on Kringle Consolidated Group	33012	Magnetic susceptibility and Alteration and relation to mineralization
Schau	2013	Petrography, Lithochemistry and Magnetic Studies on Kringle Consolidated Group	34183	Petrologic studies and new showings

6.1 1969 – Newconex Canadian Exploration Ltd.

In April and May 1969 Newconex Canadian Exploration Ltd. completed a soil sampling grid covering the area between Rooney Lake and the east fork of Rooney Creek (Richardson, 1969; Assessment Report 1959). The grid was centered on low grade copper mineralization exposed in road cuts along a new logging road. The report describes the occurrence of chalcopyrite, bornite and minor pyrite with associated chlorite and epidote

alteration hosted by massive amygdaloidal basalt flows of the Karmutsen Formation (Minfile Showing 092L 170 - Rooney 1-4). A total of 503 soil and silt and 16 rock chip samples were collected and analyzed. Overall, the results were low with only weak soil anomalies detected in the vicinity of the mineralized outcrop exposed in the road cut. The best results as shown on a sketch map were for two adjacent chip samples that returned values of 0.23% and 0.14% Cu respectively over a distance of approximately 9 metres. Very little information about these samples is included in the assessment report.



Figure 4. Location of 1969 Newconex rock samples, Rooney 1-4 showing. Values shown are sample width in feet and % Cu. Source:Richardson, 1969.

6.2

In February and March 1970, Armeda Copper Mines Ltd. completed a magnetometer and soil sampling survey covering the areas northeast and southeast of Rooney Lake (Wilmot, 1970; Assessment Report 2379). The northeast area was surveyed using a line spacing of 1500 ft. (457 m) with magnetometer readings and soil samples collected at 500 ft. (152 m) intervals along the lines. A more detailed survey with line spacing of 200 ft. (61 m) and sampling interval of 100 ft. (30.5 m) was done southwest of Rooney Lake. Magnetometer readings taken near known surface showings did not return anomalous values. It was concluded that variations in the magnetic response were most likely due to underlying bedrock than any contained mineralization (Wilmot, 1970). Soil samples returning greater than 50 ppm Cu were deemed anomalous and are plotted on the magnetometer map. A number of widely spaced single sample anomalies are shown. There was no obvious correlation with the magnetometer values. There are no analytical certificates included with the report and only minimal information on the sampling procedures and analytical techniques used in the survey.

Hole	Azimuth	Inclination	Length (m)	Mineralized intervals (m)
1	30	-45	53.3	13.6-18.6; 21.6-22.2
2	60	-45	68.9	17-18.6 (0.41 % Cu)
3	120	-45	106.7	3.0-35.6
4	255	-40	70.1	17.4-22.5; 25.3-28.0
5	0	-55	93.6	15.2-36.6
6	125	-40	140.2	49.4-53.0;76.2-77.7;85.0-86.9;137.5-140.2

 Table 3 Summary of 1969 diamond drill holes

6.3 1969-1972 - Sayward Explorations Ltd.

A large part of the Property southeast of Rooney Lake was mapped and sampled by E.P. Sheppard in 1972 (Figure 4). This work located a number of new showings. The results of the 1972 mapping and sampling and diamond drilling done earlier in 1969 were included in a 1977 assessment report (No. 3795) prepared for Sayward Explorations Ltd. (Sheppard, 1977). This report also includes drill hole sections for the AX sized diamond drill holes completed in 1969. The location of these holes was plotted by hand on the claim map accompanying the assessment report and these locations were used by the author to plot the location on Figure 5. It should be noted that these locations are very approximate. Using the location descriptions as a guide, the drill holes were replotted based on the reported distance

and direction between holes (Sheppard, 1977). Following this approach all holes plot on the logging roads shown on the geology map (Figure 5) which is most likely where they were located in 1969. It was also concluded that drill holes 1, 2 and 5 targeted the Rooney 1-4 showing (Figure 5). This suggests the Rooney 1-4 and Billy 19 showings are probably the same.

Table 3 is a summary of drill hole information contained in the 1977 report. The report also mentions 4 rock chip samples that were collected from outcrop exposed on the logging roads, one of which returned 0.12% Cu. The samples reportedly contain disseminated chalcopyrite with occasional blebs and stringers of chalcocite and bornite (Sheppard, 1977). There is no information to indicate the location of these samples but the author suspects they were from the Rooney 1-4 showing.

Magnetometer readings were also taken along the road traverses and plotted on the accompanying geology map (Figure 5). Soil samples were collected on a northwest trending claim line over a distance of 7500 feet (2286 metres). The results for these samples were also plotted on the geology map that accompanied the assessment report (Figure 4).

No tables of results or analytical certificates are included in the report and the scanned maps in the PDF report downloaded from the ARIS website are not at a high enough resolution to read the values for the soil sample sites and magnetometer stations that have been plotted. The report states that there were a number of anomalous soil samples but the magnetic response was relatively flat. The report is the basis for establishing two Minfile occurrences – 092L 163 Billy 19 presumably for drill holes 1, 2 and 5 and 092L 249 Billy 11 presumably for drill hole 6. However, as mentioned above, Billy 19 is probably the same showing as the Rooney 1-4. If this is in fact the case then the location coordinates for this showing as reported in the Minfile database are not correct.

6.4 1988 - Germa Minerals Inc.

In 1988 Germa Minerals Inc. contracted Cossack Gold Mining Corp. to further delineate copper soil anomalies detected by Sayward Exploration Co. in 1972 (Peters, 1988; Assessment Report 18255). A total of 187 soil samples were taken along grid lines located east of Rooney Lake and rock samples were collected from pits and road cuts in the area. The gridded area measured 700 metres by 1100 metres with north-south lines at 100 metre spacing and a sampling interval of 50 metres. Analytical work was done by Chemex in Vancouver and copies of the assay certificates were included with the assessment report. Several soil samples returned anomalous Au and Cu values defining roughly linear northwest trending anomalies. A VLF-EM survey was also conducted and resulted in the delineation of several conductors. Peters (1988) concluded that there was a good correlation

between gold, copper, zinc and lead concentrations in soils and the VLF-EM conductors throughout the survey grid. The highest Au value returned for the soil samples was 852 ppb and the highest Cu value in rock samples was 2280 ppm.



Figure 5. Geology and approximate location of 1969 drill holes. Source: Sheppard, 1977.

6.5 2002-2014 Mikkel Schau

Mikkel Schau P.Geo. was issued Prospectors Assistance Program ("PAP") grants in 2000 and 2001. With this support he was able to stake claims and explore the Adam River area. Work by Schau in 2002 focussed on the contact zone area between a large granitic intrusion and Triassic age limestone and basalt that occurs along the northeast side of the Adam River (Schau 2002, Assessment Report 26930). As a result, Schau discovered the Kringle showing along Highway 19 (Minfile No. 092L 359). Outcrops along a 2.5 kilometres stretch of Highway 19 and adjoining logging roads were mapped and a total of 35 rock samples were collected for assay. These samples were analyzed for 32 elements including Au, Pt and Pd. The best result was for a well mineralized garnet skarn sample that returned 66,405 ppm Cu and 68.6 ppm Ag. Five additional samples were analysed for total whole rock composition and trace elements. Twelve samples were submitted for petrography and 27 samples were used for density analyses. The magnetic susceptibility was determined at 45 sample locations.

In addition to work done around the Kringle showing, Schau also did prospecting and sampling on his Puff claim group in October and November 2002 (Schau, 2003; Assessment Report 27070). Schau's work on the Puff claims focussed on shear zones and Cu bearing veins in brecciated Karmutsen basalts and a felsite dyke exposed in a quarry locality (Puff showing, Minfile No. 092L 405). A total of 20 samples were collected from mineralized shear zones exposed in the quarry. Samples were analyzed by ACME Labs for 30 elements plus Pt, Pd and Au. Six samples were also submitted for whole rock and trace element analyses. Petrographic analyses were also done on 13 samples and density determinations on 2 samples The magnetic susceptibility was determined for 18 of the samples analyzed. The best assay value was for a grab sample that returned 6.06% Cu, 34.9 ppm Ag, 198 ppb Au and 97 ppb Pd (Schau, 2003). Schau concluded that supergene enrichment was responsible for the high Cu value in this sample. A chip sample across 2.2 metres of a mineralized shear zone returned a more modest 0.95% Cu, 4.62 ppm Ag, 20 ppb Au and 46 ppb Pd.

In 2003, Schau continued working in the area around the Puff showing utilizing a network of logging roads for access (Schau, 2003; Assessment Report 27,463). A total of 38 samples were analyzed by ACME Labs for 30 elements plus Pt, Pd and Au (fire assay). An additional 9 samples were submitted for whole rock and trace element analyses. A sample form the Macaroon showing returned 2.4% Cu, 21.7 ppm Ag and 85 ppb Pd. A rock sample from the Oreo showing returned 1.26% Cu and 6.0 ppm Ag. The Oreo showing is very close to the location of the Rooney 1-4 and Billy 19 showings and has not been assigned a separate Minfile number. The showings are in a rock quarry on the west side of the east arm of Rooney Creek. A talus boulder at the Pastry showing yielded 4.8% Cu and 14.6 ppm Ag.

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Similar high grade mineralization has not been located in outcrop. The best sample from outcrop at the Pastry returned 0.9% Cu and 3.3 ppm Ag (Schau, 2003).

In 2005, Schau did 2.5 days prospecting and sampling the Krisp showing located on either side of Highway 19 just east of Rooney Lake (Schau, 2005; Assessment Report 27,736). A total of 18 rocks samples were collected and assayed by Acme Labs. An additional 7 samples were collected for whole rock and trace element analyses. A grab sample of dyke material containing malachite, epidote veining and blebs of sulphides returned 6.33% Cu and 11.4 ppm Ag (Schau, 2005).

In 2005, Schau spent 3 days sampling and prospecting the northern portion of his Kringle Consolidated group of claims (Schau, 2006; Assessment Report 28,328). This work involved collecting 13 rock samples from outcrops accessible by logging roads in the area north of Rooney Lake and Highway 19. Four samples were also collected from the quarry at the Puff showing and 6 samples were collected from outcrop along Highway 19 east of the Adam River. The best results were for the samples from the quarry one of which returned 46,540 ppm Cu and 29.7 ppm Ag. Rock samples were submitted to Acme Labs for analyses. Magnetic susceptibility readings were taken at 6 stations.

In July 2006 Schau spent one day collecting 51 rocks samples from outcrops along logging roads in the central part of his Kringle Consolidated claim group (Schau, 2006a; Assessment Report 28,747). The area sampled covers the southern portion of the Red Metal Ridge Property. Fourteen of the samples collected contained significant copper mineralization. Some of these localities appear to have been new discoveries. The highest values were for two sample of malachite stained basalt that were collected from the same locality. These samples (K072A1 and K072A2) returned 221,760 ppm Cu and 49.1 ppm Ag and 159,060 ppm Cu and 39.2 ppm Ag respectively (Schau, 2006a). This showing later became the Linzer Minfile showing (092L 357) which, based on the coordinates given by Schau (2006a), would plot on the southern most boundary of mineral title 1057928 of the Red Metal Ridge Property and not where it plots using the coordinates from the Minfile database. Two more samples from a different locality 252 metres to the northeast returned Cu values of 49,100 ppm and 32,300 ppm respectively. This locality is described as malachite stained basalt with local specks of bornite. The location of samples and associated Cu values for the samples collected by Schau in 2006 relative to the current Property boundary (heavy purple line) is shown in Figure 6.



Figure 6. Map showing Cu assay values for rock samples collected by Schau in 2006 (Schau, 2006a) and the boundary of the Red Metal Ridge Property (heavy purple line). Map produced by D.G. MacIntyre, May 2018.

In October 2006 Schau did an additional 4 days of prospecting, collecting rock samples for assay (17 samples) and whole rock/trace element analyses (21 samples). In addition, magnetic susceptibility (181 stations) and density determinations (136 stations) were done. A petrographic study using 120 thin sections was also completed for the entire claim block. A number of new showings with low grade but anomalous Cu values were identified. A compilation of work done on the property since 2005 was included in the assessment report (Schau, 2007; Assessment Report 28,927).

From July 2008 to May 2009, M. Schau spent 9 days prospecting the area north of Rooney Lake where new roads and cut blocks had been established. He also revisited outcrops along a stretch of Highway 19 northeast of the Adam River (Schau, 2009; Assessment Report 31039) where dykes cut through Quatsino and Parsons Bay limestones. A total of 60

samples, mostly of dyke material, were assayed by Acme Labs. In addition 3 samples were submitted for whole rock and trace element analyses. Petrographic analyses were done on 22 rock specimens. Several new mineralized localities were found that returned weak to moderately anomalous Cu values.

In 2010, M. Schau spent a total of 7 days working in the Kim Creek area (Schau, 2010; Assessment Report 31856). This work was focussed on the Cruller and Linzer showings. A total of 46 rocks samples were collected and 5 samples were submitted for petrographic analyses. A magnetic susceptibility survey was also done with 315 determinations made at 48 stations. One sample from the Cruller contact shear zone assayed 2.83% Cu and 5 samples of mineralized breccia and basalt from the Linzer showing returned over 1.5% Cu with the best value 5.77% Cu. This sample was also anomalous in Au at 932 ppb (Schau, 2010). The mineralization at the Linzer showing is described as bornite dissemination in a "horizon" in altered basalt that can be traced for 100 m. along the road.

Between October 2010 and August 2011, M. Schau spent 15 days sampling showings on the Kringle-Consolidated property (Schau, 2011; Assessment Report 32,553). During this time period 9 soil samples, 44 silt samples and 119 rock samples were collected. The rock samples were analyzed by ICP-MS for 37 elements and by Fire Assay for Au, Pt and Pd. An additional 18 samples were submitted for whole rock and trace element analyzes. A petrographic study using 99 thin sections was also done. The report contains a list of the 16 best results with 9 samples from the Linzer showing (2.02%->25% Cu), 6 samples from the newly discovered Eclair showing (2.09%-6.09% Cu) and 1 sample from the Puff showing (5.07% Cu). Samples of gossanous actinolite-pyrite+/-magnetite vein from the Oreo showing were also assayed and returned Au values between 1577 and 6582 ppb.

A report describing the results of magnetic susceptibility measurements and follow up laboratory work not reported in 2011 was filed for assessment credit in 2012 (Schau, 2012; Assessment Report 33,012). The analytical work was mainly determination of FeO for whole rock samples. Infrared absorption and potash feldspar staining was also done on selected alteration suites. Four new thin sections were also described.

In August 2012 M. Schau, spent 4 days on the Kringle-Consolidated Property. The focus of this work was the Linzer showing and showings further southeast of the current Red Metal Ridge Property. A total of 33 rock samples were collected and submitted for analyzes (Schau 2013; Assessment Report 34183), 12 of which were from the Linzer showing area. Of these, two samples returned Cu values >10,000 ppm. These samples also had anomalous Au values of 378 and 436 ppb respectively. Magnetic susceptibility readings were taken at

61 sites and 10 samples were submitted for density determinations. Petrographic descriptions were done for 28 thin sections by Vancouver Petrographics Laboratory.

7 Geological Setting and Mineralization

The following description of regional geologic units is modified from Schau (2010).

7.1 Regional Geology

7.1.1 Vancouver Group

The Vancouver Group, which includes the Karmutsen, Quatsino, and Parsons Bay Formations, underlies much of the area Adam River valley (Figure 7). The Karmutsen Formation is the most extensive and is primarily comprised of low potash tholeiite basalt of remarkably consistent structure and thickness that constitutes the lower third of the Vancouver Group. Regionally, the lower 2500 to 3000 m of the Karmutsen consists of closely packed pillow lava grading upward into magnesian pillow basalts. The next 600 to 1000 metres consists of pillow breccia and aquagene tuff, typically with unsorted beds 0.5 to 2 m, thick. The upper 3000 metres is composed of metre 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 structure of the unit is marked by gently folded and locally severely faulted areas. The folding is part of a regional shallowly north plunging antiform. The distribution of units also suggest east trending folds of small amplitudes and well developed linears trend north and north westerly directions as well as easterly directions and separate large panels of gently dipping lavas. In the Adams River area units appear to be dipping gently to the northeast.

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 is a thin ribbon traversing the country in a north-northwest direction, to the northeast of the Karmutsen Formation (Figure 7). Regionally, it is seen to stratigraphically overlie the Karmutsen, and is known to vary in thickness from as much as 500 m to a thinner than 150 m. In the Adam River area it is a distinct, easily recognizable unit, but the thickness is difficult to determine as it has been ductilely deformed near the contact with the granodiorite. The Adam River follows part of its outcrop pattern. 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).

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. Small slivers have been recognized along the contact with the pluton, mainly northwest of Keta Lake, but it seems to disappear to the northwest. The Adam Lake Pluton cuts through the unit to impinge directly on the Quatsino limestone further to the northwest. Schau (2010) suggests that some of the silty reaction skarns intercalated with black limestone noted in the Adam River area represent some thin relict lenses of Parsons Bay Formation recently recognized along the western flank of the Adam River Batholith.

7.1.2 Jurassic Plutonic Rocks

Jurassic granodiorite to diorite underlies the area to the east-northeast of the Adam River. It has been called the Adam River Batholith (Carson, 1973, Muller, et al, 1974) and is part of the Island Plutonic Suite. It is about 4 kilometres wide and trends northwesterly in excess of 10 kilometres (Figure 7). It consists mainly of granodiorite to quartz diorite phase of a large mesozonal intrusive body. K-Ar dates of 160 Ma. on hornblende and 155 Ma. on biotite from a quartz diorite of this batholith confirm the mid Jurassic age and suggest it is contemporaneously with the deposition of the andesitic volcanics of the Bonanza Group. Rocks studied by Schau (2010) are described as mainly medium to fine grained biotite hornblende granodiorite and quartz diorite with a locally elevated content of mafic minerals including magnetite. The high concentration of magnetite in these I-type intrusions produces regional positive aeromagnetic anomalies.

Contacts with the granodiorite are known to be hornfelsed for short distances, with local skarnification near and in limestone beds. Locally on Highway 19, outcrops of limestone have been skarnified and are well exposed. Bedding in the limestone is steep and complex at or near the contact. At contacts volcanic rock inclusions are transformed into dioritic inclusions and limestones become skarn and marble rafts.

7.1.3 Dykes

Schau (2010) suggests that based on very preliminary field evidence, supported in part by prior observations made by Carlisle (1972) in adjacent areas, there appears to be at least

three sets of granitoid dykes in the area. The dykes observed so far are near the intrusive contact of the main Adam River pluton.

The oldest dykes are feldspar porphyry. Locally these are folded into tight folds and may predate the main Adam River plutonic mass. There is also a later group of dykes that are deformed, locally brecciated, and argillically altered and mineralized. The youngest dykes are "fresh" feldspar and hornblende porphyries with planar or irregular contacts. In the Rooney Lake area, late basaltic dykes (diabase) cut metamorphosed basalts and are metamorphosed themselves.

7.1.4 Structure

The Red Metal Ridge Property lies within the shallow east north east dipping homocline of Triassic rocks and the Adam River Batholith, called by Muller et al. (1974), the White River Block. This block is bounded to the west by the north to northwest trending Eve River fault. To the north the Johnson Strait Fault terminates the block. The eastern and southern borders are also faults. The faults on the Property are sub parallel to the border faults, or are second or third order subsidiaries of it. Schau (2010) suggests these faults contain a large normal component but a dextral transverse component is often mentioned in reports and shown in outcrop as sub horizontal slickensides. 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 were observable are more northerly than easterly. Schau (2010) suggests that the area is more structurally complex than implied by a simple homocline, since the regional structure predicts that the youngest rocks should be to the north. Instead, the Parsons Bay Formation is found near Keta Lake, or far southeast of where it would be expected in a simpler tilted stratigraphic succession.

Schau (2010) concludes that a fault system exists along the Adam River and post dates the pluton, probably with strike slip motion. This fault system is probably long lived, since it seems that it also predates the pluton as well with a sense of west side up. West of the pluton, the younging in the Karmutsen is to the east northeast. On the east side of the Adam River pluton the younging is to the south, implying the pluton cuts an east west trending syncline (Figure 7).

Schau (2010) suggests north trending excised valleys probably follow secondary fault structures. One such example might be Kim Creek. As noted above, the intrusive rocks may have been emplaced along prior faults in the vicinity of the current course of the Adam River. These are faults that are parallel to the length of the Cordillera, typically bounding crustal blocks with different tectonic and geologic histories. This type of faulting can play a

large role in localizing some mineral deposits. It is likely that these faults stayed active during later transverse faulting episodes.



Figure 7. Regional geologic setting, Red Metal Ridge Property. Map created by D.G. MacIntyre, May 2018 from B.C. digital geology data (Massey et al., 2003)



Figure 8. Property geology and location of mineral occurrences. Map created by D.G. MacIntyre, May 2018 from B.C. digital geology data (Massey et al., 2003)

Minfile No.	Name	Easting	Northing	Deposit Type	Mineralization
092L 163	Billy 19	703121	5581929	I06: Cu+/-Ag quartz veins	Chalcopyrite, Bornite, Pyrite, Magnetite
092L 170	Rooney 1-4	703111	5581962	I06: Cu+/-Ag quartz veins	Chalcopyrite, Bornite, Pyrite, Magnetite
092L 249	Billy 11	703929	5581000	I06: Cu+/-Ag quartz veins	Chalcopyrite, Bornite, Pyrite, Magnetite
092L 355	Krisp	702583	5582073	l06: Cu+/-Ag quartz veins	Chalcopyrite, Magnetite
092L 356	Cruller	705211	5580196	I06: Cu+/-Ag quartz veins	Pyrite, Chalcopyrite, Bornite
092L 357	Linzer	706084	5578294	I06: Cu+/-Ag quartz veins	Bornite, Chalcopyrite
092L 405	Puff	704710	5580568	I06: Cu+/-Ag quartz veins	Malachite
092L 407	Pastry 5	703741	5582141	I06: Cu+/-Ag quartz veins	Magnetite, Pyrite, Chalcopyrite
092L 408	Kringle Blue	702099	5582395	I06: Cu+/-Ag quartz veins	Malachite
092L 409	Kringle North	700840	5582193	I06: Cu+/-Ag quartz veins	Chalcopyrite
092L 411	Kringle (Plus 40)	702026	5581712	I06: Cu+/-Ag quartz veins	Chalcopyrite, Bornite
unassigned	Eclair	705026	5580067	I06: Cu+/-Ag quartz veins	Malachite, Chalcopyrite, Pyrite
unassigned	Oreo	703122	5581447	I06: Cu+/-Ag quartz veins	Malachite

 Table 4. Mineral occurrences, Red Metal Ridge Property.

7.2 Property Geology and Mineral Occurrences

The geology and location of mineral occurrences for the Red Metal Ridge Property is shown in Figure 8. This geology is based on the digital geology compilation for B.C. (Massey et al., 2003) and on historical reports that are discussed in the History Section of this report. The best geological map of the property was compiled by Sheppard (1977) based on mapping done in 1972 (see Figure 5). As shown on Sheppards map, outcrop is quite extensive in the Adam River area. As shown in Figure 8, almost all of the current Property is underlain by amygdaloidal to massive basalt of the Karmutsen Formation. A small amount of Quatsino limestone and mid Jurassic grandiorite is covered by the Property, mostly along and northeast of the Adam River (Figure 8). The following description of the Property geology is modified from Schau (2010).

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 volcaniclastic and limey sandstones all cut by thin dolerite/gabbro sills. Several textural types of basalt have been noted in the area. Most common are feldspar phyric fine grained basalts. Local variants include those with abundant microlites and altered glass in the groundmass. Others are somewhat coarser of grain. All varieties are locally amygdaloidal, varying from showing small occasional spherical amygdales filled with low temperature minerals to specimens with large irregular and locally joined amygdales. Coarser versions may represent later sills or possibly the centers of thick slowly cooled basalt flows.

The basalts are locally seen in stacked, massive, many metre thick units. Local pillow basalts are well exposed in quarries. The basalt units generally dip north to northeasterly with shallow to moderate dips. The basalts are variously veined and fractured.

The Quatsino Formation is a thin north-northwest trending belt northeast of the Karmutsen Formation (Figure 8). It is recrystallized and deformed as seen in road cuts along the highway. The thickness is not known. The Adam River follows part of its outcrop pattern. Outcrops on the property are closed to the contact with a large mid Jurassic pluton. Emplacement of the pluton has deformed and recrystallized the limestone to a light grey, finely crystalline rock. The limestones are remarkably pure calcite. Small elliptical grains of calcite and the prominent cleavage direction are elongated in direction of the layering. Locally, where intruded, they both host reaction and ore skarns (Schau, 2009).

Only a small part of the Property covers mid Jurassic granodiorite to quartz diorite northeast of Highway 19 (Figure 8). Outcrops in this area are mainly medium to fine grained biotite hornblende granodiorite and quartz diorite with a locally elevated content of mafic minerals. Near the contact with the Quatsino and Karmutsen formations the intrusion contains numerous inclusions. The mafic volcanic rock inclusions are transformed into dioritic inclusions, limestones become skarn and marble rafts and siliceous siltstones become rusty hornfels (Schau, 2009). At the contact, orientations of bedded host rocks are steep and complex.

7.2.1 Mineral Occurrences

The Red Metal Ridge Property covers 13 mineral showings, 11 of which are documented in the Minfile database (Table 4). The location coordinates shown in the table differ from those

in the Minfile database. The author has adjusted the location of some of the showings based on information contained in various assessment reports. As a result the location of the Billy 11, Billy 19, Linzer and Pastry 5 showings have been adjusted to more accurately reflect their true location on the Property.

Billy 19 - Minfile #092L 163

The Billy 19 showing is underlain by basalts of the Upper Triassic Karmutsen Formation. The occurrence consists of disseminated chalcopyrite and bornite, accompanied by minor pyrite and magnetite in fractured massive to amygdaloidal basalts. Chlorite and epidote alteration are present near the mineralization.

In 1969, diamond drilling returned values of 0.53% copper over 1.5 metres and 0.27% over 3.8 metres from hole number one. Hole number two, at the same location but drilled at a different azimuth, has as its highest assay 0.41% copper over 1.5 metres. A drill hole located 113 metres north of the above holes (diamond-drill hole #5) returned 0.14% copper over 6 metres (Assessment Report 3795). The approximate location of the 1969 drill holes is shown in Figure 5.

Rooney 1-4 – Minfile #092L 170

The Rooney showing is located on a un-named north flowing tributary of Rooney Creek, approximately 700 metres east of Rooney Lake.

The occurrence consists of disseminated chalcopyrite and bornite, accompanied by minor pyrite and magnetite in an area where the massive to amygdaloidal basalts are fractured and bleached. Chlorite and epidote alteration are present near mineralization.

In 1969, a chip sample over 6.0 metres assayed 0.23% copper, but other samples in the vicinity ran in the 0.03 range (Richardson 1969; Assessment Report 1859). In 2004, sampling yielded up to 1.26% copper and 6 grams per tonne silver (Schau 2004; Assessment Report 27463). The location of the 1969 samples is shown in Figure 4.

Billy 11 – Minfile #092L 249

The Billy 11 occurrence is located on a ridge west of the Adam River, approximately 2.2 kilometres south east of Rooney Lake. It has been explored in conjunction with the Billy 19 (MINFILE 092L 163) located 1220 metres to the north west.

The occurrence consists of disseminated chalcopyrite and bornite with minor pyrite and magnetite in an area where the massive amygdaloidal basalts are highly fractured. Chlorite and epidote alteration are present near mineralization.

In 1969, diamond-drill Hole 6 assayed 0.48% copper over 3.6 metres (Sheppard, 1977; Assessment Report 3795). This drill hole is presumed to be the locality intended for this showing. The location of this showing on Figure 8 is based on drill hole information contained in Sheppard (1977). The adjusted coordinates are given in Table 4.

Krisp – Minfile #092L 355

The Krisp showing is located on the southeast side of the Island Highway, east of Rooney Lake. The showing was discovered in 2005 by M. Schau and subsequently sampled.

The area is underlain by Karmutsen basalts, as a mix of autoclastic breccias, pillowed and massive flows with thin intercalations of volcaniclastic and limey sandstones cut by thin dolerite/gabbro sills.

Locally, a mineralized Tertiary shear system(s) with $epidote\pm$ magnetite bearing sulphide disseminations in and adjacent to a shear zone and hydrothermal system associated with a nearby contact between the Triassic Vancouver Group and the Jurassic Adam River batholith.

In 2005, a grab sample of vein material containing chalcopyrite mineralization returned values up to 6.33% copper, 18.4 grams per tonne silver and 0.212 grams per tonne gold (Schau, 2005; Assessment Report 27736).

Cruller – Minfile #092L 356

The Cruller showing is located between Kim Creek and the Adam River in the south-central part of the Property.

The showing is described as distal skarn contact mineralization that occurs near a porphyritic monzodiorite dike. The dike appears to strike 150 degrees. Mineralization consists of pyrite, chalcopyrite and malachite.

In 2006, sampling yielded up to 2.71% copper, 5.6 grams per tonne silver and 0.35 grams per tonne gold (Shau 2006; Assessment Report 28747). In 2010, sampling of the zone returned up to 2.83% copper and 6 grams per tonne silver (Shau, 2010; Assessment Report 31856).

Linzer – Minfile #092L 357

The Linzer showing is located on or near the southernmost boundary of the Property A complete exploration history of this showing can be found in Assessment Report 31856 (Schau, 2010).

Locally, three (Upper, Mid and Lower) areas of small, several centimetre wide, bornitechalcopyrite veins and breccias are hosted in potassic altered basalts over a length of 150 metres. In 2006, sampling yielded up to 21.28% copper and 49.1 grams per tonne silver (Schau, 2007; Assessment Report 28747).

Approximately 250 metres to the north east of the Linzer occurrence, malachite stained basalts host copper values. In 2006, two samples yielded 4.9 and 3.2% copper with 6.5 grams per tonne silver each, respectively (Schau, 2007; Assessment Report 28747). Location of the 2006 samples is shown in Figure 6. The location of the Linzer showing has been adjusted based on the GPS coordinates contained in assessment report 28747. Based on these coordinates the Linzer showing plots on the boundary of the Property.

Puff – Minfile #092L 405

The Puff occurrence is located in a quarry along the Kim Creek FSR near a logging road junction, approximately 2.6 kilometres southeast of Rooney Lake.

The showing is comprised of quartz veins in fractured and brecciated basaltic rock. A nearby felsite dike hosts chalcopyrite mineralization. Other highly sheared and locally veined zones of magnetite-chalcopyrite bearing epidosite are also reported from sampling in the quarry.

In 2002, sampling yielded up to 4.5% Cu, 23.9 grams per tonne Ag, 0.107 grams per tonne Au and 0.118 gram per tonne Pd from a 6 centimetre wide mineralized quartz vein; while a sample of the mineralized felsic dike yielded 2.25% Cu and 12.3 grams per tonne Ag. A chip sample across the mineralized shear zone yielded 0.95% Cu and 4.62 grams per tonne Ag over 2.2 metres (Schau 2002; Assessment Report 27070).

In 2006, sampling yielded up to 4.65% copper and 29.7 grams per tonne silver (Schau 2006; sample PU-2; Assessment Report 28328). In 2009, a sample (109a1) taken from near the shear assayed 52.6 grams per tonne silver and greater than 1.0% copper (Schau 2009; Assessment Report 31039). In 2010, a chip sample assayed 7.1% copper, 46.7 grams per tonne silver and 0.06 gram per tonne gold (Shau 2010; Assessment Report 31856).

Pastry 5 – Minfile #092L 407

The Pastry 5 occurrence is located near a logging road junction, southwest of the Adam River and approximately 1.5 kilometres east-northeast of Rooney Lake.

At the showing, an epidotized felsite brecciated basalt hosts magnetite veins, disseminated sulphides and malachite staining. In 2004, sampling yielded up to 0.9% copper and 3.3 grams per tonne silver, while a nearby talus boulder assayed 4.8% copper and 14.6 grams per tonne silver (Schau 2004; Assessment Report 27463).

Kringle Blue – Minfile #092L 408

The Kringle Blue occurrence is located southwest of the Adam River, approximately 400 metres north-northwest of Rooney Lake.

At the showing, a malachite stained "blue" quartz vein is hosted by massive basalt. In 2006, sampling yielded up to 0.681% copper, 6.4 grams per tonne silver and 0.266 grams per tonne gold (Schau 2006; Assessment Report 28328).

Kringle North – Minfile #092L 409

The Kringle North occurrence is located at an elevation of 605 metres in the head waters of an unnamed northeast flowing tributary of Rooney Creek.

At the showing, basalts host quartz-feldspar-epidote veins with sulphide mineralization. In 2006, a lone sample (K079) assayed 0.424% copper, 3.0 grams per tonne silver, 1.17 grams per tonne gold and 0.11 grams per tonne palladium (Schau 2006; Assessment Report 28328).

Kringle (Plus 40) – Minfile #092L 411

The Kringle (Plus 40) occurrence is located on the northwest side of Rooney Lake.

The showing is comprised of chalcopyrite, bornite, malachite and azurite mineralization, in basalt that has been exposed in road cuts.

Eclair

The Eclair occurrence is located a few hundred metres south west of the Cruller showing. In the Minfile database it is included with the Cruller showing although it is at a different location. The showing exposed in borrow pits on either side of the Kim Creek FSR. Here, amygdaloidal, feldspar phyric basalt hosts quartz veins with chalcopyrite and bornite. Malachite and azurite occurs on fracture surfaces and in shear zones.

The first mention of this showing is a 2011 assessment report (Schau, 2011; Assessment Report 32553). A sample collected in 2011 returned up to 6.09% Cu. This showing was sampled again in the 2018 program described in this report.

Oreo

The mineralization noted in Oreo is in a large road metal quarry which has been situated between two shear zones to exploit the crushed rock developed there (Schau, 2002). The quarry is on the west side of the east arm of Rooney Creek and is approximately 450 metres south of the Rooney 1-4 and Billy 19 showings (Figure 8). According to Schau (2002) this whole region is mineralized with copper sulphides and attendant epidote alteration. The mineralization is spread across the quarry floor in patches seemingly associated with secondary faults. The patches are metre sized and are chalcedonic in nature. The mineralization is predominantly chalcopyrite with associated epidote and other unidentified green minerals.

Several patches yield good values, the best being 1.26% Cu and 6.0 Ag (Schau, 2002; Assessment Report 27070).

8 Deposit Types

The Minfile database classifies the Billy 19 and Rooney 1-4 showings as porphyry Cu type occurrences. Other showings are classified as vein, breccia and stockwork type occurrences (Mineral Deposit Profile Category I). The Cruller showing is classified as a skarn. A complicating factor in the classification of the showings on the property is that in many cases there is evidence of post mineral shearing which has destroyed or modified some of the original vein features.

In the author's opinion all of the showings on the property should be classified as vein showings, specifically Cu-Ag quartz veins (Lefebure 1996; Mineral Deposit Profile type I06). 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. This type of vein typically crosscuts clastic sedimentary or volcanic sequences, however, there are also Cu quartz veins related to porphyry Cu systems and associated with felsic to intermediate intrusions.

A diversity of tectonic settings reflecting the wide variety of hostrocks including extensional sedimentary basins and volcanic sequences associated with rifting or subduction-related continental and island arc settings.

Veins are typically emplaced along faults; they commonly postdate major deformation and metamorphism. The veins related to felsic intrusions form adjacent to, and are contemporaneous with, mesozonal stocks. In the case of the Property showings this would be the mid Jurassic granodiorite northeast of Highway 19.

Cu-Ag quartz veins are known to occur in virtually any rocks although the most common hosts are clastic metasediments and mafic volcanic sequences such as the Karmutsen basalts. Mafic dikes and sills are often spatially associated with metasediment-hosted veins. These veins are also found within and adjacent to felsic to intermediate intrusions. These occur on the Property as dykes.

This deposit type also typically forms simple to complicated veins and vein sets which follow high-angle faults which may be associated with major fold sets. These types of structures are common in the Adam River area. Single veins vary in thickness from centimetres up to tens of metres. Major vein systems extend hundreds of metres along strike and down dip. In some exceptional cases the veins extend more than a kilometre along the maximum dimension.

Sulphides are irregularly distributed as patches and disseminations. Vein breccias and stockworks are associated with some deposits. The mineralogy of intrusion related veins can include chalcopyrite, bornite, chalcocite, pyrite, pyrrhotite; enargite, tetrahedrite-tennantite, bismuthinite, molybdenite, sphalerite, native gold and electrum. Quartz and carbonate (calcite, dolomite, ankerite or siderite); hematite, specularite, and barite are common gangue minerals. Wallrocks are typically altered for distances of centimetres to tens of metres outwards from the veins. The metasediments display carbonatization and silicification. Decalcification of limy rocks and zones of disseminated pyrite in roughly stratabound zones are also reported for this deposit type. The volcanic hostrocks exhibit abundant epidote with showings on the Property Malachite or azurite staining is commonly associated with this deposit type and this is also the case on the Property.

Ore controls for this deposit type are structural. Veins and associated dikes follow faults. Ore shoots are commonly localized along dilational bends within veins. Sulphides may occur preferentially in parts of veins which crosscut carbonate or other favourable lithologies. Intersections of veins are an important locus for ore. Lefebure (1996) indicates that the genetic model for this deposit type is one where the veins are associated with major faults related to crustal extension which control the ascent of hydrothermal fluids to suitable sites for deposition of metals. The fluids are believed to be derived from mafic intrusions which are also the source for compositionally similar dikes and sills associated with the veins.

9 **Exploration**

In April 2018, Rich River under the supervision of Mr. Lynes collected 341 soil samples and 32 rock samples from the Red Metal Ridge Property. This work was done on behalf of Crest. The sampling was done along existing logging roads and covered a large part of the property. This section describes the results of this sampling.

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 341 soil samples collected in 2018 is shown in Figure 9. Samples were collected along existing logging roads at roughly 50 metre intervals. In Figure 9, proportional symbol size and colour is used to highlight anomalous samples. Table 5 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 8 to 1380 ppm Cu, with a mean value of 121.96 ppm Cu. As shown in Figure 9 there is a cluster of anomalous samples near the Puff, Eclair and Cruller showings. Ag values did not define any obvious target areas with random anomalies spread throughout the area of sampling.



Figure 9. Proportional symbol plot showing results for Cu (ppm) in the 2018 soil samples. Map produced by D.G. MacIntyre using analytical results from ALS laboratories, May 2018.

Lab. No.	Minimum	Maximum	Median	Average	Std. Dev.	90th Percentile	95th Percentile	N > detection
Ag ppm	0.02	4.82	0.11	0.136	0.263	0.19	0.24	341
AI %	0.14	12.85	4.95	5.076	1.658	7.1	8.033	341
As ppm	0.4	21.8	1.2	1.863	1.894	3.9	5.005	341
Au ppm	<0.02	0.38	<0.02	<0.01701	0.027	<0.02	<0.02	8
B ppm	<10	10	<10	<8.2991	5.587	<10	10	29
Ba ppm	10	110	20	19.912	10.860	30	40	341
Be ppm	<0.05	1.08	0.5	0.496	0.149	0.67	0.71	337
Bi ppm	0.01	0.16	0.06	0.060	0.027	0.09	0.1005	341
Ca %	0.09	2.57	1.01	1.077	0.500	1.83	2.0005	341
Cd ppm	0.07	0.87	0.19	0.229	0.128	0.38	0.501	341
Ce ppm	0.61	52.6	13.95	15.379	7.545	25	30.32	341

Table 5. Summary statistics for 2018 soil samples (N=341).

0. No.	mumi	ximum	dian	erage	l. Dev.	h Percentile	h Percentile	detection
Lat	Mir	Ma	Me	Av	Stc	90t	95t	ž
Co ppm	0.9	173	16.9	19.329	16.545	30.2	38.6	341
Cr ppm	3	149	76	75.595	24.242	105	114	341
Cs ppm	<0.05	0.97	0.31	0.333	0.133	0.5	0.561	339
Cu ppm	8	1380	93.9	121.961	130.612	183	230.3	341
Fe %	0.22	14.3	6.92	6.903	1.960	9.29	10	341
Ga ppm	0.52	45.7	14.8	14.867	4.536	20.2	22.705	341
Ge ppm	0.05	0.26	0.1	0.106	0.033	0.15	0.17	341
Hf ppm	<0.02	1.59	0.56	0.590	0.301	1	1.14	339
Hg ppm	0.02	0.67	0.19	0.195	0.088	0.29	0.3505	341
In ppm	0.005	0.131	0.063	0.062	0.019	0.085	0.096	341
K %	<0.01	0.19	0.01	0.014	0.012	0.02	0.03	340
La ppm	0.3	10.1	3.7	3.871	1.351	5.5	6.2	341
Li ppm	0.1	19.4	4.8	4.909	1.837	6.8	7.9	341
Mg %	0.04	2.17	0.45	0.492	0.248	0.8	0.93	341
Mn ppm	15	6160	383	560.455	777.791	887	1294.5	341
Mo ppm	0.24	22.4	0.77	1.071	1.620	1.47	2.096	341
Na %	<0.01	0.06	0.01	0.013	0.008	0.02	0.03	336
Nb ppm	0.19	6.88	4.15	4.061	1.067	5.24	5.75	341
Ni ppm	3.4	72	26.5	26.744	9.533	37.7	42.605	341
P ppm	170	1230	490	499.296	141.153	680	740.5	341
Pb ppm	0.7	26.5	3.2	4.316	3.325	8.5	9.9	341
Rb ppm	0.4	6.1	1.1	1.150	0.547	1.7	2	341
Re ppm	<0.001	0.006	<0.001	<0.0006	0.001	0.001	0.001	53
S %	<0.01	0.33	0.04	0.046	0.027	0.07	0.08	338
Sb ppm	<0.05	1.74	0.11	0.137	0.118	0.22	0.26	336
Sc ppm	0.3	27.5	13.7	13.860	4.830	19.5	21.525	341
Se ppm	<0.2	4	0.9	0.995	0.510	1.7	1.905	340
Sn ppm	0.2	2.3	1	0.972	0.294	1.3	1.5	341
Sr ppm	4.6	91.7	15.8	19.066	11.401	31.2	39.03	341
Ta ppm	<0.01	0.16	0.05	0.053	0.036	0.11	0.12	335
Te ppm	<0.01	0.08	0.02	0.024	0.017	0.05	0.06	320
Th ppm	<0.2	1.7	0.6	0.616	0.221	0.8	0.9	334
Ti %	0.022	1.56	0.688	0.681	0.205	0.912	0.99075	341
TI ppm	<0.02	0.1	<0.02	<0.00237	0.023	0.03	0.03	133
U ppm	<0.05	9.93	0.3	0.377	0.543	0.55	0.6315	340
V ppm	13	649	266	269.572	87.074	376	424.1	341
W ppm	<0.05	0.16	<0.05	0.004	0.063	0.08	0.1	151
Y ppm	0.25	31.4	10.75	11.149	4.648	16.85	19.2025	341
Zn ppm	13	117	44	45.886	16.015	65	72	341
Zr ppm	<0.5	59.4	23.9	24.367	11.274	39.1	43.955	340



Figure 10. Proportional symbol plot showing results for Cu (ppm) in soil samples collected near the Eclair Showing. Map produced by D.G. MacIntyre using analytical results from ALS laboratories, May 2018.

LC121622-1



Figure 11. Proportional symbol plot showing results for Cu (ppm) in soil samples collected in the Rooney Creek area. Map produced by D.G. MacIntyre using analytical results from ALS laboratories, May 2018.

A number of soil samples in the Rooney Creek area also returned anomalous values for Cu (Figure 11) but there is no obvious clustering of anomalies. One sample collected near the Billy 19 and Rooney 1-4 showings did return 351 ppm Cu and a sample from another 600 metres to the south-southeast returned 572 ppm Cu (Figure 11).

9.2 Rock Samples

A total of 32 rock samples were collected from the Property in 2018. The location of these samples is shown in Figures 12, 13 and 14. Sample descriptions, location coordinates and results for Cu, Mo, Ag and As are given in Table 6. 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 32 samples submitted for assay, 15 returned values greater than 10,000 ppm Cu. Most of these samples were from the Puff and Eclair showings. The best result for Cu was 14.95% for a sample of massive sulphide in a shear zone collected from the Eclair quarry site (Map No. R6, Figure 13). The best result for Ag was 34.7 ppm for a sample from the Puff showing (Map No. R12, Figure 14). One sample collected north of the Linzer showing returned 1855 ppm Mo (Map No. R15, Figure 15) in what is described as a 0.5 metre wide massive chalcopyrite-pyrite vein in basalt. Other samples from this locality (R13-R16, Table 6) were also anomalous in Mo and As compared to samples collected elsewhere on the Property. Cu values at this locality ranged from 1740 to 8290 ppm. Samples collected further north along the logging road (Map Nos. R17-R20; Figure 15) also returned good Cu values. One of these samples (Map No. R19, Figure 14) that returned 2.32% Cu was probably collected from the same site that M. Schau collected two samples from in 2006 that returned 3.2 and 4.9% Cu respectively (Schau, 2006a). The location of these two samples is shown in Figure 6 in the History Section of this report.



Figure 12. Rock sample locations and results for Cu and Ag, north central area. Map prepared by D.G. MacIntyre from ALS laboratory results and company supplied GPS sample site coordinates, May 2018.



Figure 13. Rock sample locations and results for Cu and Ag, Eclair showing area. Map prepared by D.G. MacIntyre from ALS laboratory results and company supplied GPS sample site coordinates, May 2018.



Figure 14. Rock sample locations and results for Cu and Ag, Linzer showing area. Map prepared by D.G. MacIntyre from ALS laboratory results and company supplied GPS sample site coordinates, May 2018.

Map No.	Sample	Easting	Northing	Description	Cu ppm	Mo ppm	Ag ppm	As ppm
R1	34501	704585	5581664	no information	521	0.33	0.52	25.1
R2	34502	702988	5581706	shear in volcanic with calcite and epidote stringers. Mal staining	3230	1.47	2.68	1.2
R3	34503	702988	5581706	across Py shear zone. Blebs-stringers massive Py. Ep alterations.	189.5	1.12	0.43	1.9
R4	34504	702988	5581706	sheared wall rock. Ep	12.9	0.54	0.05	0.8

Table 6. Rock sample descriptions and results for Cu, Mo, Ag and As.

Map No.	Sample	Easting	Northing	Description	Cu ppm	Mo ppm	Ag ppm	As ppm
				minor Cp-Py- Mt				
R5	34505	702988	5581706	hanging wall- Mt volc. Minor rhodonite? Or K spar	281	0.43	0.21	1.9
R6	34506	705022	5580056	Eclair showing. 10 cm seam massive Cp-Py in shear zone	14.95%	0.46	27.4	23.2
R7	34507	705006	5580069	Eclair showing. 1 m chip shear zone with Mal, Az, Bn, Cc	5.27%	48.2	24	3.2
R8	34508	705006	5580069	shear. Footwall rocks. Mal stain. Pods of massive Cp-Py	3.92%	14.9	4.66	1.6
R9	34509	705006	5580069	1 m chip. Basalt dyke. Mal staining. Blebs Cp-Py	1.875%	11.4	1.98	2.2
R10	34510	705202	5580209	Cruller showing. 10 cm shear. Qtz calcite mal staining. Py-Cp	1010	0.87	0.43	9.4
R11	34511	704710	5580563	Puff quarry. 1 m chip outcrop. Mal staining. Fractured silicified volcanic.	6520	1.07	2.58	3
R12	34512	704751	5580553	Grab of Ep altered volcanic. Mal staining. - diss Cp-Py	5.29%	1.61	34.7	9.3
R13	34513	706063	5578382	Qtz. Carb veins in volc. Py-Cp Semi. Mass. 2-5 cm veins	1860	1855	1.43	303
R14	34514	706061	5578374	Outcrop. Stockwork veins of mass Py. with Cp-Py in basalt	3360	317	1.27	571
R15	34515	706061	5578374	Same zone5 m chip across massive Py-Cp veins in basalt outcrop. Road cut	1740	843	1.43	1055
R16	34516	706047	5578384	Grab. 8 cm wide vein chunk. mass Py float sub crop	8290	478	4.02	400
R17	34517	706036	5578521	Grab. 20 cm Qtz carb Ep vein. Outcrop blebs Cp-Py-Cc Mal, Az	3550	4.7	1.8	2.9
R18	34518	706042	5578515	Grab ot Cp siliceous volc. Qtz carb Cc-Cp- Py Mal, Az.	3.2%	8.53	7.16	3.7
R19	34519	706202	5578516	Mal staining. Basalt diss Cp-Py. Diss. Cc subcrop	2.32%	0.87	4.56	0.4
R20	34520	706029	5578599	Grab ang. subcrop. Qtz rich volc. Diss. Po Cc. Minor Cp-Py Mal,	4.96%	3.53	11.8	63.7

Map No.	Sample	Easting	Northing	Description	Cu ppm	Mo ppm	Ag ppm	As ppm
				staining.				
R21	34521	705353	5581126	Grab 0.5 m Shear zone. Heavy Py	845	12.9	1.32	67.4
R22	34522	703411	5581265	Grab 10 cm fine mass Py. in volcanic rocks	414	0.85	0.19	46
R23	RMR-R- 18-01	702590	5582053	outcrop, Krisp showing on highway, Mal. staining with Cp	1.355%	1.98	6.79	1.3
R24	RMR-R- 18-02	703917	5581697	subcrop, blast pit, Py- Mal	72.3	0.79	0.1	2.6
R25	RMR-R- 18-03	704727	5580559	grab sample, blast pit, Py-Mal-Ep.	3.54%	1.8	20.8	6.1
R26	RMR-R- 18-04	705009	5580068	grab sample, blast pit, Py-Bn-Ep	3.31%	14.1	11.9	1.9
R27	RMR-R- 18-05	705034	5580087	grab sample, blast pit, Mal. staining	4.17%	0.8	9.48	23.3
R28	RMR-R- 18-06	705239	5580010	grab sample, Eclair pit, Mal-Az. staining	2.54%	1.49	7.72	3.6
R29	RMR-R- 18-07	705012	5580077	grab sample, Eclair pit, Mal-Cp-Py	4.2%	23.2	9.65	10.3
R30	RMR-R- 18-08	704724	5580895	grab sample, Eclair pit, Mal-Cp-Py	2.42%	0.9	10.7	5.2
R31	RMR-R- 18-09	703885	5582366	grab sample, Wacor pit, Mt	542	0.32	0.22	1.6
R32	RMR-R- 18-10	703914	5582309	outcrop, Wacor pit, Fe rich basalt (test sample for Fe)	937	0.95	0.22	0.5

Note: Cu values in % were reanalyzed using different analytical technique; Py = pyrite, Cp = chalcopyrite, Bn = bornite, Cc = chalcocite, Mal = malachite, Az = azurite, Mt = magnetite, Ep = epidote, Qtz = quartz

10 Drilling

Only limited diamond drilling has been done on the Red Metal Ridge Property and this work is described in the History section of this report. No recent diamond drilling has been done on the Property which is still in the early stages of exploration.

11 Sample Preparation, Analyses and Security

The evaluation of the Red Metal Ridge Property is partially based on historical data derived from British Columbia Mineral Assessment Reports and other regional reports. Rock sampling and assay results are critical elements of this review. The description of sampling techniques utilized by previous workers is described in the assessment reports, in particular for the work done by M. Schau between 2003 and 2013. The historical work done on the property was done by reputable exploration companies or individuals and the author is confident that followed industry best practises applicable at the time were followed in the collection and preparation of samples.

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 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 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 5. 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.

ANALYTES & RANGES (ppm)							
Ag	0.01-100	Cs	0.05-500	Мо	0.05-10,000	Sr	0.2-10,000
Al	0.01-25%	Си	0.2-10,000	Na	0.01%-10%	Та	0.01-500
As	0.1-10,000	Fe	0.01%-50%	Nb	0.05-500	Те	0.01-500
Au*	0.2-25	Ga	0.05-10,000	Ni	0.2-10,000	Th	0.2-10,000
В	10-10,000	Ge	0.05-500	Р	10-10,000	Ti	0.005%-10%
Ва	10-10,000	Hf	0.02-500	Рb	0.2-10,000	TI	0.02-10,000
Ве	0.05-1,000	Hg	0.01-10,000	Rb	0.1-10,000	U	0.05-10,000
Ві	0.01-10,000	In	0.005-500	Re	0.001-50	۷	1-10,000
Са	0.01%-25%	К	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
Се	0.02-500	Li	0.1-10,000	Sc	0.1-10,000	Zn	2-10,000
Со	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		

 Table 7. Upper and Lower limits for ICP-AES analyses (ALS ME MS41 package)

12 Data Verification

The author visited the Property on April 25, 2018. During this visit rock sample sites at the Eclair quarry locality and nearby soil sample sites were examined (Photo 2). These were clearly marked and appropriately labelled. The rock sample sites were located in bedrock exposed in the back walls of the quarry. This material was well mineralized with visible malachite and azurite staining on fracture surfaces (Photo 3). Chalcopyrite and pyrite were observed in sheared 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. The analytical results obtained in 2018 were similar to those determined by previous operators and in the author's opinion these results give an accurate indication of the grade of mineralization that occurs in outcrop at the sampled localities.



Photo 2. The author examining mineralized outcrop and Rich River sample site 34507 at the Eclair showing quarry locality, Red Metal Ridge Property. Photo taken April 25, 2018 by field assistant J. MacIntyre.



Photo 3. Green malachite staining in outcrop at sample site 34507, Eclair showing. This sample site returned 5.27% Cu and 24 ppm Ag. Photo taken by the author, April 25, 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 Red Metal Ridge 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 Red Metal Ridge Property. Therefore, there are no mineral resource estimates for the Property.

15 Adjacent Properties

There are two adjacent properties covering two minfile showings respectively – Kringle (Highway) and Macaroon.

15.1 Kringle (Highway) – Minfile #092L 359

The Kringle (Highway) showing is located on the east side of the Adam River. The area is underlain by the volcanic rocks of the Triassic Karmutsen Formation (Vancouver Group) and limestones of the Triassic Quatsino Formation (Vancouver Group). These are near the contact with the Jurassic Adam River batholith to the east. Early altered dikes are near, and fresh porphyry dikes cut, the altered contact.

Locally, sulphides occur as veins cutting, garnet skarns, granodiorite, and feldspar porphyries, and as replacement masses at contacts between rock types, especially marble and garnetite. Sulphide mineralization consists of bornite along with, and among, magnetite, chalcopyrite, pyrrhotite, and pyrite. Local masses of wollastonite are also reported.

In 2002, a sample (E187880) of malachite-stained, argillically altered felsite returned 7.05% copper, 67.2 grams per tonne silver. Another sample (E187881) returned 0.112% molybdenum with 0.203% copper. Samples of massive magnetite yielded up to 36.7% iron (Schau, 2002; Assessment Report 26930). In 2006, a sample (A8-79) assayed 0.018% molybdenum and 0.218% vanadium (Schau, 2009; Assessment Report 31039).

15.2 Macaroon – Minfile #092L 406

The Macaroon occurrence is located west of Rooney Creek, approximately 300 metres south-southwest of its junction with the Adam River. The area to the west of the Adam River is underlain mainly by the upper part of the Triassic Karmutsen Formation, comprising mainly thick massive flows with local intercalations of amygdaloidal basalt and pods of autoclastic breccias, pillowed and massive flows with thin intercalations of volcaniclastic and limy sandstones, all cut by thin dolerite/gabbro sills.

Locally, a highly sheared and strained silicified, chloritic and epidotic andesite hosts sulphide mineralization. Small dodecahedrons of reddish-brown garnet occur with epidote and felsitic rocks. In 2004, sampling yielded up to 2.4% copper and 21.7 grams per tonne silver with anomalous values in gold and palladium (Schau 2004; Assessment Report 27463).

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 Red Metal Ridge Property in 2018 has confirmed the presence of a number of high grade Cu+/-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 are most likely related to emplacement of a granodioritic intrusion in mid Jurassic time. Presently this intrusion is exposed northeast of the Adam River but may also underlie the Property at depth as well. Alternatively, the Red Metal Ridge Property showings could be related to hydrothermal activity directly associated with eruption of Karmutsen volcanics but in the author's opinion this is a less likely scenario. 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 very 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. With this in mind the area north of the Linzer showing may hold the best potential given the number of showings located in this area.

Soil sampling along logging roads has detected an area of anomalous concentrations of Cu in soil near the Puff and Eclair showings. 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.

18 Recommendations

In the author's opinion the Red Metal Ridge Property continues to be a property of merit and additional exploration expenditures are warranted. Numerous high grade Cu+/-Ag showings have been detected on the property. 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 coincident magnetometer survey. In particular, the extent of anomalous soils located near the Puff and Eclair showings needs to be determined. It is recommended that a soil sampling grid with line spacing of 100 metres and sample intervals of 25 metres be established to cover the area that would include the Puff, Eclair and Cruller showings. Given the density of underbrush it may be necessary to cut lines in order to facilitate sampling. A magnetometer survey on the same grid would also be useful. Similarly, the area north of the Linzer showing should also be covered by a

soil sampling and magnetometer grid. The objective of these surveys is to try to determine the extent of subsurface mineralization beyond the current known showings, all of which are located in road cuts or quarries along logging roads. Depending on the results of the recommended soil/magnetometer 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 is given in Table 8.

Phase 1								
			Unit					
Expense		Units	cost	Total				
Mob/Demob				\$5,000				
Line cutting				\$10,000				
Soil sampling/geophysics				\$62,000				
Camp costs – food & lodging	120	person days	\$100	\$12,000				
Analytical	300	analyses	\$30	\$9,000				
Report preparation	10	days	\$600	\$6,000				
			Total	\$104,000				

Table 8. Projected costs for	proposed ex	ploration program,	Red Metal	Ridge Property
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Phase 2				
			Unit	
Expense		Units	cost	Total
Geophysical surveys				\$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	\$267,000
		Total Phase 1 +	- 2	\$361,000

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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: Red Metal Ridge Mineral Property, Vancouver Island, British Columbia, Canada" dated July 19, 2018 (the "Technical Report"). The effective date of this Technical Report is July 19, 2018. Sections not written by myself are noted in the text. I visited the Red Metal Ridge Property on April 25, 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 19th day of July, 2018



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