BC Geological Survey Assessment Report 38234

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: PROSPECTING AND GEOCHEMICAL ASSESSMENT REPORT ON THE ALWIN PROPERTY

TOTAL COST: \$9484.90

AUTHOR(S): Leopold J. Lindinger, P.Geo. SIGNATURE(S): Leopold J. Lindinger.

STATEMENT OF WORK EVENT NUMBER(S)/DATE (S): 5728327 dated January 27, 2019.

YEAR OF WORK: **2018**PROPERTY NAME: **ALWIN**

CLAIM NAME(S) (on which work was done): 1058142, 1058147, 1058144, 1058149

COMMODITIES SOUGHT: COPPER, GOLD, SILVER

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 092ISW010, 092ISE042

MINING DIVISION: KAMLOOPS

NTS / BCGS: 092I/038, 039, 048 and 49

LATITUDE: _____50_____° ____28_____' ___42____"

LONGITUDE: ___121_____° ____05 ___' 59____" (at centre of work)

UTM Zone: 10U EASTING: 633500, NORTHING: 5594000

OWNER(S): RICHARD J. BILLINGSLEY

MAILING ADDRESS: 11114 147A ST. SURREY, BC, CANADA, V3R 3W2

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. *Upper Triassic aged Bethsaida phase of the Guichon batholith host 080 and 110 striking subvertical structures that contain disseminated and pods of chalcopyrite, bornite and chalcocite in a sericitic hydrobrecciated gangue. The structures are hosted by possibly potassically altered resistant Bethsaida intrusives.*

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 380A, 318A, 1028, 1055, 23151, 23827, 26453, 28783, 30283.

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
RECONAISSANCE GEOLOGCIAL GEOCHEMICAL (number of samp			3794.90
Soil			
Silt			
Rock	2		133
Other DRILL CORE	3		167
RELATED TECHNICAL			390
Sampling / Assaying			390
Petrographic			_
Mineralographic			
Metallurgic			
PROSPECTING (scale/area)	1:1000- 1/1000. 400 hectares	1058142, 1058147, 1058144, 1058149	5000
		TOTAL COST	9484.90

PROSPECTING AND GEOCHEMICAL ASSSESSMENT REPORT

ON THE

ALWIN COPPER-GOLD-SILVER PROPERTY

Highland Valley Area

NTS 092I06E

BCGS 092I/038, 039, 048 and 49

50° 28' 42" N 121° 05' 59" W

UTM Z10U 5594000 N 635500 E

Kamloops Mining Division

Owner Richard J. Billingsley

 $\mathbf{B}\mathbf{y}$

Leopold J. Lindinger, P.Geo.

May 03, 2019

Revised November 05, 2019

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SUMMARY

This report documents for assessment purposes the results of a 2018 prospecting and, geochemical sampling exploration program on the 343 hectare ALWIN property, Similkameen Mining Division, NTS map sheets 092I06E. The report supports Statement of Work and Reclamation Event No 5728327 dated January 27, 2019.

The author was responsible for the 2018 program that is reported herein and is solely responsible for the interpretations made, conclusions reached and recommendations made.

The ALWIN property covers a hilly portion of the Guichon Batholith 4 km west of the Valley pit of the Highland Valley Mining company of Teck and 18 kilometres west of Logan Lake B.C.. The property is accessed along well-maintained roads from Logan Lake or Ashcroft along Highway #97C to the west end of the Valley Copper tailings disposal area. A well maintained mine/logging road leads 15km to the southeast to the old Alwin plant site. Several logging roads provide good access to most areas of the property. Alternate access to the property is possible from the east end of the tailings disposal area, however locked gates (Cominco) inhibit casual access. The property lies in the semi-arid intermontane climatic zone. Rainfall is less than 70 cm per year, and temperatures range from -25 to +30 degrees centigrade. The dominant resource activities are mining, logging, mineral exploration, tourism and cattle ranching. Kamloops 65 km east north east is the nearest city where exploration and mining supplies can be obtained. Water for exploration purposes is available from several small lakes and streams. For larger scale projects water would have to be taken from the ALWIN underground workings.

Richard Billingsley acquired portions of the ALWIN property by MTO staking in February 2018 and February 2019.

The area lies within the Intermontane Belt or Super Terrane portion of the western north American Orogen. The lithologies within this terrane are almost entirely comprised of imbricated and deformed portions of accreted late Paleozoic to mid Mesozoic island arc and oceanic assemblages. These include the Harper Ranch, Slocan and Nicola-Stikine rocks of island arc affinity and the Slide Mountain, and Fennel formations of oceanic affinity. The Harper Ranch, Nicola-Stikine and possibly Fennel Formations have coeval intrusives.

Intruding and overlying the accretionary lithologies are late Mesozoic to Miocene sedimentary and volcanic deposits. These include the Cretaceous Spences Bridge Group, Eocene Kamloops Group, Miocene Chilcotin Group and Quaternary to recent volcanics and coeval intrusives.

Pre and post glaciation surficial deposits of variable thickness blanket the region

A wide variety of dominantly epigenetic and less commonly syngenetic hydrothermally related mineral deposits are found within the region. These include pre and post accretionary porphyry copper-molybdenum+/-gold+/-silver+/-zinc, mesothermal and epithermal gold-silver, porphyry related tungsten, chromite deposits. The syngenetic deposits are primarily pre accretionary and include besshi copper-zinc-silver-gold and Kuroko copper-zinc-lead silver-gold deposits. Placer gold deposits are mostly located along the eastern edge of the terrain adjacent to orogenic gold camps hosted by deformed north American provenance lithologies. Pre and post accretionary

industrial mineral deposits include limestone, bentonite, zeolite, diatomaceous earth, post glacial gravel and sand.

The local geology is dominated by early Mesozoic Nicola Group rocks, specifically the Guichon Creek batholith. These are intruded by and/or overlain by Eocene Kamloops Group subareal basalts, and andesites. The area is covered by extensive till sheets and post glacial outwash gravel, sand and lake terrace deposits. The pre mid Tertiary rocks host coeval porphyry coppermolybdenum +/- gold-silver porphyry, and mesothermal copper-silver-molybdenum deposits.

The property is underlain from west to east by succeedingly younger phases of the Guichon Creek batholith, namely Guichon-Highland Valley, Bethlehem and Bethsaida phases. Each younger phase is more potassic and siliceous than the previous ones. Northern portions are covered by Eocene Kamloops group volcanics. Glacial till covers most of the property. The observed alteration and mineralization has been interpreted by J. Ostler in 2008 to be comprised of an earlier 'highland valley" and later Alwin suite of phases. A late stage structurally hosted clay phase probably related to Eocene volcanic activity overprint all earlier alteration. Mineralization similar to the alteration are early molybdenum to copper-molybdenum bulk tonnage and later sericite associated 'ALWIN style' cpy-bornite +/- molybdenum structurally associated high grade mineralization. Higher grade gold and copper values are associated with bornite.

The 2018 exploration program was limited to prospecting, reconnaissance geological observations and limited resampling of the ALWIN Zone mineralized rocks and selected 2008 drill core from hole 08-04A. A total of 6 samples were taken and sent for analyses. The best copper value was 30.7% from massive chalcopyrite taken from a 40+ by 30+ 15+ semi massive chalcopyrite pod from the Ashcroft glory hole. This sample also had reported platinum and moderately anomalous silver. The selected pieces of core from hole 08-04a representing 1 to 1.5 metre samples all reported over 6% copper, over 80 ppm (to 168 ppm) silver and up to 2.68 g/t gold. The average silver content from these samples (over 100 ppm in 2008) was 128 ppm.

Prospecting elsewhere on the property revealed widespread largely unreclaimed trenches and stripped areas. Most of these areas are underlain by variably altered intrusives that host strengthening with depth chargeability and copper gold anomalies.

A \$800,000 phase 1 program is recommended. The phase 1 program is divided into separately budgeted Titan 24 IP geophysical, a small surficial geological-prospecting stage and a 2008 drill hole by drill hole drilling budget stages that undercut and bracket the 2008 drilling.

Additional exploration expenditures are contingent on exploration success.

INTRODUCTION AND TERMS OF REFERENCE

This report documents for assessment purposes the results of a 2018 prospecting and, geochemical sampling exploration program on the 343 hectares ALWIN property.

Included in this report is a summary of existing historical and geological data from previous programs conducted on and around the property. Sources of information include all readily available published sources, including government and industry assessment reports on the Property and on other properties in the immediate area and from other reports that were available to the writer.

This report follows the technical assessment report format recommended by the BC Ministry of Energy and Mines. The report is required to support a Statement of Work and Reclamation Event No 5728327 dated January 27, 2019

The author was responsible for designing and implementing the 2018 program that is reported herein. He also is solely responsible for the interpretations made, conclusions reached and recommendations made.

Based on his experience, qualifications and review of the historical data, the author is of the opinion that the historical work programs conducted on the property have been conducted in a professional manner and the quality of data and information produced from the efforts meet or exceed acceptable industry standards of the times.

Sources of information are listed in the references.

Units of measure and conversion factors used in this report include:

		1 sq. mi.	=225.899 hectares
CAPACITY			
1 can. gal.	=4.5461 litre	MASS	
		1 TROY oz.	=31.103 g.
VOLUME		1 g.	=0.03215 TROY oz.
1 cu. m.	=35.315 cu. ft.	1 lb.	=0.4536 kg.
		1 kg.	=2.2046 lb.
LENGTHS		1 (short) ton	=0.907 metric tonnes
1 in.	=2.540 cm.	1 metric tonne	=1.1023 short tons
1 cm.	=0.3937 in.	1 TROY oz. /short to	on=34.2848 g. /metric
1 ft.	=0.3048 m.	tonne	
1 m.	=3.2808 ft.	1 g./metric tonne	=0.0292 TROY oz.
1 m.	=1.09361 yd.	/short ton	
1 mile:	=1.6093 km.		
1 km.	=0.6214 mile		
AREA			
1 sq. ft.	=0.0929 sq. m.		
1 sq. m.	=10.764 sq. ft.		
1 hectare	=0.003861 sq. mi.		

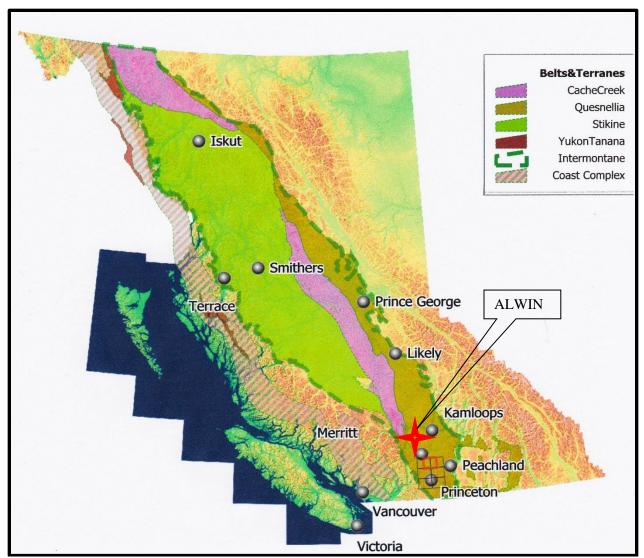


FIGURE 1 – ALWIN LOCATION MAP

PROPERTY

The ALWIN property currently comprises 9 MTO claims totaling 575.72 hectares. However, the claims partially overlie pre-existing mineral tenures held by other parties. The actual area of the ALWIN property is 343 hectares. The claims are located in the Kamloops Mining Division, on NTS map sheet 092I06E, BCGS map sheets 092I068, centered at LAT 50° 28' 42" N, LONG 121° 05' 59" W and UTM ZONE 11U 5504000 N 250000 E. The claims protect the ALWIN Minfile Occurrences (092ISW010) as well as surrounding prospective ground. The Alwin property also has 3 crown grants currently held in trust for Billingsley by San Marco Resources Ltd.

The claim details are presented in Table 1 and Figure 2 below.

The claims are good assuming acceptance for assessment credit of the work presented in this report as detailed in MTO Event No. Event No 5728327 dated January 27, 2019.

TABLE 1 - MINERAL TENURE

Title Number	Claim Name	Owner	Issue Date	Good To Date	Area (ha)
	O.K.				
	I.O.U				
	APEX				
1058142		139085 (100%)	2018/FEB/01	2021/DEC/15	82.2478
1058144	HIGHLAND VALLEY 1	139085 (100%)	2018/FEB/01	2021/DEC/15	246.7524
1058147		139085 (100%)	2018/FEB/01	2021/DEC/15	123.3521
1058149		139085 (100%)	2018/FEB/01	2021/DEC/15	20.5611
1058150	HIGHLAND VALLEY 2	139085 (100%)	2018/FEB/01	2021/DEC/15	20.5575
1058153	HIGHLAND VALLEY 3	139085 (100%)	2018/FEB/01	2021/DEC/15	20.5575
1058155	HIGHLAND VALLEY 4	139085 (100%)	2018/FEB/01	2021/DEC/15	20.5663
1066266	ALWIN NORTH FR.	139085 (100%)	2019/FEB/02	2020/FEB/02	20.5611
1066267	ALWIN SOUTH FR.	139085 (100%)	2019/FEB/02	2020/FEB/02	20.5663
				TOTAL AREA	575.7221

Mineral claims in British Columbia may be kept in good standing by incurring assessment work or by paying cash-in-lieu of assessment work. The value of exploration and development required to maintain a mineral claim for one year is at least

- (a) \$5 per hectare for each of the first and second anniversary years,
- (b) \$10 per hectare for each of the third and fourth anniversary years,
- (c) \$15 per hectare for each of the fifth and sixth anniversary years, and
- (d) \$20 per hectare for each subsequent anniversary year.

Cash in lieu payments are for a minimum of 6 months and are double the physical or technical work requirements.

ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

The ALWIN property covers a hilly portion of the Guichon Batholith 2.5 km west of the Valley pit of the Highland Valley Mining company of Teck and 18 kilometres west of Logan Lake B.C.. The property is accessed from Logan Lake or Ashcroft along Highway #97C to the west end of the Valley Copper tailings disposal area. Well to poorly maintained mine/logging roads leads 15km to the southeast to the old Alwin plant site. Several old mine now logging roads provide good access to most areas of the property. Alternate access to the property is possible from the east end of the tailings disposal area, however locked gates (Teck) inhibit non permitted access. The property is about a 45 minute drive from Logan Lake.

The climate is dry continental, with warm summers and fairly cold winters. July daytime high temperatures average 20°C; winter highs average -15°C. Precipitation averages about 70 cm (25 in) per year, with fairly abundant snowfall.

The surficial exploration season extends from late May to late October, although drilling could be completed somewhat later in the season, and geophysics year round.

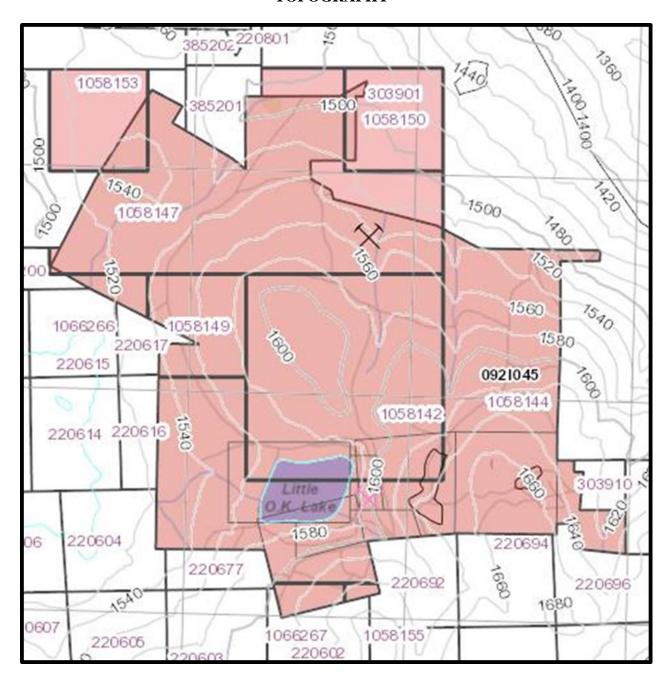
The dominant resource activity in the area is mining, logging, mineral exploration and tourism. The dominant mining activity is the enormous nearby Highland Valley mining complex operated by Teck. Nearby copper prospects provides continued mineral exploration interest in the area. Kamloops, 60 kilometres east north east is the nearest city where most supplies, equipment and personnel to conduct mineral exploration are readily available. Merritt 50 kilometres southeast, and Ashcroft 30 kilometres northwest are smaller communities with available labour forces and limited supplies.

The property's size and gentle terrain are sufficient to accommodate smaller scale mining facilities, potential mill processing sites, heap leach pads, and waste disposal sites.

The City of Kamloops with a population of about 85000 is a full-service community for all regional mining and exploration activities. The property has access to abundant electrical power. Mineralized concentrate could be transported by truck to the main highways. Water for exploration and mining purposes is available from several nearby lakes, and small streams and possibly the underground working of the Alwin Mine. For larger scale projects water would have to be taken from the ALWIN underground workings.

The property is located in an area of gentle to moderate relief. Elevations range from under 1670 metres east of the Alwin Mine to 1500 metres at the properties northern edge. The property is covered by lodgepole pine and interior Douglas fir forest, with lesser spruce and cedar stands. Much of area has undergone recent pine and fir salvage logging, resulting in a still well developed network of logging roads. Secondary growth is typically about 1 to 20 metres in height. The majority of the property is covered by thin to locally thick glacial till.

FIGURE 2 – MINERAL TENURE, MINFILE OCCURENCES, ACCESS, AND TOPOGRAPHY



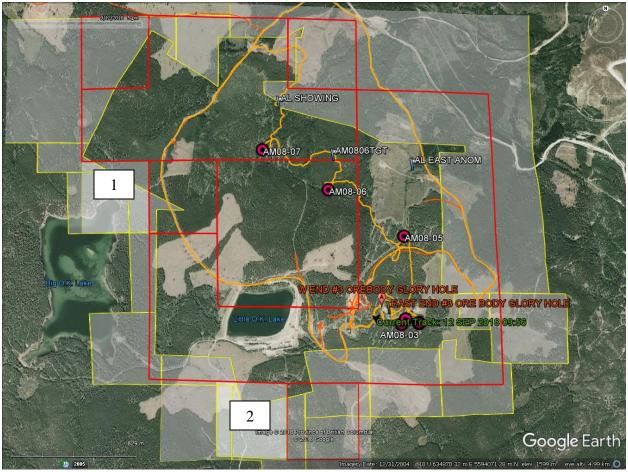


FIGURE 3 – GOOGLE EARTH IMAGE OF TENURE OUTLINE.

(Oct 2018 outline), 1 is current claim 1066266, 2 is 1066267.
Also showing 2018 GPS tracks and 2008 drill hole locations.
Dark orange track is Sept 11, 2018 and lighter orange is Sept 12, 2018 track

HISTORY

The following summary of the Property's exploration, development and mining history is excepted from Kerr 2008.

..."All resource estimates included in this section are herein referred to as **Historical Estimates** and have not been verified by the writer.

Copper mineralization was discovered in the area in the late nineteenth century. Old records indicate 2000 tonnes of hand-sorted ore grading 9 - 13%Cu was shipped to a smelter in Nelson, B.C. during the period 1907 - 1914.

In 1916, a 50 t/day gravity(?) mill was installed which operated through 1918. 1875 tonnes of ore were treated recovering a grade of 12.8%Cu and 0.4optAg. Development continued through 1919, which consisted of a 66 meter adit, an internal winze sunk to a depth of 60 meters, with some 225 meters of underground development.

The property then lay dormant through the 1960s, when the Alwin Mining Company gained control of the three crown-grants and located claims all around the property. The following summarizes the work since 1967:

1967 - 1970: Induced Polarization, geochemical surveys, 6940 meters of surface diamond drilling (81 holes), 5860 meters of underground diamond drilling (119 holes) and 1400 meters of underground development.

Bacon and Crowhurst Ltd. and Sandwell and Company Ltd. completed a feasibility study on the property in early 1970 indicating a positive cash flow from a 500 ton/day underground mining operation. A resource calculation was provided in this study estimating 955,000 tonnes grading 2.51%Cu, classified in this report as a **Historical Resource**. Cut-off was reported at 0.7%Cu, over a minimum mining width of 1.2 meters.

1971 - 1972: The OK Syndicate was formed consisting of 50% Alwin Mining Company Alwin), 25% D.K. Mining Inc (DK). and 25% International Minerals and Chemicals Corp (IMC). A 500 t/day mill was constructed, and mining was by limited block caving methods. Extreme dilution occurred and mining was halted in 1972 due to continued losses being sustained. In total, 76,000 tonnes were mined grading 1.52%Cu.

Alwin's 50% interest was bought by DK and IMC, who then continued mine development by adding 1000 meters of underground tunneling and 4375 meters of underground diamond drilling (148 holes).

1973: Selco Mining Corp. optioned the property for one year, drilling 11 underground holes totaling 905 meters.

1974 - 1979: The OK Syndicate continued development drilling 205 additional underground holes, totalling 10,330 meters.

1980 - 1982: Dekalb Mining Corp. gained control of the property and restored the mill, upgrading its capacity to 700t/day. Total production amounted to 155,000 tonnes grading 1.54%Cu. Mining was suspended in September 1981, due to falling copper prices. Development reached an elevation of 1400 meters (asl), to a depth of 270 meters below surface. Extensive underground diamond drilling was completed, totaling 3,935 meters and consisting of 67 holes in 1981. 11 shallow, surface diamond drill holes totaling 905 meters were also completed in 1981, testing shallow IP anomalies near the existing resource.

Dekalb completed a resource calculation in late 1982, classified in this report as a **Historical Resource**. A summary of this calculation is reported to be a total of 390,000 tonnes grading 2.50%Cu, allowing for 25% dilution, that remain in the ground today after all historical mining events. This was classified as proven, possible and possible by Dekalb. Cut-off grade was not reported; therefore, it is assumed the cut-off was a geological contact.

Recent Exploration:

1992 - 2003: Claimstaker Resources Ltd. (later J-Pacific Gold Inc.) held the claims continuously from 1992 - 2003. During this period, the claims were subjected to a geophysical survey, limited underground development, some road work, trenching, reclamation and remedial treatment of old tailings sites and a resource calculation."...

This work largely confirmed earlier results. The trenching, although incompletely sampled did provide encouraging at surface copper and silver mineralization on the eastern end of the known ore shoots (Sebert and Sommerville 1993). The program also indicated lower grade ~1.25% stockwork copper mineralization surrounding the shears in the area of trenching. The underground work confirmed the locally geometrically erratic nature of the high grade shear mineralization within the larger zones (Sommerville 1995).

Kerr continues.

..."The resource calculation completed by the staff of Dekalb after mine closure in 1982 was reviewed and verified by R.D. Westervelt, P. Eng. in 1993.

J-Pacific Gold Inc. allowed the claims to lapse in late 2004 or early 2005.

Richard John Billingsley and Gaye Richards acquired the claims by the new Cell Grid on-line staking system early in 2005.

2005: An option agreement was completed to permit San Marco Resources Inc. to earn a 100% interest in the property. They have completed a Three Dimensional Induced Polarization program over 35 kilometers of grid covering the entire the property. Soil samples were collected at 50 meter intervals along all grid lines and analyzed for 32 elements by ICP methods. 2007: San Marco completed a 7 hole diamond drill program totaling 1304.5 meters."...

The IP results indicated the ALWIN ore zone lies with a much larger chargeability high that is rapidly increasing in size and strength to a depth of 150-250 m below the surface. The resitivity highs are separate from the chargeability. The summary 3D results are presented in Figure 3 below.

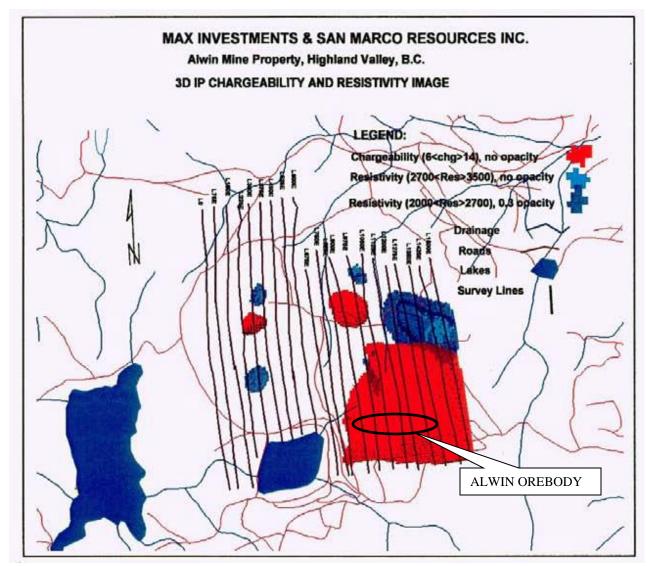
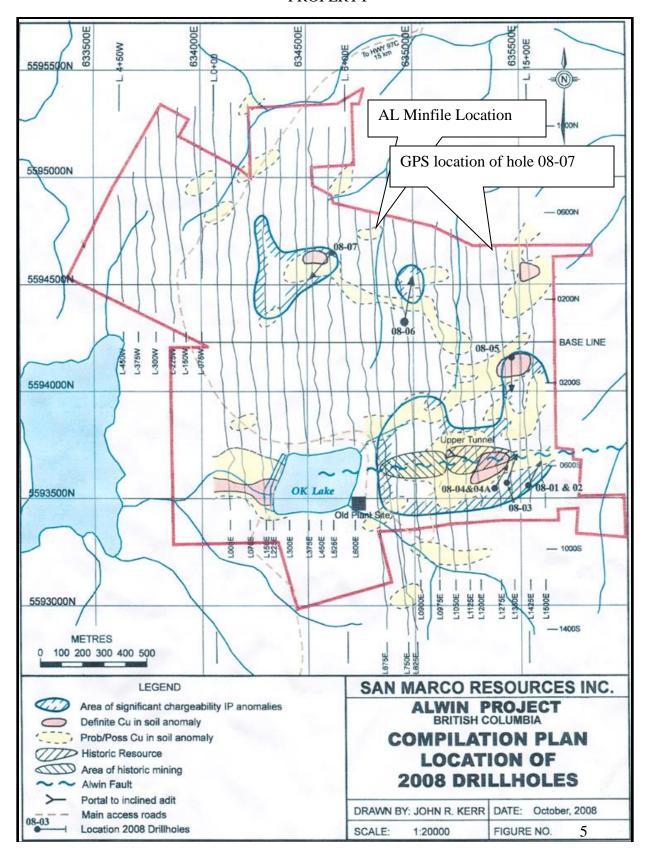


FIGURE 4

The summary chargeability and copper in soil results with drill hole locations and traces are presented in Figure 4 below.

Some limited rock sampling was also completed over the eastern end of the zone presumably some of the eastern 1993 trenches (~75 m east of trench 93-04) by Claimstaker. The samples returned over 0.85%.2 m and 2.38 %/1.5 m copper with negligible silver and gold. NOTE the rock sampling GPS co-ordinates in the report are in NAD 27 datum.



Kerr continues;

... "2008 DIAMOND DRILL RESULTS

... "The initial four drill holes were drilled into the main mineralized structure testing the eastern extension of the zone (08-01 and 02) and the depth of the zone (08-03 and 04). The two holes testing the eastern extension of the zone"... and underlying the two rock samples taken in 2006 ... "successfully intersected mineralized zones, however grade thickness of the zones intersected in these two holes are significantly less than grade thicknesses of the main zone that was historically mined. The two holes drilled to test the main zone at depth proved to have grade thicknesses equal or better than those historically mined. Further and more detailed drilling is required in these two areas to substantiate grades. It is also recommended that detailed construction of underground workings be established for future drill programs to prevent the intersection of underground workings"....

... "drill-hole 08-04A intersected the old workings"... with an ... "interval of 3.6 meters grading 6.34% copper."... ... "It did not intersect the full width of mineralization as it was terminated in an old adit. It is also uncertain as to the true width of the zone in this hole; however, it is estimated the measured core-length of 3.6 meters will represent a true width of 1.8 - 2 meters.

The latter three drill holes were considered exploration drill holes and located on targets delineated from the 2006 3D-IP and soil sampling surveys and refined by geological mapping of these targets. The following summarizes the results:

<u>08-05</u>: Drilled near the eastern border of the property in an area of historical trenching and possible drilling. The intersection of 21.1 meters grading 0.28% copper is of economic interest as it is in an area of strong chargeability high and moderate to strong argillic and potassic alteration, similar in nature to the typical Highland Valley porphyry systems. The intercept is less than 3 kilometers west of the main Valley Copper ore deposit. Further drilling in this area is certainly warranted.

<u>**08-06**</u>: Drilled in the central portion of the property testing a strong chargeability high and weak geochemical signature. There is no evidence of historical exploration in this vicinity. The intersection of 13.4 meters of 0.44% copper is of economic interest as it is in an area of strong chargeability high and moderate to strong argillic and potassic alteration, again similar in nature to the typical Highland Valley porphyry systems. Further drilling into this target area is certainly warranted.

<u>08-07</u>: Drilled in the central portion of the property testing a moderate-strength chargeability anomaly, a soil anomaly and in an area of historical trenching and possible drill holes. The negative results of this hole would place this target in low priority for future drill programs."...

Note: the 08-07 GPS location on the drill logs, summary and cross section lie ~850 m east of the plotted location on Figure 3.

...'In summary, approximately 649 diamond drill holes totaling 34,550 meters were drilled during the period 1967 - 2008. Most historical drilling provided AQ diameter drill core (2.5cm),

however some reference to limited NQ and BQ has been found. Good quality drill logs with assay data are available. Greater than 50% of the primary laboratory reports are also available. The 2008 program drilled NQ core diameter (4.5cm)."...

San Marco's drilling results are presented in Table 2 below.

TABLE 2 – 2008 DRILLING RESULTS

Hole	Northing	Easting	Brg	Angle	Depth(m)	Intercept(m)	length(m)	Cu content
110.0	110111111111111111111111111111111111111							
08-01	5593558	635536	020	-45	111.9	34.3 - 34.5	0.2	4.83%
						83.0 – 93.5	10.5	0.09%
08-02	5693558	635536	020	-65	172.8	20.8 – 27.5	6.7	0.90%
					(in	c) 20.8 – 21.2	0.4	8.54%
					(in	c) $27.3 - 27.5$	0.2	10.53%
						79.5 - 80.0	0.5	0.61%
						129.3 - 133.3	4.0	0.48%
						149.0 – 159.5	10.5	0.25%
08-03	5593580	635450	020	-45	108.8	35.0 – 39.5	4.5	0.37%
						50.6 - 52.8	2.2	3.51%
						74.0 - 87.5	13.5	0.56%
					(ii	nc) $75.3 - 76.2$	0.9	3.79%
						102.5 - 104	1.5	0.69%
08-04*	5593549	635427	020	-60	79.6	no significa	ınt intersect	ions
08-04A	5593549	635427	020	-67	131.1	111.5 -131.1		1.51%
					(in	c) 127.5 – 131.1	3.6	6.34%
08-05	5594088	635437	180	-60	250	194.9 – 216.0	21.1	0.28%
					(in	c) 194.9 – 197.5	3 2.6	1.40%
08-06	5594368	634958	010	-66	250	183.0 - 184.0	1.0	0.57%
						207.8 - 221.1	2 13.4	0.44%
					(ir	nc) 207.8 – 211.	1 3.3	1.18%
08-07	5594609	635437	240	-60	200.3	no sign	ificant inter	sections

Not mentioned in Kerr's report is that several intercepts, especially in holes 3 and 4A which were testing the deeper eastern portions of the Alwin ore body had significant co-incident with copper, relatively high silver and gold results. Noted is that most of the samples in the deepest 3.6 metres intercept in hole 4A had over limit (>100 g/t) silver results with several reporting over 1 and one reporting 2.68 g/t gold.

up at a steeper angle, however also intersected an underground working in a high grade mineralized shoot.

The AL Minfile 092ISW042 is plotted about 1.1 kilometres due north of the Alwin Mine and has reported ..."Trenching (that) exposes chlorite and sericite altered, northeast trending fractured and brecciated quartz diorite with local, minor chalcopyrite, bornite and malachite staining. Two dominant joint sets strike 285 to 308 degrees and 052 to 075 degrees respectively. Bornite, chalcopyrite and malachite appear locally on silicified and sericite altered joints as well as disseminated through the adjacent rock".... San Marco drill hole 08-06 targeted a coincident chargeability weak copper in soil anomaly near that locality. This hole (see above) returned a deep 13.4 metre intersection grading 0.44% copper. A small gold anomaly directly lies on the documented occurrence location. This area has increasing chargeability with depth. Sam Marco hole 08-07's GPS'd location is also close to this showing.

GEOLOGY AND MINERALIZATION

REGIONAL GEOLOGY (Figure 6)

The ALWIN gold-silver-copper-zinc occurrences are located within the Intermontane Belt or Super Terrane portion of the western north American Orogen. The lithologies within this Terrane are almost entirely comprised of imbricated and deformed portions of accreted late Paleozoic to mid Mesozoic island arc and oceanic assemblages. In the region surrounding the ALWIN property the rock packages include the upper Paleozoic Harper Ranch arc affinity, Cache Creek, Slide Mountain, and Fennel formations of oceanic affinity, and early Mesozoic Nicola-Stikine rocks of island arc affinity. Recent interpretations have these rocks overlying ancestral north American basement due to eastward directed compressive activity (Thompson).

The pre accretionary, Harper Ranch, Nicola-Stikine and possibly Fennel Formations have coeval intrusives.

Intruding and overlying the accretionary lithologies are late Mesozoic to Miocene sedimentary and volcanic deposits. These include the Cretaceous Spences Bridge Group, Eocene Kamloops Group, Miocene Chilcotin Group and Quaternary to Recent volcanics.

Pre and post glaciation surficial deposits of variable thickness blanket the region

A wide variety of dominantly epigenetic and less commonly syngenetic hydrothermally related mineral deposits are found within the region. These include pre and post accretionary porphyry copper-molybdenum+/-gold+/-silver+/-zinc, orogenic gold, mesothermal and epithermal gold-silver, porphyry related tungsten, chromite deposits. Pre and post accretionary industrial mineral deposits include limestone, bentonite, diatomaceous earth, zeolite, roofing shingle basalt, post glacial gravel and sand.

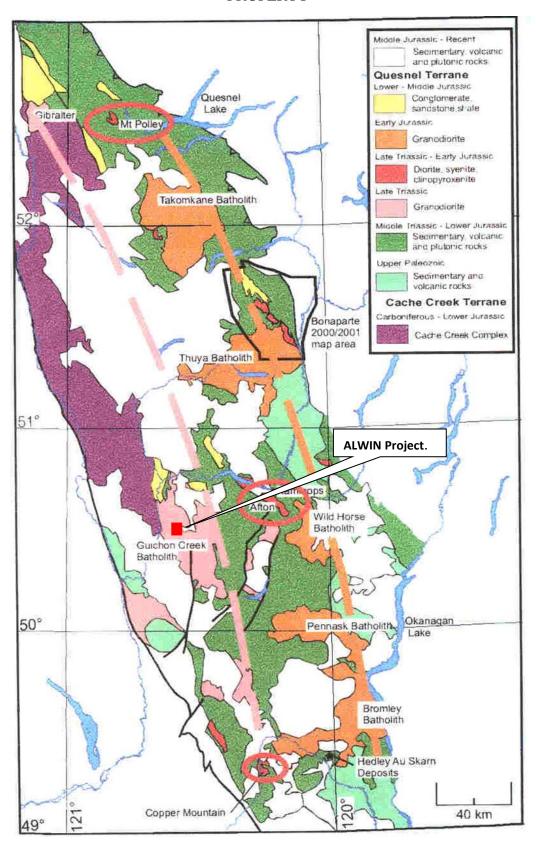


FIGURE 6 – REGIONAL GEOLOGY (Source Logan, et. al. 2006.)

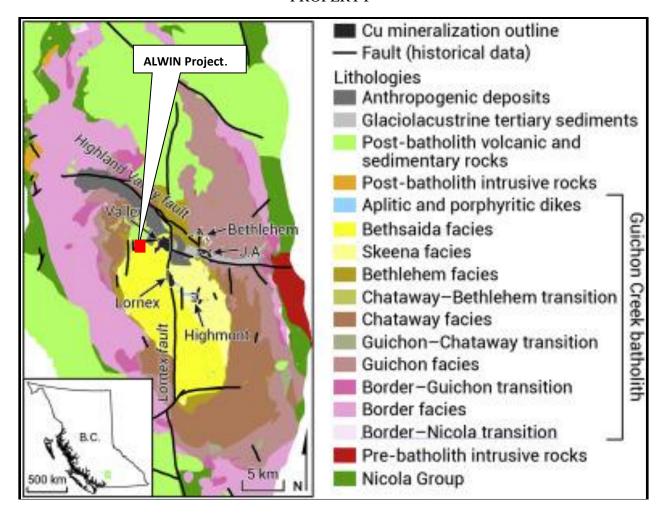


FIGURE 7 - LOCAL GEOLOGY- Source, Science Direct.com.

LOCAL GEOLOGY

The geology of the local area is dominated by the Guichon Creek batholith and overlying remnants of Eocene Kamloops Group volcanics. The Guichon Creek batholith hosts British Columbia's greatest endowment of copper. The current center of this mineralization is the Valley-Lornex orebody which together host over 1 billions tonnes grading 0.35% copper with substantial lower grade and smaller peripheral < 5 km distance high grade deposits. The earliest known batholithic mineralizing episode was the Bethlehem-Getty south (Trojan)-Getty North-J.A. system hosted by Bethlehem phase intrusive episode. This event was followed less than 1 million years later by the Bethsaida phase Valley-Lornex-Highmont deposit system and its numerous both low grade bulk and high grade structurally hosted deposits.

The deposits are located at or near to the intersection of northerly and southeast trending regional syn intrusion structures in a sinistral transtensional to transcompressional tectonic environment. Post Mesozoic dextral transtensional tectonics have dismembered and displaced the Valley-Lornex orebody into two unequal portions now over 3 km apart.

The numerous small to medium sized copper showings and prospects north, west and south of the Valley orebody including the ALWIN mine and adjacent mineralized bodies are interpreted to be distal extensions of the same mineralizing system.

PROPERTY GEOLOGY

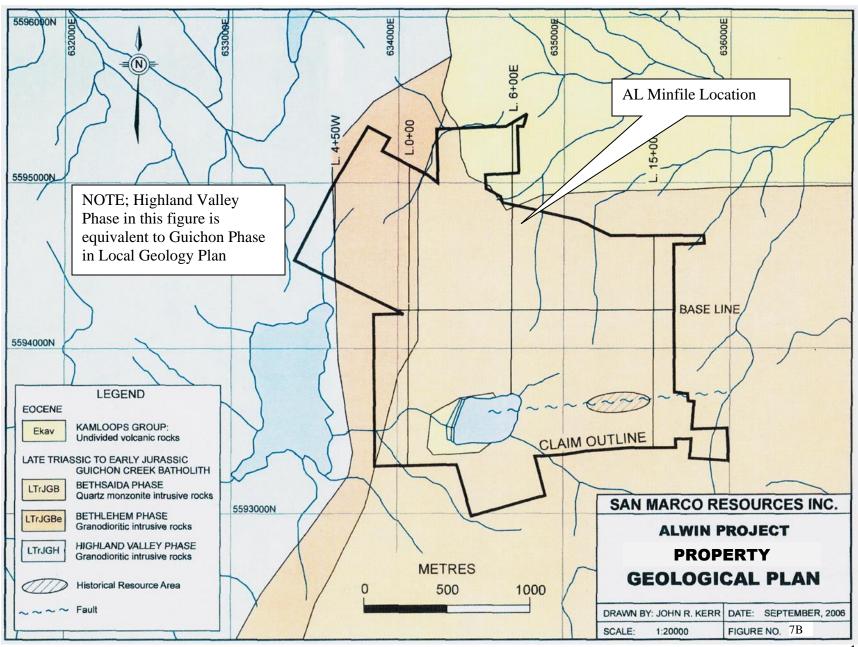
The property has relatively simple geology. It lies entirely within the Guichon creek batholith and has portions of four separate phases of intrusive within its borders. The first three are from west to east successively younger and siliceous-alkalic Guichon granodiorite, Bethlehem granodiorite and Bethsaida quartz monzonite phases. Cross cutting these are a slightly later that Bethsaida siliceous feldspar porphyry dyke swarm. Later Tertiary volcanic rocks of the Kamloops Group have been mapped in the northern and central portion of the property

The property hosts a strong set of ENE to east, east to ESE, northerly and northwesterly faults. These structures can both host and truncate and displace mineralization on the property.

The most important mineralized zone on the property is the ALWIN past producing copper+/-silver+/-gild+/-molybdenum deposits located at the property's SE corner.

The mineralization is largely confined to ENE to east and east to ESE steeply south dipping structures and individual mineralized zones commonly extend from one set to the other at structural intersections.

Individual zones can be over 5 metres wide with horses of unmineralized wallrock common to solid 0.5 to 3 metre zones. Then can extend over 100 metres horizontally and over 150 metres vertically. The zone has 6 individual designated orebodies however they sometimes intersect and merge or crosscut each other, especially in plan. The copper mineralization is dominated by chalcopyrite and bornite in an unusual gangue of sericite with varying percentages of silicification. Chalcopyrite can occur as over 40 by 30 by 15 cm massive veins but is more commonly erratically disseminated in the gangue. Bornite appears to be dominantly disseminated in the sericitic gangue.



John Ostler, P.Geo. who logged the 2008 drill core noted 6 discreet alteration with associated mineralization types for all of the mineralization on the property, some with subtypes.

He termed them;

Phase 1 – pre-hydrothermal recrystallization

Phase 2 – "Highland Valley Event" 'classic' potassic + quartz, cpy-bornite veins

Phase 3 – retrograde propylitic

Pre phase 4 – porphyritic dacite dyke intrusions

Phase 4A – "Alwin event" – chlorite-quartz with disseminated cpy-bn and commonly quartz-cpy-bn veins.

Phase 4B – "Alwin event" – massive chlorite-sericite with 'lensoid replacement cpy-bn bodies.

Phase 5A – sericite alteration the oxidises sulphides and 'flushes' metals.

Phase 5B – kaolinite dominant argillic alteration

Phase 6 – recent faulting producing clay gouge (Tertiary related to Kamloops Group volcanic activity)

Ostler notes in the drill hole 5 log that he observed in holes 1 to 4a a discreet distal early Phase 2 molybdenum event that surrounded the copper dominant normal phase 2 event. In holes 5 to 7 he notes that phase 5 which he considered a metallic mineralization flushing phase is locally dominant and periodically overprints earlier phases. Phase 6 is most common in hole 7.

ADJACENT PROPERTIES

The ALWIN property occurs immediately west of the Valley porphyry copper-molybdenum-silver ore body. The property has a very extensive exploration history and is currently being explored by mine site exploration geologists. HVC also holds many of the porphyry targets surrounding the ALWIN property.

2018 EXPLORATION PROGRAM AND RESULTS

The 2018 ALWIN exploration program was completed on Sept 11 and 12 with Billingsley and Lindinger present. Lindinger visited the site on November 13, 2018 to examine and retrieve mineralized intersections of 2008 drill core for study and analyses. The September visits were limited to prospecting and completing reconnaissance geological observations of the larger claim block, reconnaissance geological observations of the ALWIN zone exposures and sampling of massive chalcopyrite taken from the north wall of the Ashcroft glory hole, and less massive very coarsely disseminated chalcopyrite from the same location.

GPS stations, 2008 drill hole locations, and Sept 2018 GPS tracks are presented in Figures 9 and 10. The 2019 sample locations and significant results are also presented in Figure 10. Index Plan, Figure 8 is located in Appendix C below. Figure 9 also has reconnaissance geological observations plotted with BETH as Bethlehem and Bethsaida phases and PPY as feldspar porphyry dyke. TABLE 3 below is a summary of Sept 12, 2018 geological observations. Sample locations, descriptions and significant results are presented in TABLE 6 and in a sample image file with both in Appendix B. Full analytical results presented in Appendix A. The trace of DH

08-04A which had the 3 samples analysed is presented in Figure 11 below. The portion of the drill hole trace with sample tag no's, copper, silver, gold and gallium results is presented in Figure 11a below.

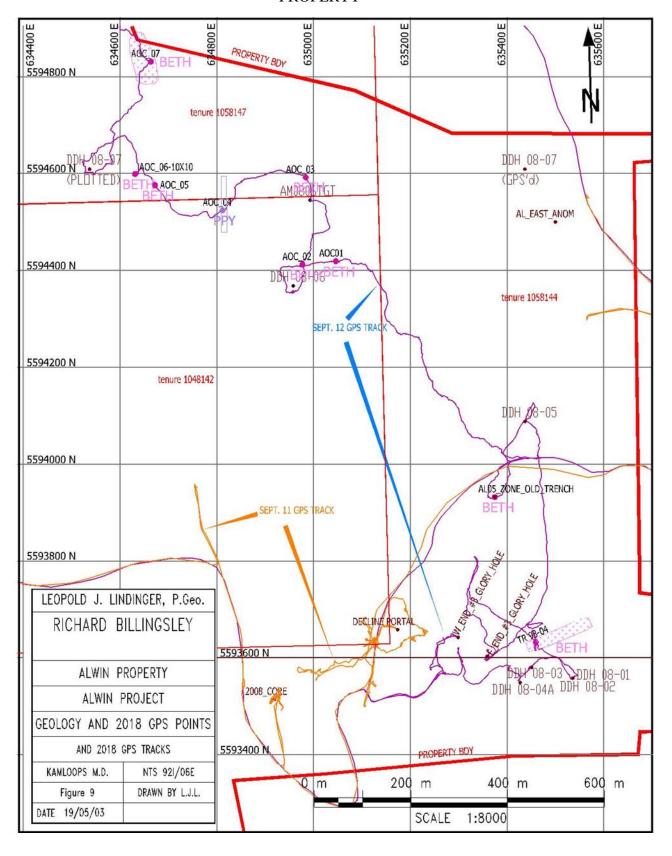
The ALWIN area is, as previously documented a 400+ by 150 metre area of variably weakly to moderately altered Bethsaida quartz monzonite and a later north striking east dipping siliceous feldspar porphyry dyke system.

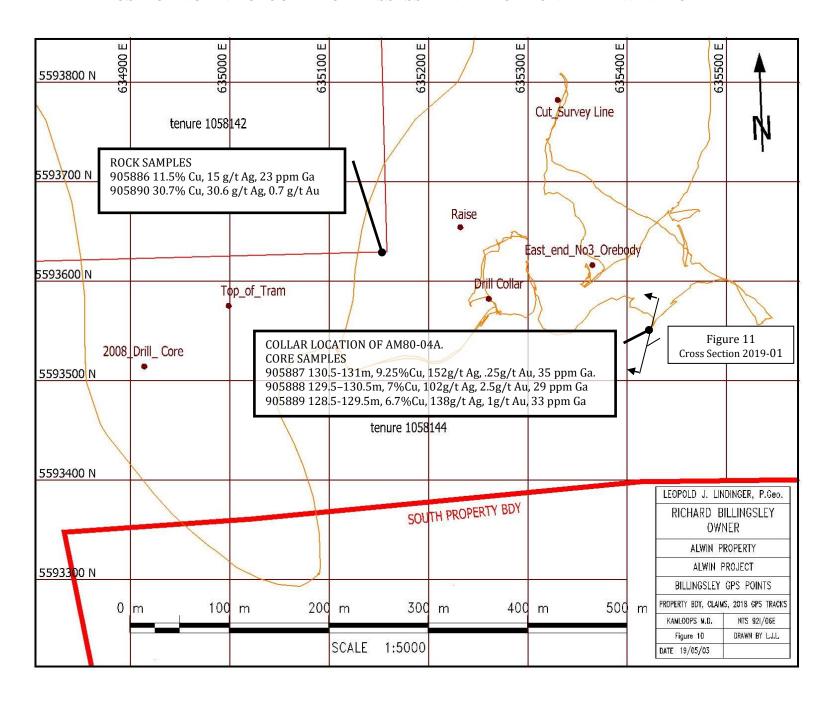
Preliminary prospecting by the writer, revealed that the property has been extensively explored for in the past 100 years and that several areas, especially in the northwest corner of the claims have significant apparently undocumented exploration workings. Almost all of these workings have coincident copper, gold and underlying chargeability highs. Many of the old exploration trails have been variably obliterated by recent pine salvage logging.

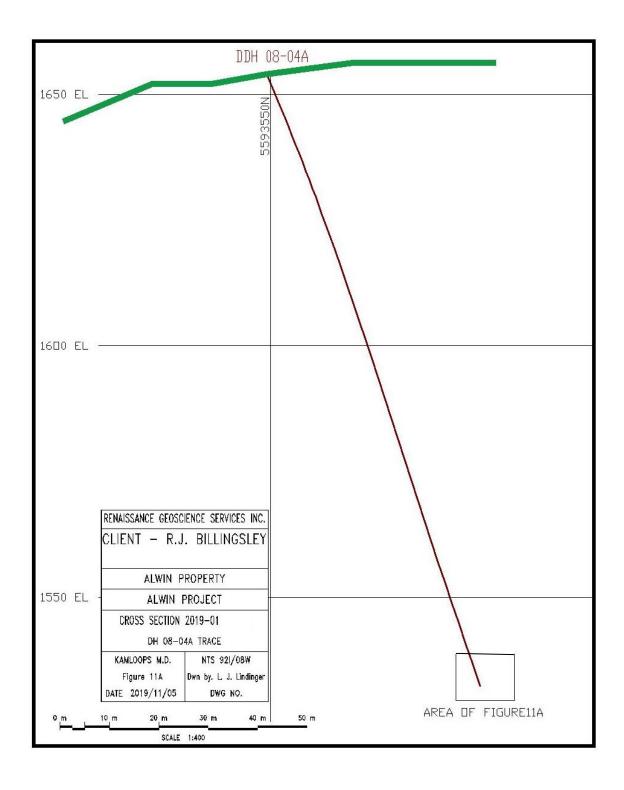
The area surrounding site AOC_07 at the extreme NW corner area of the property is an extensive 100+ by 100+ metre area of stripping and trenching of variably and locally strongly altered intrusive. Based on the property geological plan the intrusive would be part of the eastern contact area of Bethlehem with later Bethsaida phase intrusive with the bulk of the altered rock on the Bethlehem side of the contact.

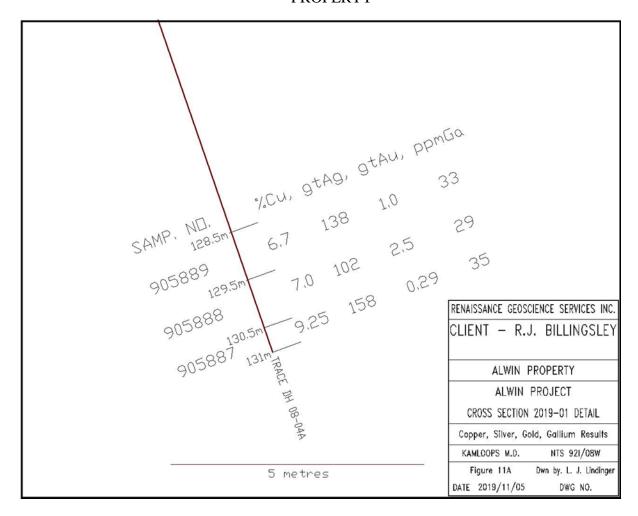
TABLE 3

	TABLE 3						
	2018 ALWIN OUTCROP OBSERVATIONS						
OC NAME	E	N	ELEV	ROCKTYPE	DESCRIPTION		
AOC_01	635046	5594419	1562	BETH	Bethsaida granodiorite		
AOC_02	634977	5594412	1563	BETH	Altered Bethsaida granodiorite. Rock is		
					resistant with tan cast.		
AOC_03	634984	5594592	1558	BETH	Bethsaida granodiorite		
AOC_04	634812	5594524	1549	PPY	Grey medium grained feldspar porphyry		
					dyke. Groundmass is very fine grained.		
AOC_05	634672	5594576	1561	BETH	Strongly altered Bethsaida granodiorite.		
AOC_06-10X10	634631	5594599	1564	BETH	Strongly altered Bethsaida granodiorite.		
AOC_07	634664	5594831	1533	BETH	Altered Beth lehemgranodiorite. Rock is		
					resistant with tan cast.		
TR93-04	635460	5593630	1644	BETH	Strongly altered Bethsaida granodiorite.		
					Sericitic EW shears. Abundant malachite on		
					stockwork fractures.		









SAMPLE PREPARATION, ANALYSES AND SECURITY

All 2018 samples were taken by Leo Lindinger and remain in his possession. Those selected for analyses were delivered to Actlabs in Kamloops.

Analytical Procedures and Methodology

The analytical procedures used by Actlabs are detailed below.

The samples are dried at 105 °C then a 250 gram split is pulverized to 85% passing <75 micron.

The samples were analyzed for gold, platinum and palladium by Code 1C-OES-Kamloops Fire Assay ICPOES, a Gold and Silver by Code 8-4 Acid Total Digestion-Kamloops Code 8-4 Acid Total Digestion Assays and 62 element Code UT-6-Kamloops Total Digestion ICP & ICP/MS packages.

This chosen sample procedures produced results for 66 elements at a range of 2 ppb to 10+% depending on the element. The samples are digested in a 90 degree Celsius in separate hydrochloric and nitric acid and 4 acid hydrochloric, nitric, perchoric and hydroflouric acid

solutions for 45 minutes. This procedure fully digests sulphides and iron oxide, most silicates and resistate minerals. They are then bulked with de-ionized water, and an aliquot of this is taken for analysis. A 2-3 point standardization curve is used to check the linearity (high and low). Certified reference material is used to check the performance of the machine and to ensure that proper digestion occurred in the wet lab. QC samples are run along with the client samples to ensure no machine drift or instrumentation issues occurred during the analysis of the sample(s). Repeat samples (every 10 or less) and re-splits (every 35 or less) are also run to ensure proper weighing and digestion occurred.

Elements returning results over the maximum threshold are upon request or instruction fire assayed using a separate subsample by procedures specific for those elements.

Analytical results processing

The results are collated by computer and are printed along with accompanying quality control data (re-splits and standards). After approval by the chief assayer, the results are released for publication and Emailed to the client as signed PDF and editable CSV text files. Final analytical result affidavits are appended to this report in Appendix A

DATA VERIFICATION

Due to the prospective nature of the program and very limited sample set no field standards or blanks were used for this program. The author opines that the internal quality controls of the laboratories used were adequate.

TABLE 5 - 2018 ALWIN COST STATEMENT

Exploration Work type	Comment	Days			Totals
Personnel (Name)* / Position	Field Days (list actual days)	Dave	Date	Subtotal*	
LINDINGER	Sept 11, 12, nov 13, 2018	Days 2.6		\$2,288.00	
BILINGSLEY	Sept 11, 12 2018	2.0		\$1,000.00	
DILINGSLET	Зерс 11, 12 2010		φ300.00		\$3,288.00
Office Studies	List Personnel (note - Office onl	v. do no	t include f		\$3,200.00
Literature search		10.00		\$1,100.00	
Database compilation		10.00	\$75.00		
Computer modelling		11.09			
Reprocessing of data		0.29	· · · · · · · · · · · · · · · · · · ·	-	
General research		4.58	-	-	
Report preparation		15.00		\$1,650.00	
Rock descriptions		1.75			
Trock descriptions		1173	Ψ110.00		\$4,296.90
Ground Exploration Surveys	Area in Hectares/List Personnel			ψ 1,230.30	ψ 1/250150
Geological mapping	150 HEC LINDINGER 1 DAY				
Regional		note: ex	xpenditures	here	
Reconnaissance	150 HEC LINDINGER 1 DAY		•	in Personn	el
Prospect	150 HEC LINDINGER 1 DAY		penditures a		
Prospect	20 HEC BILLINGSLEY 1 DAY	Trefa esq		\$500.00	
Underground	Define by length and width			4000.00	
Trenches	Define by length and width			\$1,380.00	
,	Joine 27 longer and main			4=/555.55	
Geochemical Surveying	Number of Samples	No.	Rate	Subtotal	
Rock	laboratory costs	2.0	\$78.00	\$156.00	
DRILL CORE	,	3.0			
			·	\$390.00	
Transportation		No.	Rate	Subtotal	·
truck rental	3 DAYS @ 150/DAY	3.00	\$150.00		
kilometers	·	800.00		-	
			'		\$1,050.00
Accommodation & Food	Rates per day				. ,
Hotel	2 person nights	2.00	\$75.00	\$150.00	
Camp			\$0.00	-	
Meals	2 day @ \$ 80/day	2.00			
				\$310.00	
Equipment Rentals					
Field Gear (sat phone)	2 days	2.00	\$15.00	\$30.00	
GPS RECEIVERS	2 DAYS AT 2 UNITS	4.00			
				\$50.00	
Freight, rock samples					
2 HOURS TRANSPORTTION					
			\$2.00	\$50.00	
			\$2.00 \$0.00		
				\$0.00	

CONCLUSIONS

The 2018 prospecting, rock sampling and property examination program confirmed the location and degree of mineralization at the ALWIN area, the location of sampled trench 93-04 and the locations of the 2008 drill holes except for 08-07.

A review of the 2008 drill logs partially accompanied with high chalcopyrite composition rocks retrieved from the old Ashcroft glory holes indicated that there is a general increasing bornite with accompanying higher copper/iron-sulphur ratios, and a trend of higher silver and gold values with depth. Also noted was at least in the 1993 trench 93-04 a several metre wide stockwork fracture associated mineralized zone averaging over 1% copper.

The 2008 drill core except for entirely missing holes 08-02 is still in reasonably good shape. Many boxes containing some of the high grade intersections have been removed by the writer and are stored in a dry location at his home core storage facility. Much of the 1972-1981 core is in 'OK" to poor shape in constructed log core storage areas.

RECOMMENDATIONS

Additional exploration is warranted on portions of the ALWIN copper-molybdenum-silver-gold property. An \$800,000 phase 1 multi-staged program is proposed. The stages are separately budgeted IP and drilling program based on the separate targets described below.

Since no exploration work has been completed on the property since the 2008 San Marco drilling the writer has excerpted Kerr's recommendations.

... "It is recommended that continued exploration be diamond drill holes located in the areas of holes #08-05 and 08-06. The initial phase incorporates a total of six diamond drill (NQ - 5.2cm diameter) holes on the property, three holes to test the area around hole #08-05 and three holes to test the area around hole #08-06. Each hole should be 250 - 300 meters deep, therefore a total of 1650 meters of drilling is allowed for.

Sufficient access roads exist into the initial two areas contemplated for drilling and clear-cuts should provide fairly easy access into the last two sites, therefore building of roads to drill sites should be minimal. An allowance is being made in for site preparation to suit permit requirements.

Also incorporated into the initial is continued research to procure and organize all historic mine development records and drill data that may exist in the offices of government or past operators. Consideration should be given to establishing a new geological and resource model, utilizing available and updated computer programs. It is this author's opinion that a resource model should be developed prior to any further resource development drilling in order to establish the amount and nature of drill-hole patterns, required to upgrade the resource to an indicated and measured category."...

In addition to Kerr's recommendations for additional exploration in the holes 08-05 and 06 areas and due to the uncertainty of the actual location of hole 08-07 the writer considers the plotted location at 634670E some 850 metres west of the same hole's GPS'd location on all summary log and sections may remain untested and therefore may explained the 'poor' results reported in this hole (the writer could not locate evidence of a drill site at the plotted location which he could for all other 2008 pad sites). The GPS'd location was in a very recently clear cut with evidence of several past exploration trails but the writer (partially due to the unencouraging results) did not make a specific effort to locate a possible drill site here.

Several better copper and/or silver intersections in holes 1 to 6 were not bracket sampled to determine if the mineralization was terminated within the sample. These intersections should be bracket sampled especially due to the possibility of lower grade copper mineralization adjacent to these intersections.

In the ALWIN target area two deep 1 kilometre long north-south TITAN 24 IP lines should be completed. One immediately east of and centered at the #3 glory hole and the second parallel line between 200 and 300 metres east to determine the depth extent and strength of the mineralizing system there. The depth penetration of this survey should be at least 500 metres.

Also, in the Alwin area recommended is to test the down dip extension of the intersection in hole 08-04a by at least 25 metres. The fact that the relatively thick ore grade intersection has not yet been mined out suggests to the writer that unmined mineralized material probably exists below. The down depth extensions of the mineralization under hole 08-03 especially below the 5130 (main) development and mining level presents another attractive exploration target.

TABLE 6

ALWIN PHASE 1 RECOMMENDED EXPENDITURES						
PROSPECTING - CORE SAMPLING	4 MANDAYS AT \$600 DAY		\$	2,400		
ANALYSES	15 SAMPLES @ \$55/SAMPLE	15	\$	825		
GEOLOGICAL MAPPING	2 MANDAYS AT \$1100/DAY		\$	2,200		
TITAN 24 IP SURVEY	2.2 KM TO 500 M		\$	20,000		
DIAMOND DRILLING (under hole 4a)	200 M AT \$260/M	200	\$	52,000		
CORE TECHNICIAN	3 MANDAYS @ \$500.DAY	3	\$	1,500		
PROJECT MANAGER-GEOLOGIST	3 MANDAYS@ \$1200/DAY	3	\$	3,600		
ANALYSES	50 SAMPLES @ \$55/SAMPLE	50	\$	2,750		
DIAMOND DRILLING (beside and under hole 5)	800 M AT \$260/M	800	\$	208,000		
CORE TECHNICIAN	6 MANDAYS @ \$500.DAY	6	\$	3,000		
PROJECT MANAGER-GEOLOGIST	6 MANDAYS@ \$1200/DAY	6	\$	7,200		
ANALYSES	300 SAMPLES @ \$55/SAMPLE	300	\$	16,500		
DIAMOND DRILLING (beside and under hole 6)	800 M AT \$260/M	800	\$	208,000		
CORE TECHNICIAN	6 MANDAYS @ \$500.DAY	6	\$	3,000		
PROJECT MANAGER-GEOLOGIST	6 MANDAYS@ \$1200/DAY	6	\$	7,200		
ANALYSES	300 SAMPLES @ \$55/SAMPLE	300	\$	16,500		
DIAMOND DRILLING (plotted hole 08-07 location)	250 M AT \$260/M	250	\$	65,000		
CORE TECHNICIAN	3 MANDAYS @ \$500.DAY	3	\$	1,500		
PROJECT MANAGER-GEOLOGIST	3 MANDAYS@ \$1200/DAY	3	\$	3,600		
ANALYSES	45 SAMPLES @ \$55/SAMPLE	45	\$	2,475		
DIAMOND DRILLING (under hole 3)	1750 M AT \$260/M	175	\$	45,500		
CORE TECHNICIAN	3 MANDAYS @ \$500.DAY	3	\$	1,500		
PROJECT MANAGER-GEOLOGIST	3 MANDAYS@ \$1200/DAY	3	\$	3,600		
ANALYSES	50 SAMPLES @ \$55/SAMPLE	50	\$	2,750		
REPORT			\$	30,000		
	CONTINGEN	NCY@ 10%	\$	80,000		
	TOTAL	PROGRAM	\$	790,600		

Based on the IP and drilling results additional exploration in the target areas would be recommended.

ALWIN PHASE 1 RECOMMENDED EXPENDITURES						
PROSPECTING - CORE SAMPLING	4 MANDAYS AT \$600 DAY		\$	2,400		
ANALYSES	15 SAMPLES @ \$55/SAMPLE	15	\$	825		
GEOLOGICAL MAPPING	2 MANDAYS AT \$1100/DAY		\$	2,200		
TITAN 24 IP SURVEY	2.2 KM TO 500 M		\$	20,000		
DIAMOND DRILLING (under hole 4a)	200 M AT \$260/M	200	\$	52,000		
CORE TECHNICIAN	3 MANDAYS @ \$500.DAY	3	\$	1,500		
PROJECT MANAGER-GEOLOGIST	3 MANDAYS@ \$1200/DAY	3	\$	3,600		

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- Somerville, R.D., 2000: A Report On A Magnetometer Survey Performed on the Alwin Copper Property. BCMEM Assessment Report 26453.

STATEMENT OF QUALIFICATIONS

I, Leopold J. Lindinger, hereby do certify that:

I am a graduate of the University of Waterloo (1980) and hold a BSc. degree in honours Earth Sciences.

I have been practicing my profession as a mineral exploration and mine geologist continually for the past 39 years.

I am a registered member, in good standing as a Professional Geoscientist with Engineers and Geoscientists BC (1992).

I have no interest in the ALWIN Property.

I am responsible for the report entitled PROSPECTING and GEOCHEMICAL ASSESSMENT REPORT on the ALWIN PROPERTY dated May 3, 2019

May 3, 2019. Revised Nov 5, 2019

"Leopold J. Lindinger"

Leopold J. Lindinger, P.Geo.

APPENDIX A -ANALYTICAL AFFIDAVITS

Quality Analysis ...



Innovative Technologies

Date Submitted:04-Mar-19Invoice No.:A19-03275Invoice Date:20-Mar-19

Your Reference: 2019-03-04

Renaissance Geosciences 680 Dairy Road Kamloops B.C. V2B8N5 Canada

ATTN: Leo Lindinger

CERTIFICATE OF ANALYSIS

5 Rock samples were submitted for analysis.

The following analytical package(s) were requested: Code 1A3-Kamloops Au - Fire Assay Gravimetric (QOP AA-Au)

Code 1C-OES-Kamloops Fire Assay ICPOES

Code 8-4 Acid Total Digestion-Kamloops Code 8-4 Acid Total Digestion Assays

Code UT-6-Kamloops Total Digestion ICP & ICP/MS

REPORT **A19-03275**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

CERTIFIED BY:

Emmanuel Eseme , Ph.D. Quality Control

ACTIVATION LABORATORIES LTD.

9989 Dallas Drive, Kamloops, British Columbia, Canada, V2C 6T4
TELEPHONE +250 573-4484 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Kamloops@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Results	Activation Laboratories Ltd.	Report: A19-03275
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				_			_						_		_	_		_				_	
Analyte Symbol	Au	Pd	Pt	Cu	Li	Na	Mg	Al	K	Ca	Cd	٧	Cr	Mn	Fe	Hf	Hg	Ni	Er	Ве	Но	Ag	Cs
Unit Symbol	ppb	ppb	ppb	%	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	2	5	5	0.001	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	1	1	0.01	0.1	10	0.5	0.1	0.1	0.1	0.05	0.05
Method Code	FA-ICP	FA-ICP	FA-ICP	4Acid ICPOE S	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
905886				11.5	1.9	0.07	0.18	6.55	1.79	0.12	0.8	10	2	203	11.7	0.4	10	0.7	0.2	0.6	< 0.1	11.9	3.34
905887				9.25	5.8	0.08	0.28	8.52	2.95	0.42	3.3	82	5	461	5.03	0.4	150	0.7	0.5	0.6	0.2	> 100	4.58
905888	2520	< 5	5	7.01	4.4	0.07	0.24	8.92	2.91	0.28	1.6	55	10	462	5.84	0.4	1280	0.5	0.5	0.7	0.2	99.4	4.63
905889				6.69	7.1	0.08	0.28	8.72	2.26	0.34	1.9	51	3	473	4.68	0.6	150	0.5	0.8	0.8	0.3	> 100	4.78
905890	680	< 5	21	30.7	< 0.5	< 0.01	0.02	0.63	0.39	0.01	4.1	2	< 1	66	23.5	< 0.1	40	< 0.5	< 0.1	< 0.1	< 0.1	30.6	0.46

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Analyte Symbol	Co	Eu	Bi	Se	Zn	Ga	As	Rb	Υ	Sr	Zr	Nb	Мо	In	Sn	Sb	Те	Ва	La	Ce	Pr	Nd	Sm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.05	0.02	0.1	0.2	0.1	0.1	0.2	0.1	0.2	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
905886	6.9	0.12	1.56	9.0	47.0	23.3	19.6	151	1.8	7.5	8	1.5	32.9	4.6	4	0.8	1.0	279	3.6	8.7	1.1	4.0	0.7
905887	5.5	0.50	6.99	1.3	51.6	35.2	9.3	175	4.6	16.5	7	1.6	109	0.8	10	1.2	0.4	426	11.9	26.3	3.2	11.8	2.0
905888	5.5	0.45	3.56	1.7	53.1	28.8	6.0	175	4.5	13.1	7	1.9	199	1.0	7	1.3	0.7	474	11.6	24.3	2.9	10.7	1.8
905889	4.3	0.58	1.37	1.2	48.9	32.7	2.6	174	6.9	16.4	9	2.1	73.9	0.8	8	1.1	< 0.1	463	13.4	28.3	3.6	13.2	2.3
905890	13.4	< 0.05	6.54	41.2	264	3.0	4.5	24.8	0.5	2.0	2	0.3	3.88	6.7	8	0.4	6.7	62	0.5	1.1	0.1	0.5	< 0.1

Results	Activation Laboratories Ltd.	Report: A19-03275
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Analyte Symbol	Gd	Tb	Dy	Cu	Ge	Tm	Yb	Lu	Ta	W	Re	TI	Pb	Sc	Th	U	Ti	Р	S	Au	Ag
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	g/tonne	g/tonne
Lower Limit	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.05	0.5	1	0.1	0.1	0.0005	0.001	0.01	0.03	3
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-ICP	TD-ICP	FA-	FA-
																				GRA	GRA
905886	0.4	< 0.1	0.3	> 10000	0.1	< 0.1	0.2	< 0.1	< 0.1	17.9	0.009	0.59	1.1	1	1.2	0.6	0.123	0.066	11.0	< 0.03	15
905887	1.5	0.2	1.0	> 10000	0.2	< 0.1	0.5	< 0.1	< 0.1	16.8	0.050	0.59	9.9	3	1.0	1.4	0.134	0.064	4.52	0.29	152
905888	1.5	0.2	0.9	> 10000	0.1	< 0.1	0.4	< 0.1	0.1	14.9	0.116	0.62	5.4	3	1.1	1.5	0.136	0.056	4.31	2.78	102
905889	2.0	0.2	1.3	> 10000	0.1	0.1	0.8	0.1	< 0.1	15.2	0.069	0.63	9.0	3	1.2	1.9	0.149	0.060	3.46	0.99	138
905890	< 0.1	< 0.1	< 0.1	> 10000	0.3	< 0.1	< 0.1	< 0.1	< 0.1	3.7	0.003	< 0.05	5.5	< 1	0.2	0.2	0.0175	0.070	> 20.0	< 0.03	30

Analyte Symbol	Au	Pd	Pt	Cu	Li	Na	Mg	Al	К	Ca	Cd	V	Cr	Mn	Fe	Hf	Hg	Ni	Er	Ве	Но	Ag	Cs
Unit Symbol		ppb	ppb		ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%		ppb	ppm		_		ppm	ppm
Lower Limit		5	5		0.5	0.01		0.01	0.01	0.01	0.1	1	1	1	0.01	0.1	10	0.5		0.1	0.1	0.05	0.05
Method Code	FA-ICP	FA-ICP	FA-ICP						TD-MS	TD-MS		TD-MS	TD-MS	TD-MS	TD-MS							TD-MS	TD-MS
SDC-1 Meas																							
SDC-1 Cert																							
GXR-6 Meas																							
GXR-6 Cert																							
MP-1b Meas				3.08																			
MP-1b Cert				3.07																			
DNC-1a Meas																							
DNC-1a Cert																							
OxQ75 Meas																							
OxQ75 Cert																							
PK2 Meas	4540	5740	4320																				
PK2 Cert	4785	5918	4749																				
CZN-4 Meas				0.414																			
CZN-4 Cert				0.403																			
SQ47 Meas																							
SQ47 Cert																							
PTC-1b Meas				7.70																			
PTC-1b Cert				7.97																			
CCU-1e Meas				22.7																			
CCU-1e Cert				22.9																			
OREAS 923 (4 Acid) Meas																							
OREAS 923 (4 Acid) Cert																							
OREAS 621 (4 Acid) Meas					12.8	1.17	0.43	5.68	1.86	1.79	275	33	21	464	3.52	3.9		26.1		1.6		63.6	3.19
OREAS 621 (4 Acid) Cert					14.2	1.31	0.507	6.40	2.20	1.97	284	31.8	37.1	532	3.70	4.41		26.2		1.69		69.0	3.28
OREAS 925 (4 Acid) Meas					32.7	0.26	1.64	7.32	1.85	0.44	0.6	89	60	940	6.85	3.4		34.6	2.6	2.3	0.9	2.91	6.36
OREAS 925 (4 Acid) Cert					32.3	0.286	1.79	7.32	2.47	0.458	0.540	91.0	70.0	990	6.86	3.15		34.8	2.70	2.32	0.930	2.36	6.50
OREAS 520 (4																							
Acid) Meas OREAS 520 (4	 		-		-	-			-	-					-			-					
Acid) Cert																							1
CDN-PGMS-30 Meas	1820	1620	225																				
CDN-PGMS-30 Cert	1897.0 00	1660.0	223.000																				
Oreas 45e (4-Acid) Meas	- 55	- 55			7.0	0.06	0.16	7.03	0.35	0.07		314	1010	577	24.8	3.6		475	1.2	0.6		0.59	1.26
Oreas 45e					6.58	0.059	0.156	6.78	0.324	0.065		322	979		24.12	3.11		454	1.20	0.62		0.311	1.26

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Analyte Symbol	Au	Pd	Pt	Cu	Li	Na	Mg	Al	K	Ca	Cd	٧	Cr	Mn	Fe	Hf	Hg	Ni	Er	Ве	Но	Ag	Cs
Unit Symbol	ppb	ppb	ppb	%	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	2	5	5	0.001	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	1	1	0.01	0.1	10	0.5	0.1	0.1	0.1	0.05	0.05
Method Code	FA-ICP	FA-ICP	_	4Acid ICPOE S	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
(4-Acid) Cert														550.000									
905886 Orig																							
905886 Dup																							
905890 Orig				31.3	< 0.5	< 0.01	0.02	0.67	0.41	0.01	4.1	3	< 1	64	23.9	< 0.1	40	< 0.5	< 0.1	0.1	< 0.1	30.9	0.47
905890 Dup				30.2	< 0.5	< 0.01	0.02	0.60	0.37	0.01	4.0	2	< 1	68	23.0	< 0.1	40	< 0.5	< 0.1	< 0.1	< 0.1	30.4	0.45
Method Blank					< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 1	< 1	5	< 0.01	< 0.1	< 10	< 0.5	< 0.1	< 0.1	< 0.1	< 0.05	< 0.05
Method Blank				< 0.001																			
Method Blank	3	< 5	< 5																				
Method Blank																							

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Analyte Symbol	Со	Eu	Bi	Se	Zn	Ga	As	Rb	ΙΥ	Sr	Zr	Nb	Мо	In	Sn	Sb	Те	Ва	La	Ce	Pr	Nd	Sm
Unit Symbol			-						<u> </u>	 													_
Lower Limit	ppm 0.1		ppm 0.02	ppm 0.1	ppm 0.2		ppm 0.1		ppm 0.1	ppm 0.2	ppm 1	ppm 0.1		ppm 0.1		ppm 0.1	ppm 0.1	ppm 1	ppm 0.1	ppm 0.1	ppm 0.1	ppm 0.1	ppm 0.1
Method Code			TD-MS	TD-MS					TD-MS	TD-MS						TD-MS		TD-MS		TD-MS		TD-MS	TD-MS
SDC-1 Meas	TD-WIS	TD-WG	TD-WIS	TD-WIS	TD-WIS	TD-WG	TD-IVIO	TD-IVIO	TD-WIS	T D-IVIO	TD-WIS	10-1010	TD-WG	TD-WIS	TD-WG	TD-WIS	TD-IVIO	TD-WIS	TD-WG	TD-WIS	TD-WG	TD-IVIO	TD-WIS
SDC-1 Meas																							\vdash
GXR-6 Meas																							\vdash
GXR-6 Cert																							\vdash
MP-1b Meas																							\vdash
MP-1b Cert				-															-				\vdash
DNC-1a Meas																							\vdash
DNC-1a Meas																							\vdash
OxQ75 Meas				-						-									-				\vdash
OxQ75 Weas				-															-				\vdash
PK2 Meas																							\vdash
PK2 Cert																							\vdash
CZN-4 Meas				 	-	 					-	 	-		 				 				$\vdash \vdash \vdash$
CZN-4 Meas																							
SQ47 Meas																							\vdash
SQ47 Meas																							-
PTC-1b Meas										-													-
PTC-1b Cert																							
CCU-1e Meas																							
CCU-1e Cert																							\vdash
OREAS 923 (4																							\vdash
Acid) Meas																							
OREAS 923 (4 Acid) Cert																							
OREAS 621 (4 Acid) Meas	28.3		3.92	5.7	> 10000	24.0	60.3	86.9	11.8	94.7	147	9.6	14.4	1.7	5	134			24.4	50.3			
OREAS 621 (4 Acid) Cert	29.3		3.93	5.64	52200	24.6	77.0	84.0	11.1	91.0	168	8.61	13.6	1.83	5.25	139			21.6	46.6			
OREAS 925 (4 Acid) Meas	24.6	1.19	32.7	8.6	431	19.6	7.9	136	23.2	34.6	104	13.4	0.94	0.7	14	1.5		356	37.7	78.4	9.2	32.6	5.9
OREAS 925 (4 Acid) Cert	24.6	1.28	31.3	9.07	446	20.3	9.60	163	24.6	36.2	106	13.3	0.099	0.670	14.9	1.36		425	41.3	82.0	9.36	34.8	6.51
OREAS 520 (4																							
Acid) Meas OREAS 520 (4																							
Acid) Cert										-													\vdash
CDN-PGMS-30 Meas																							
CDN-PGMS-30 Cert																							
Oreas 45e (4-Acid) Meas	59.8		0.31	2.3	44.5	17.1	10.2	21.7	7.7	14.1	112	4.7	1.99	< 0.1	< 1	0.5		266	10.4	23.5	2.6	9.2	2.0
Oreas 45e (4-Acid) Cert	57.0		0.28	2.97	46.7	16.5	16.3	21.2	8.28	15.9	110	6.80	2.40	0.099	1.32	1.00		252	11.0	23.5	2.57	9.57	2.28
905886 Orig																							
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Analyte Symbol	Co	Eu	Bi	Se	Zn	Ga	As	Rb	Υ	Sr	Zr	Nb	Мо	In	Sn	Sb	Te	Ва	La	Ce	Pr	Nd	Sm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.05	0.02	0.1	0.2	0.1	0.1	0.2	0.1	0.2	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
905886 Dup																							
905890 Orig	13.7	< 0.05	6.68	41.1	276	3.1	4.7	24.9	0.5	2.0	2	0.3	3.87	6.8	8	0.3	7.0	64	0.5	1.2	0.1	0.5	< 0.1
905890 Dup	13.1	< 0.05	6.40	41.3	252	2.9	4.2	24.7	0.5	2.0	2	0.3	3.89	6.5	8	0.4	6.4	60	0.5	1.1	0.1	0.5	0.1
Method Blank	< 0.1	< 0.05	< 0.02	0.3	< 0.2	0.4	< 0.1	< 0.2	< 0.1	< 0.2	< 1	< 0.1	< 0.05	< 0.1	< 1	< 0.1	< 0.1	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							
Method Blank																							

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Analyte Symbol	Gd	Tb	Dy	Cu	Ge	Tm	Yb	Lu	Та	w	Re	ті	Pb	Sc	Th	U	Ti	Р	s	Au	Ag
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%		g/tonne
Lower Limit	0.1	0.1	0.1	0.2	0.1		0.1	0.1	0.1	0.1	0.001	0.05	0.5	1	0.1	0.1	0.0005	0.001	0.01	0.03	3
Method Code		TD-MS	TD-MS		TD-MS			TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS				FA- GRA	FA- GRA
SDC-1 Meas	1													15			0.184	0.055			
SDC-1 Cert														17.00			0.606	0.0690			
GXR-6 Meas														24				0.035	0.01		
GXR-6 Cert														27.6				0.0350	0.0160		
MP-1b Meas																					
MP-1b Cert																					
DNC-1a Meas														27			0.246				
DNC-1a Cert														31			0.29				
OxQ75 Meas																				49.8	150
OxQ75 Cert																				50.0	153.9
PK2 Meas																					
PK2 Cert																					
CZN-4 Meas																					
CZN-4 Cert																					
SQ47 Meas																				39.2	
SQ47 Cert																				39.9	122.3
PTC-1b Meas	ļ																				
PTC-1b Cert																					
CCU-1e Meas																					
CCU-1e Cert	<u> </u>																				
OREAS 923 (4 Acid) Meas														13			0.380	0.063	0.71		
OREAS 923 (4 Acid) Cert														13.1			0.405	0.0630	0.691		
OREAS 621 (4 Acid) Meas		0.4		3400			0.9	0.1		2.3		1.80	> 5000	6	7.7	2.7	0.171	0.037	4.72		
OREAS 621 (4 Acid) Cert		0.460		3630			0.990	0.140		2.35		1.96	13600	6.24	7.48	2.83	0.149	0.0359	4.48		
OREAS 925 (4 Acid) Meas	5.4	0.8	4.6	5900		0.4	2.3	0.3	0.7	5.2		0.79	108	13	14.9	2.9	0.371	0.063	1.01		
OREAS 925 (4 Acid) Cert	5.58	0.810	4.82	6150		0.390	2.43	0.380	1.06	5.82		0.870	100	13.1	16.0	2.94	0.391	0.0620	0.962		
OREAS 520 (4 Acid) Meas														16			0.275	0.065	0.94		
OREAS 520 (4 Acid) Cert														17.0			0.445	0.0740	1.01		
CDN-PGMS-30 Meas																					
CDN-PGMS-30 Cert																					
Oreas 45e (4-Acid) Meas	1.9		2.1	847			1.3	0.2	0.2	0.8		0.10	18.7	91	14.0	2.6	0.297	0.024	0.04		
Oreas 45e (4-Acid) Cert	1.99		2.05	780			1.19	0.17	0.56	1.07		0.15	18.2	93	12.9	2.41	0.559	0.034	0.046		

QC	Activation Laboratories Ltd.	Report: A19-03275
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Analyte Symbol	Gd	Tb	Dy	Cu	Ge	Tm	Yb	Lu	Та	W	Re	TI	Pb	Sc	Th	U	Ti	Р	S	Au	Ag
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	g/tonne	g/tonne
Lower Limit	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.05	0.5	1	0.1	0.1	0.0005	0.001	0.01	0.03	3
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-ICP	TD-ICP	FA- GRA	FA- GRA
905886 Orig																				< 0.03	15
905886 Dup																				< 0.03	15
905890 Orig	0.1	< 0.1	< 0.1	> 10000	0.3	< 0.1	< 0.1	< 0.1	< 0.1	3.8	0.004	< 0.05	7.0	< 1	0.2	0.2	0.0177	0.071	> 20.0		
905890 Dup	< 0.1	< 0.1	< 0.1	> 10000	0.4	< 0.1	< 0.1	< 0.1	< 0.1	3.5	0.002	< 0.05	4.0	< 1	0.2	0.2	0.0173	0.069	> 20.0		
Method Blank	< 0.1	< 0.1	< 0.1	7.8	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.001	< 0.05	< 0.5	< 1	< 0.1	< 0.1	< 0.0005	< 0.001	< 0.01		
Method Blank																					
Method Blank																					
Method Blank																				< 0.03	< 3

PROSPECTING AND GEOCHEMICAL ASSESSMENT REPORT ON THE ALWIN PROPERTY
APPENDIX B – TABLE 4 - 2018 ALWIN ROCK SAMPLE LOCATIONS, SAMPLE DESCRIPTIONS AND SIGNIFICANT ANALYTICAL RESULTS and ALWIN ROCK
SAMPLE IMAGES, DESCRIPTIONS AND SIGNIFICANT ANALYTICAL RESULTS.

	TABLE 4 -	2018 AL	WIN ROC	K SAN	IPLE L	OCATIONS	AND SAMPLE DESCRIPTIONS		AND		
Sample No		E	N	ELEV	BRG	DIP	LITHOLOGY	ALTERATION	MINERALIZATION	COMMENTS	% Copper
905886	ROCK	635160	5593630	1640			massive sericite - medium fine grained ~90% of rock with 10% fine to coarse grained erratically disseminated chalocpyrite.	Rock is semi massive sericite presumably altered from the host bethsaide granodiorite. Areas of the rock appear to show relict intrusive texture.	~10% fine to very coarse grained (>1 cm dia. grains) erratically disseminated chalcopyrite.		11.5
905887	COLLAR DDH AM08- 04A	635427	5593549	1655	20	-67	massive sericite - medium fine grained ~90% of rock with 10% fine to coarse grained erratically disseminated chalocpyrite.	Rock is semi massive sericite presumably altered from the host bethsaide granodiorite. Areas of the rock appear to show relict intrusive texture.	~12% disseminated bornite as 2-6 mm single and polycrystaline grains.	DRILL HOLE AM08-04A, 130.5-131 M	9.25
905888	COLLAR DDH AM08- 04A	635427	5593549	1655	20	-67	massive sericite - medium fine grained ~90% of rock with 10% fine to coarse grained erratically disseminated chalocpyrite.	Rock is semi massive sericite presumably altered from the host bethsaide granodiorite. Areas of the rock appear to show relict intrusive texture.	~6% 2-6 mm dia. disseminated single and polycrystalline grains and ~5% coarsely disseminated chalcoipyrite as 3-6 mm subhedral grains. Bornite and chalcopyite rarely touching.	DRILL HOLE AM08-04A, 129.5 -130.5	7
905889	COLLAR DDH AM08- 04A	635427	5593549	1655	20	-67	massive sericite - medium fine grained ~90% of rock with 10% fine to coarse grained erratically disseminated chalocpyrite.	Rock is semi massive sericite presumably altered from the host bethsaide granodiorite. Areas of the rock appear to show relict intrusive texture.	~5% 2-6 mm dia. disseminated single and polycrystalline grains and ~3% coarsely disseminated chalcoipyrite as 3-6 mm subhedral grains. Bornite and chalcopyite rarely touching.	DRILL HOLE AM08-04A, 128.5-129.5 M	6.7
905890	ROCK	635160	5594576	1640		ВЕТН	Massive chalcopyrite - > 90% chalcopyrite as medium to coarse cubic crystals. ~5% clear quartz interstitial quartz grains. Mineralization in late dilational lense along north wall of zone	Host rock is semi massive sericite presumably altered from the host bethsaide granodiorite.	see lithology		30.7

	GNIFICANT ANA	ALYTICAL RESUL	TS
Sample No	g/t SILVER	g/t GOLD	ppm GALLIUM
905886	15	not significant	23
905887	152	0.29	35
905888	102	2.5	29
905889	138	1	33
905890	30.6	0.7	not significant



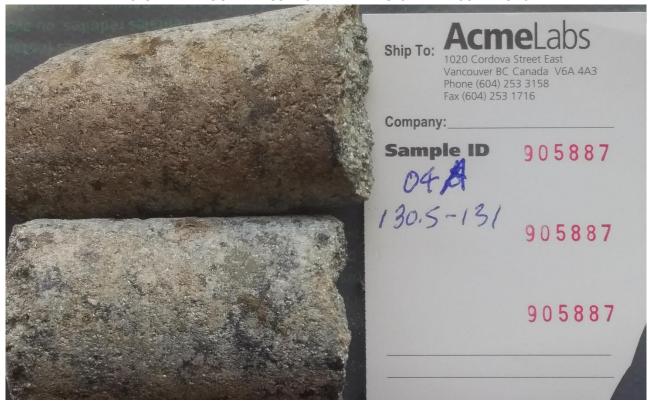
MASSIVE CHALCOPYRITE FROM NORTH WALL OF OLD ASHCROFT MINING GLORY HOLE. SAMPLE 905890 UTM Z10U 635160E, 5593630N





COARSELY DISSEMINATED CHALCOPYRITE IN SERICITIC GANGUE FROM ASHCROFT GLORY HOLE SAMPLE 905866 UTM Z10U 635160E, 5593630N

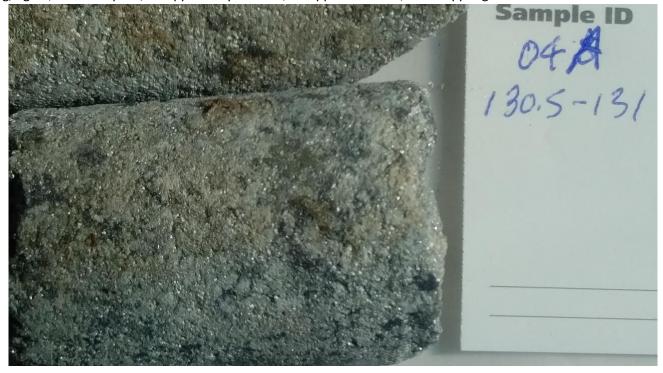
This sample returned 11.5% copper, 15 g/t silver, 23 ppm gallium

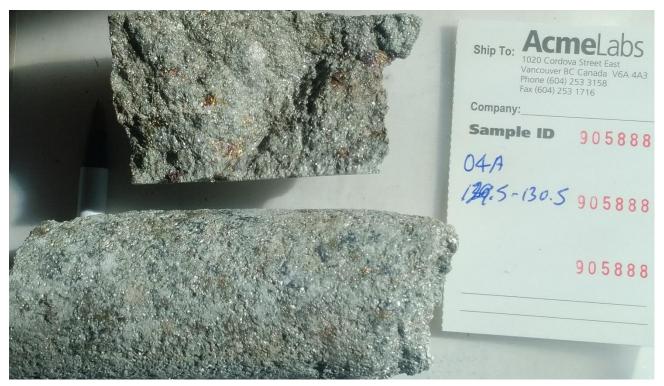


CORE SAMPLE FROM 2008 DRILL HOLE AM08-04A - 130.5-131.1 m, Sample No 905887.

~12% disseminated bornite in a sericitic gangue. Bornite 2 to 6 mm often polycrystalline masses.

The original samples returned 8.92% copper, >100 g/t silver, 0.77 g/t gold, 2.9% sulphur, 123 ppm molybdenum, 1 ppm gallium. The sample in the image (905887) from Hole 08-04A-130.5 to 131 metres returned 9.25% copper, 152 g/t silver, 0.29 g/t gold, 4.52% sulphur, 109 ppm molybdenum, 175 ppm rubidium, and 35 ppm gallium.

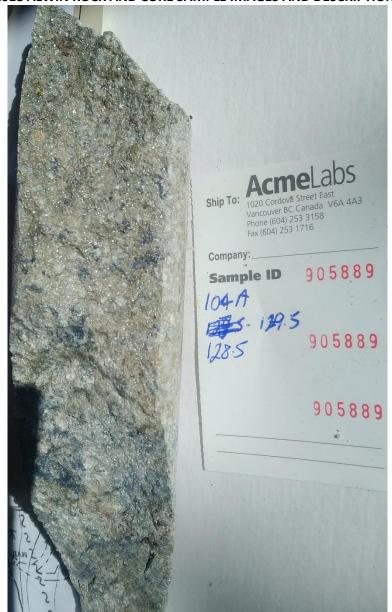




CORE SAMPLE FROM 2008 DRILL HOLE AM08-04A – 129.5-130.5 m, Sample no. 905888.

~6% disseminated bornite and 5% coarsely disseminated chalcopyrite in a sericitic gangue. Bornite 2 to 6 mm often polycrystalline masses, chalcopyrite as 3 to 6 mm subhedral crystals.

The original samples returned 6.5% copper, >100 g/t silver, 2.7 g/t gold, 3.5% sulphur, 116 ppm molybdenum, 1 ppm gallium. The sample in the image (905888) returned 7.0 % copper, 102 g/t silver, 2.5 g/t gold, 4.3% sulphur, 199 ppm molybdenum, 175 ppm rubidium, 29 ppm gallium and 1.3 ppm mercury.



CORE SAMPLE FROM 2008 DRILL HOLE AM08-04A - 128.5-129.5 m, sample 905889.

~5% disseminated bornite and 3% coarsely disseminated chalcopyrite in a sericitic locally siliceous gangue. Bornite 1 to 5 mm often polycrystalline masses, chalcopyrite as 2 to 6 mm subhedral crystals.

The original sample returned 5.8 % copper, >100 g/t silver, 1.5 g/t gold, 2 % sulphur, 45 ppm molybdenum, 2 ppm gallium This sample in the image (905889) returned 6.7 % copper, 138 g/t silver, 1.0 g/t gold, 3.5% sulphur, 74 ppm molybdenum, 174 ppm rubidium, and 33 ppm gallium.

BELOW

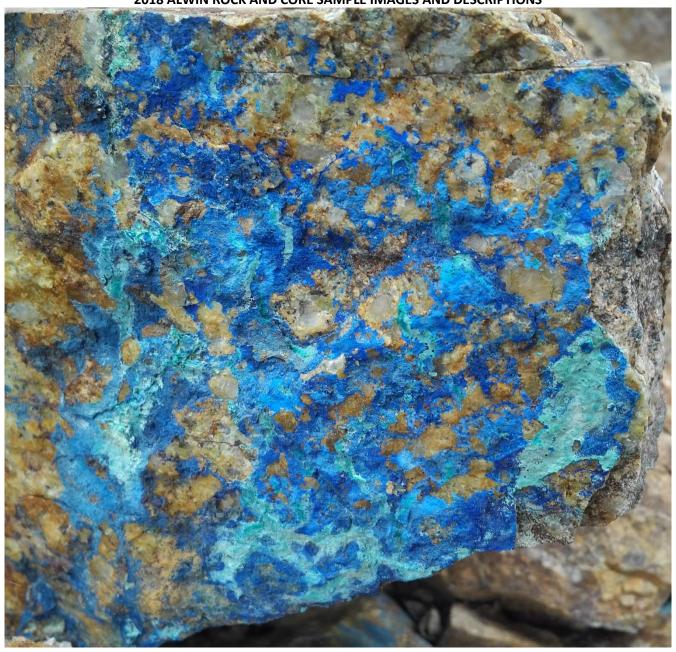
SEVERAL IMAGES FROM THE ASHCROFT GLORY HOLE BLUE AZURITE AND GREEN MALACHITE COATINGS UTM Z10U 635160E, 5593630N

Host rock is coarsely stockwork fractured probably potassically altered Bethsaida granodiorite.

This would not have been ore.

2018 ALWIN ROCK AND CORE SAMPLE IMAGES AND DESCRIPTIONS

2018 ALWIN ROCK AND CORE SAMPLE IMAGES AND DESCRIPTIONS



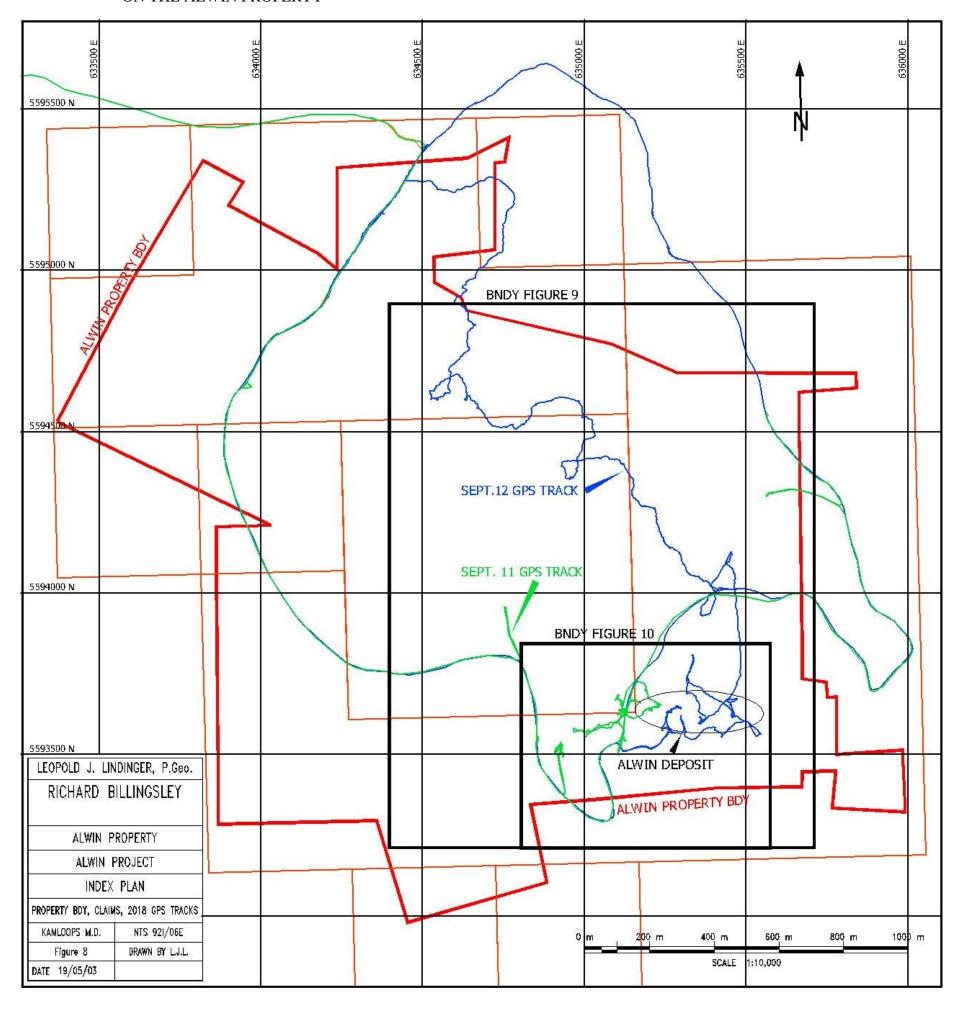


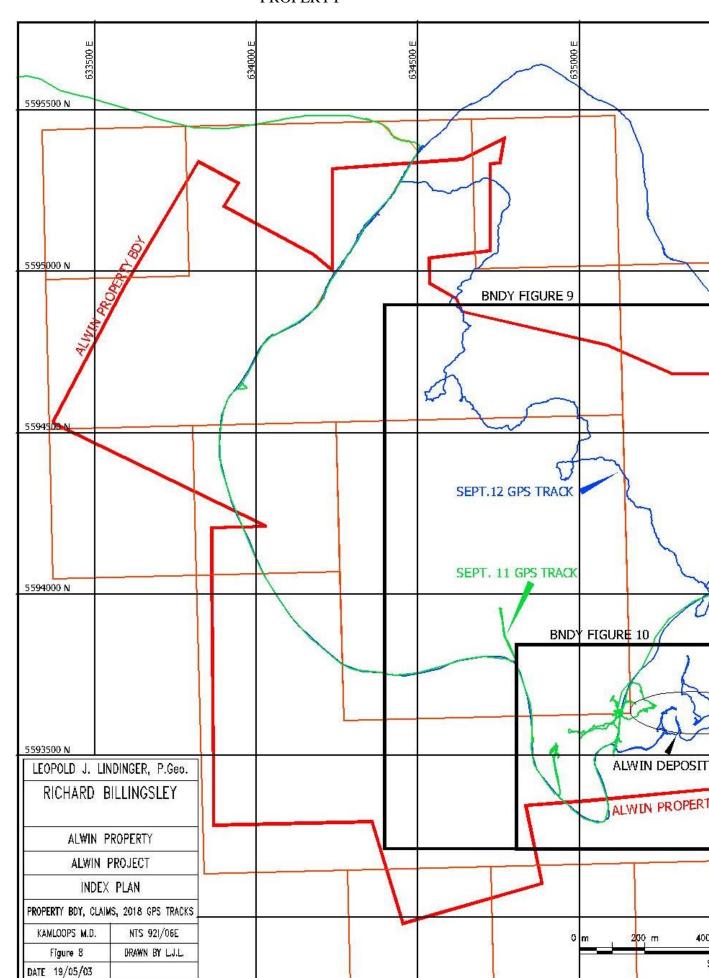
DIOPTRA IMAGE OF 2006 CLAIMSTAKER TRENCH 93-04 LOOKING NORTH.

UTM Z10U 635460E, 5593630N

Exposed is the outcropping of the ALWIN 'orebody' 4 north. Note plentiful malachite coated stockwork fracture altered Bethsaida intrusive. W-E brown streak in upper right center is weathered sericitic material from one of the higher grade shear zones that returned 0.92% copper and 4.4 g/t silver over 1 metre. This is within the northern part of a historic composite sample of returning over 1.1% copper and ~1.25 g/t silver over 6 metres.

APPENDIX C-FIGURE 8 - ALWIN INDEX PLAN





APPENDIX D - STATEMENT OF WORK

SOW for Highland Valley Property Event No: 5728327

Mineral Claim Exploration and Development Work/Expiry Date Change Confirmation

Submitter: BILLINGSLEY, RICHARD JOHN (139085)

Recorder: BILLINGSLEY, RICHARD JOHN (139085) Recorded: 2019/JAN/27 Effective: 2019/JAN/27

D/E Date: 2019/JAN/27

Confirmation

If you have not yet submitted your report for this work program, your technical work report is due in 90 days. The Exploration and Development Work/Expiry Date Change event number is required with your report submission. Please attach a copy of this confirmation page to your report. Contact Mineral Titles Branch for more information.

Event Number: 5728327

Technical Work Work Type:

Technical Items: Geochemical, PAC Withdrawal (up to 30% of technical work required), Prospecting

Work Start Date: 2018/AUG/15 Work Stop Date:

2018/DEC/15 **§** 7,000.00 ← Total Work Total Value of Work:

Mine Permit No: N/A

Summary of the work value:

Title N0	Claim Name/Property	Issue Date	Good To Date	New Good To Date	# of Days For- ward	Area in Ha	Applied Work Value	Sub- mission Fee
1058142		2018/FEB/01	2019/FEB/01	2021/DEC/15	1048	82.25	\$ 1536.79	\$ 0.00
1058144	HIGHLAND VALLEY 1	2018/FEB/01	2019/FEB/01	2021/DEC/15	1048	246.75	\$ 4610.55	\$ 0.00
1058147		2018/FEB/01	2019/FEB/01	2021/DEC/15	1048	123.35	\$ 2304.83	\$ 0.00
1058149		2018/FEB/01	2019/FEB/01	2021/DEC/15	1048	20.56	\$ 384.18	\$ 0.00
1058150	HIGHLAND VALLEY 2	2018/FEB/01	2019/FEB/01	2021/DEC/15	1048	20.56	\$ 384.12	\$ 0.00
1058153	HIGHLAND VALLEY 3	2018/FEB/01	2019/FEB/01	2021/DEC/15	1048	20.56	\$ 384.12	\$ 0.00
1058155	HIGHLAND VALLEY 4	2018/FEB/01	2019/FEB/01	2021/DEC/15	1048	20.57	\$ 384.28	\$ 0.00

Financial Summary:

Total applied work value: \$9,988.87 ← Actual Work

PAC name: Richard BIllingsley (FMC No: 139085) Debited PAC amount: \$ 2,988.87 **←** 29.9 % PAC Applied

Credited PAC amount:

Total Submission Fees: \$ 0.0

Total Paid: \$ 0.0

The event was successfully saved.