

# KETCHAN SOUTH PROPERTY REPORT

Geophysical Technical Report on  
Mineral Claim  
1024072

Nicola Mining Division  
British Columbia  
Aspen Grove Area

BC Geological Survey  
Assessment Report  
34709

Centre of Work  
UTM : 679272 E 5515430 N  
NTS Map Sheet 092H078 BCGS 092H088

March 16<sup>th</sup> 2014

Author Christopher Delorme

Owners

Christopher Delorme  
Steven Scott  
Brian Scott

Event Number 5480074

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## SUMMARY

Christopher and Guy Delorme completed 2.35 kilometers of magnetometer lines on mineral tenure 1024072 .The purpose of the program was to fill in an add lines to existing and current magnetometer programs .The 2013 work program was done between Nov 26 and Nov 28 consisting of 6 lines ground magnetometer survey using a, Scintrex Model MF-2 Fluxgate Magnetometer Serial number 002142 .The Lines were spaced 100 meters with 25 meter intervals .Each station was identified using a Magellan Triton 200 GPS receiver which was very accurate due to the open terrain and no interfering mountains or valleys .Snowy conditions hindered and slowed the work program due to access and road condition problems . The magnetometer results show an NW SE trending magnetic signature on the most north westerly portion of the survey.

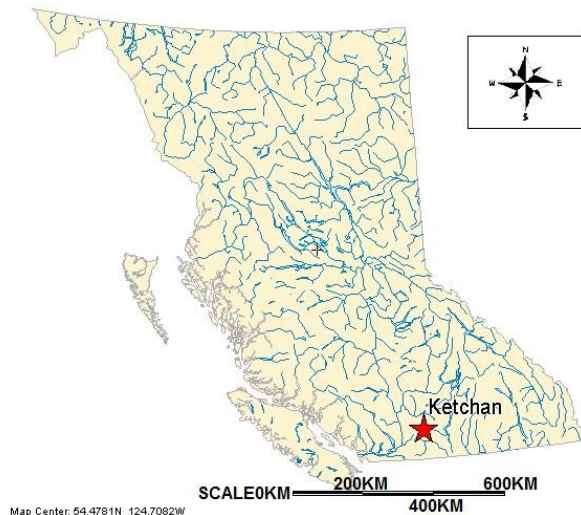


## LOCATION AND ACCESS

The Ketchan North Property is located in south-central British Columbia, 187 by air Kilometers north east of Vancouver

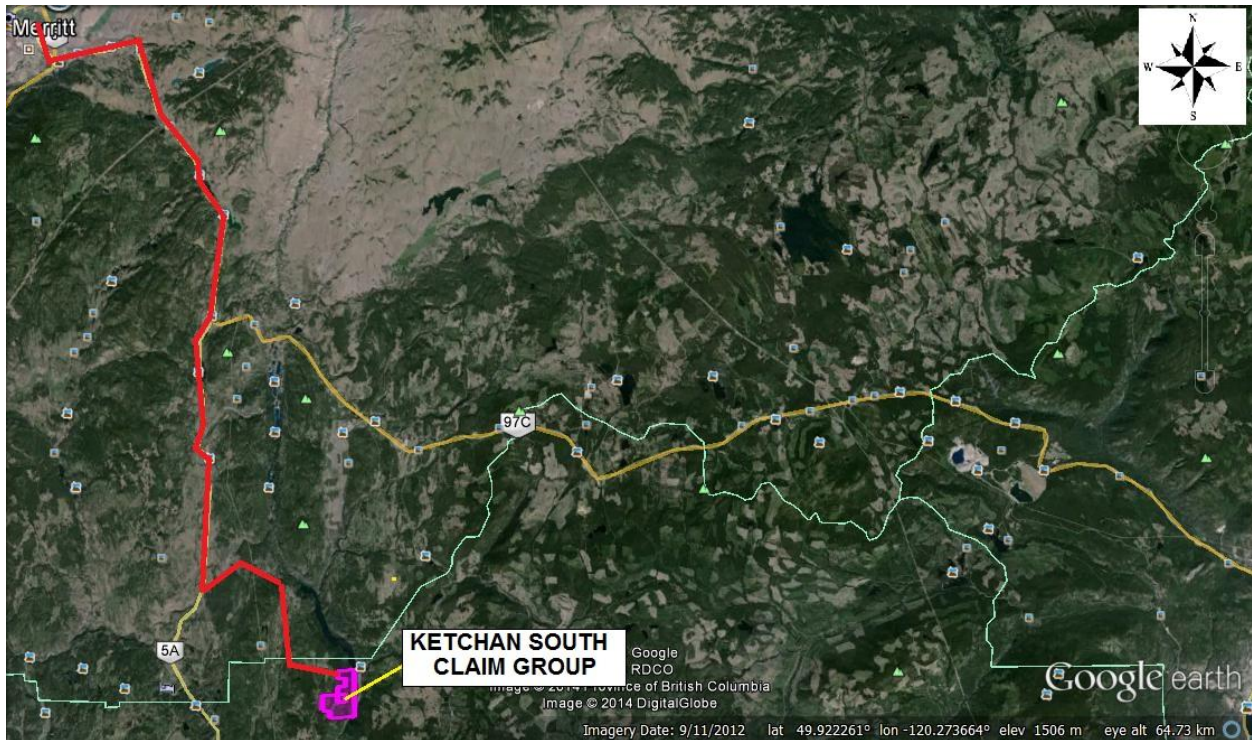
and 2km west of Missezula Lake .The centre of the claim group coordinates are at an approximate geographic location UTM reading 10 U 679272E 5515430N 120.30 longitude 49.45 latitude, on map sheet NTS 092H15E and BCGS Map 092H078 . The Ketchan North Claim Group is approximately 45 kilometers south of Merritt B.C.

Access to the property is by taking highway 97 C from Merritt to Kelowna for a 25 km distance then turning south onto 5A towards Princeton BC for 14.8 km turning left onto Ketchan Lake forest service road for 10.49km then turn left and go 4.5km to the northern grid or turn right at of the property at 14.3km and go a further distance of 1.2km to the most southern portion of the property. Access to some of the Lines and grids are through various different branches of side gravel roads which are extensive but difficult to pass and access due to snow conditions.



MAP - 1

## Ketchan North Location and Access Map -2



## PHYSIOGRAPHY

The mineral claims lie within the Thompson plateau area of the larger Interior plateau region. The physiographic setting of the area is defined as the Dry Interior and/or Sub-Alpine belt, depending on the local elevation within the property boundaries. The property covers low, rounded hilly terrain, exhibiting a north-south fabric about Ketchan Lake.

Patches of coniferous and deciduous trees interspersed with open range areas cover the property. The elevations of the claim area range from 1,265 metres (4,150 feet) to 1,433 metres (4,700 feet). The general area receives about 60-90 cm. (25"-35") of precipitation annually depending mainly on local elevation, of which 20% may occur as a snow equivalent. The winter weather is generally moderately cold. The

summer weather could be described as variable, but most often dry and fairly hot with squally precipitation.

## PROPERTY AND OWNERSHIP

OWNER	Tenure	Claim Name	Area in Hectares	Good to Date
Christopher Delorme 50%	1024072	BROWN	313.12	2015/May/07
Brian Scott 25%	1024072	BROWN	313.12	2015/May/07
Steven Scott 25%	1024072	BROWN	313.12	2015/May/07

The KETCHAN SOUTH property comprises of on single tenure or claim totalling 313.12 hectares which are owned by three people. Christopher Delorme FMC 141575 Brian Scott FMC 124128 and Steven Scott FMC 219636. The Claims are located in the Nicola mining Division on Map sheet NTS 092H15E. The 2013 assessment due on the BROWN property with the submission of a geophysical report is \$2213.30

## HISTORY AND PREVIOUS WORK

- 1929: A small shipment from the Shamrock "mine" averaged 5.78% copper (Minfile).
- 1963: Consolidated Wood green carried out trenching on the Shamrock prospect and completed 3 diamond drill holes (Minfile).
- 1979: Cominco Ltd. drilled 6 percussion holes in the central part of present claims, based on LP. magnetic and geochemical surveys. Only two holes reached bedrock. One hole reportedly averaged 0.141% Cu over 32 metres. Further mapping and drilling were recommended (Mehner, 1979, Scott, 1979, Ostenko, 1979). There is no record of follow-up.
- 1985: Vanco Exploration carried out geochemical and geological mapping on central part of present claims. They also mapped and sampled the Shamrock prospect (Lisle, 1985). There is no record of follow-up exploration.
- 1988: Laramide Resources carried out a geochemical survey for gold in the northern part of the present claims (Watson, 1988).
- 1990: Mine quest Exploration carried out 56 kilometres of I.P.surveying on central part of present claims (Gourlay, 1990).
- 1991: Rayrock Yellowknife Mines drilled 9 percussion holes on the Mine quest property. No significant Cu or Au values are reported, but a significant, but untested, copper prospect on Zig 3 Claim was noted (Gourlay, 1991).
- 2004-2005: Copper Hill Exploration Corp. and Copper Belt Resources carried out geological and photo- geological mapping of the entire claim block, along with magnetometer and VLF surveying of one Mine quest 1990 IP anomaly area (Bergey, 2005).

## Ketchan Lake Prospect

- 1962: Plateau Metals Ltd. staked the present Ketchan Lake prospect area. Later the same year, they carried out a magnetometer survey and completed 3 diamond drill holes (Minfile).
- 1966: Adera Mining Ltd. optioned the property and carried out geological and geophysical surveys, along with trenching and 512 metres of diamond drilling (Lammle, 1966; Schurr, 1966).
- 1973: Bethlehem Copper Corporation staked Log Group of mineral claims following a large-scale regional exploration program.
- 1974: Bethlehem Copper carried out geological mapping and geochemical sampling, followed by drilling of 10 percussion holes (Nethery, 1974).
- 1975: Bethlehem Copper completed 351 metres of diamond drilling in 4 holes (Anderson, 1975; Anderson, 1976). Assay results from this drilling were not published.
- 1979: Bethlehem Copper completed 410 metres in 2 diamond drill holes to test the results of an LP. Survey carried out earlier in the year (Anderson, 1979; Simpson, 1979,).
- 1991: Cominco Ltd. completed 15 percussion drill holes -- 1067 metres (Aulis, 1991).
- 1992: Cominco Ltd drilled 8 percussion holes — 640 metres (Aulis, 1992).
- 2005: Copper Belt Resources drilled 10 diamond drill holes -- 1210 metres (Thomson, 2006).
- 2006: Copper Belt Resources drilled 2 diamond drill holes - 485 metres (Thomson, 2007).



- 2007: Copper Belt Resources drilled 5 diamond drill holes - 931 metres (Thomson, 2007).

## REGIONAL GEOLOGY

The geological history of the underlying rocks in this area is thought to be representative of a northwest-southeast trending island arc depositional environment that is cut by steeply dipping north-south faults. The predominant lithology has the oldest rock units assigned to the Nicola Group of Upper Triassic to Lower Jurassic age. The Nicola Group (Nicola), in this general area has been divided into three distinct, adjacent, elongate (structurally controlled), volcano (igneous)-sedimentary assemblages or belts which are not considered to be of strictly contemporaneous age. These belts are defined as follows: the Central Belt is the oldest while the Eastern Belt is next oldest. Both are thought to be locally derived and are of alkalic igneous (some calcalkaline) composition, The youngest, Western Belt of the Nicola Group does not appear to be strictly, locally derived and are mainly of calcalkaline composition. The origin and composition of the Nicola (the three belts) from oldest to youngest are described as follows:

- a) Central Belt – sub aerial and submarine assemblages; pyroxene and plagioclase abundant andesitic to basaltic flows, breccia, conglomerate and lahar deposits; coeval intrusives mainly diorite and lesser syenite.
- b) Eastern Belt - submarine volcano-sedimentary units, lahars, basalt flows and high-level syenitic stocks.

c) Western Belt - flow and pyroclastic rocks ranging in composition from andesite to rhyolite and interbedded sediments as limestone, volcanic conglomerate and sandstone (fossiliferous). The Nicola and its' equivalents form an elongated belt of eugeosynclinal rocks which are observed from near the 49'1'

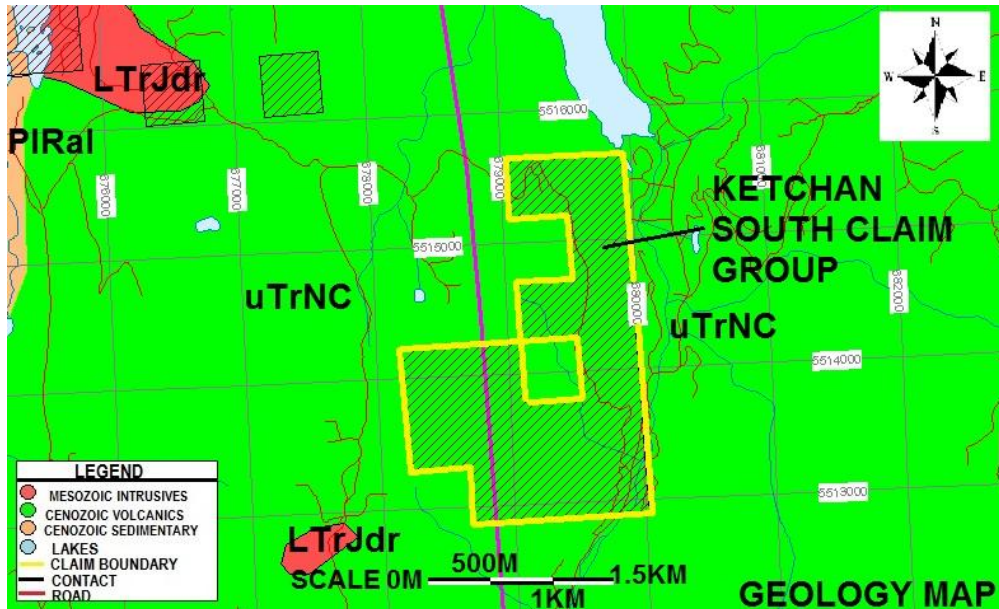
parallel, trending northward for over 240 kilometres (150 miles) and possibly beyond to northern British Columbia and the Yukon Territory for a possible total distance of 1,300 km (800 miles). The width of the Nicola locally approaches 50 km (30 miles) in places and is often bound on its' east margin by Jurassic or later intrusives and volcanics and on the west by Jurassic/Tertiary aged intrusives and Carboniferous to Tertiary volcanics. The next oldest rocks in the general area are non-correlated sediments thought to 'be of Lower Jurassic to Lower Cretaceous age. The next youngest units are variable units of igneous and sedimentary rocks assigned to the Kingsvale Group of Lower Cretaceous age. The next youngest units are a variety of well-rounded, boulder conglomerates of post Lower Cretaceous age. The next youngest rocks observed in the general area are the more acidic, talc-alkaline intrusive rocks which are seen to range in composition from granite through quartz diorite, these units have been assigned an Upper Cretaceous or Lower Tertiary age. The youngest rocks observed in the general area are those of the Princeton Group, assigned a Tertiary age and comprised of a lower volcanic unit of andesite or basalt and an upper sedimentary unit composed of shale, sandstone, conglomerate which are sometimes seen to contain economic occurrences of coal. The lower Princeton Group volcanics have been observed, in places to lay, uncomfortably over portions of the Upper Triassic aged Copper Mountain intrusions that are thought to be coeval with the Nicola volcanic rocks of the area .The Nicola is found in places to have been cut by small stocks and dykes of ages varying from late Triassic into the Tertiary The general area has also experienced widespread faulting which display an east-west and north easterly trend that in turn have sometimes been cut by

younger northerly trending faults, For example in the Copper Mountain-Inger belle Mine area, in the southern portion of the Nicola ,the boundary of the Copper Mountain Stock is truncated by the north trending, west dipping “Boundary Fault”. East of the Boundary Fault, faulting is generally east-west, northwesterly and north easterly. The connection, if there is one between the Boundary Fault on the south and Fault(s) on the north side of the Town of Princeton, BC is masked by the large, Tertiary aged Princeton Basin. These faults may have affected the ore control which poses the possibility of much younger hydrothermal sources of mineralization, possibly Tertiary. Within the major southeastern lobe of the Nicola Group some 39 km. east-southeast of Princeton, B.C. occurs the famous lode gold mines of the Hedley area. These deposits are found to occur within metamorphosed limestone units (skarns) of the Nicola near diorite gabbro intrusive contacts.

## LOCAL GEOLOGY

Volcanic flows and Fragmental intruded by dikes, sills and plugs of Jurrassic age .The region is extensively faulted including the prominent north striking Allison Lake, Otter Creek and Summers Creek faults. Numerous north-west and north - east trending faults , shears and breccia zones branch from these major faults .Copper mineralization is widespread and is generally found in Nicola group rocks associated with intensive faulting and brecciation .Minerals observed i n the claims area are chalcopryite, chalcocite and pyrite disseminated in a feldspar porphyry andesite flow breccia .A narrow northerly striking chalcocite vein is observed west of Summers Creek and much malachite and azurite staining is observed in a recent trench in a creek canyon on the eastern side of the property .Most observed

mineralization to date occurs between 3,400 and 3,600feet A.S.L. and appears to favour a single bed and to be fracture controlled.

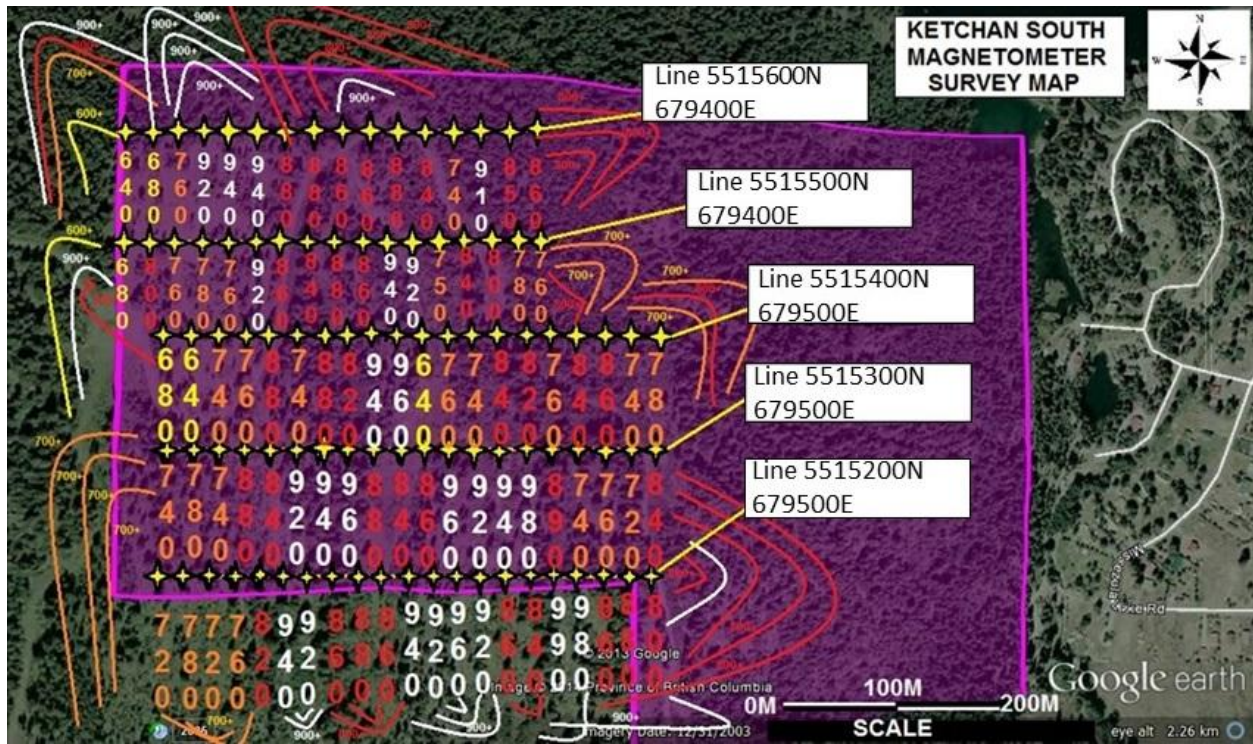


MAP-3

## GROUND GEOPHYSICS WORK PROGRAM

Christopher and Guy Delorme completed 2.35 kilometers of ground magnetometer survey to fill in and complete previous work programs done by the author from assessment report #27086 .Field Crew consisted of a two person crew for a total of 3 days. The 2013 exploration work program consisted of 6 lines north-south grid lines, spaced 200 meters apart with recording stations spaced 25 meters. The Crew utilized a Magellan Triton 200 GPS receiver and a Scintrex Model MF-2 Fluxgate Magnetometer. The terrain was difficult due to snow conditions.

Map -4



SPREADSHEET TABLE 1

LINE 5515200N	STATION	READING	LINE 5515300N	STATION	READING	LINE 5515400N	STATION	READING
679600E	00E+00N	800	679600E	00E+100N	840	679600E	00E+200N	780
679575E	25E+00N	880	679575E	25E+100N	720	679575E	25E+200N	740
679550E	50E+00N	860	679550E	50E+100N	760	679550E	50E+200N	860
679525E	75E+00N	980	679525E	75E+100N	740	679525E	75E+200N	840
679500E	100E+00N	990	679500E	100E+100N	890	679500E	100E+200N	760
679475E	125E+00N	840	679475E	125E+100N	980	679475E	125E+200N	820
679450E	150E+00N	860	679450E	150E+100N	940	679450E	150E+200N	840
679425E	175E+00N	920	679425E	175E+100N	920	679425E	175E+200N	740
679400E	200E+00N	960	679400E	200E+100N	960	679400E	200E+200N	760
679375E	225E+00N	920	679375E	225E+100N	860	679375E	225E+200N	640
679350E	250E+00N	940	679350E	250E+100N	840	679350E	250E+200N	960
679325E	275E+00N	860	679325E	275E+100N	880	679325E	275E+200N	940
679300E	300E+00N	880	679300E	300E+100N	960	679300E	300E+200N	820
679275E	325E+00N	860	679275E	325E+100N	940	679275E	325E+200N	880
679250E	350E+00N	920	679250E	350E+100N	920	679250E	350E+200N	740
679225E	375E+00N	940	679225E	375E+100N	840	679225E	375E+200N	880
679200E	400E+00N	820	679200E	400E+100N	880	679200E	400E+200N	760
679175E	425E+00N	760	679175E	425E+100N	740	679175E	425E+200N	740
679150E	450E+00N	720	679150E	450E+100N	780	679150E	450E+200N	640
679125E	475E+00N	780	679125E	475E+100N	740	679125E	475E+200N	680

Spreadsheet Table 2

LINE 5511500N	STATION	READING	LINE 5511600N	STATION	READING
679500E	100E+300N	760	679500E	100E+400N	860
679475E	125E+300N	780	679475E	125E+400N	850
679450E	150E+300N	800	679450E	150E+400N	910
679425E	175E+300N	840	679425E	175E+400N	740
679400E	200E+300N	750	679400E	200E+400N	840
679375E	225E+300N	920	679375E	225E+400N	880
679350E	250E+300N	940	679350E	250E+400N	860
679325E	275E+300N	860	679325E	275E+400N	860
679300E	300E+300N	880	679300E	300E+400N	880
679275E	325E+300N	840	679275E	325E+400N	880
679250E	350E+300N	860	679250E	350E+400N	940
679225E	375E+300N	920	679225E	375E+400N	940
679200E	400E+300N	760	679200E	400E+400N	920
679175E	425E+300N	780	679175E	425E+400N	760
679150E	450E+300N	760	679150E	450E+400N	680
679125E	475E+300N	800	679125E	475E+400N	640
679100E	500E+300N	680	679100E	500E+400N	640

# CONCLUSIONS

The 2013 work program was successful in delineating two different NW SW magnetic high anomalies that correlate onto a northern survey completed this year. . Further fill in lines are needed to establish the continuity of the elevated high magnetometer values. High copper values and mineralization are associated with highly magnetic rocks in this area so the magnetometer is very useful for identifying possible drill targets.

# REFERENCES

- Anderson, R.E. (1975)  
Rotary and Diamond Drilling Report on the Log Claim Group  
Bethlehem Copper, *Assessment Report 5824*
- Anderson, R.E. (1979)  
Geophysical (IP) Survey of Log Claims  
Bethlehem Copper, *Assessment Report 7543*
- Aulis, R J. (1991)  
Percussion Drill Report on the Log 1-4 Claims  
Cominco Ltd., *Assessment Report 21746*
- Aulis, R.J., (1992)  
Report on Percussion Drilling, Missezula Property, Log 1-8 Claims  
Cominco Ltd., *Assessment Report 22555*
- Bergey, W.R. (2004)  
Report on the Ketchan Property for Copper Hill Exploration Corporation  
*Assessment Report 27534*
- Bergey, W.R., (2004)  
Geological Report on the Ketchan Property for Copper Hill Exploration Corporation  
*Assessment Report 27564*
- Bergey, W.R. (2005)  
Report on the Central Nicola Property for Copper Belt Resources Ltd.  
*Assessment Report 27905*
- Eliot, I.L. (1987)  
Report on Soil Geochemical Sampling, Missezula Property, Log 1-4, Aspen Grove Area  
Cominco Ltd., *Assessment Report 16439*
- Hall of, P.G., Mullan, A., Simpson, R.G., (1980)  
Induced Polarization and Diamond Drilling Report of Log 1-4 Claims  
Bethlehem Copper, *Assessment Report 8309*
- Lammle, C, (1966)  
Geological-Geophysical-Diamond Drilling Report on Strike-Lorna Group  
Adera Mining Ltd., *Assessment Report 977*
- Lammle, C, (1971)

2013 COST STATEMENT

Labour Costs	Days	Daily Rate	Total
Chris Delorme	3	\$250	\$750
Guy Delorme	2	\$250	\$500
Lodging Food Gas	Days	Daily Rate	Total
Lodging	3	\$68	\$204
Food	3	\$30	\$ 90
Gas	3	\$40	\$120
Misc			\$49.70
Report Costs	Days	Daily Rate	Total
Christopher Delorme	2	\$250	\$500
<u>Total Cost of work program</u>			\$2800.00
Total applied value of work			\$2213.30





Ministry of Energy, Mines & Petroleum Resources  
Mining & Minerals Division  
BC Geological Survey



Assessment Report  
Title Page and Summary

TYPE OF REPORT (type of survey(s))

(T) Technical (P) Geophysical

TOTAL COST: 82800.0

AUTHOR(S):

Christopher Delorme

SIGNATURE(S):

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):

NW 29<sup>th</sup> DEC 01 / 2013

YEAR OF WORK: 2013

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S):

5480074

PROPERTY NAME:

KETCHAN SOUTH PROPERTY

CLAIM NAME(S) (on which the work was done):

KETCHAN SOUTH, 102<sup>nd</sup> OFR

COMMODITIES SOUGHT:

Copper, Gold, Silver

MINERAL INVENTORY MAPLE NUMBER(S) IF KNOWN:

092HNE153 / 092HNE092

MINING DIVISION:

Similkameen

NTS/BOSR:

092H078 / 092H088

LATITUDE:

49° 45' 32.1"

LONGITUDE:

120° 31' 04.7" (at centre of work)

OWNER(S):

1) 141575 Chris Delorme  
124128 Brian Scott

2) 219636 Steven Scott

MAILING ADDRESS:

124128 PO Box 77 (BRUNSWICK)  
Tanjah YT YOB ITO

219636 (STEVEN SCOTT)  
PO Box 75 Clarkburg, ON N0L1S0

OPERATOR(S) (who paid for the work):

1) 141575 Chris Delorme  
106466 Guy Delorme

2)

MAILING ADDRESS:

340 Lorne Lane Merritt BC  
V1K1P7 (Resident Suite)

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and altitude):

Volcanic flows/fragmental intruded by dike, gills and plugs of  
Tertiary age. Numerous NW/NE trending faults, some break eastward  
from these faults. Chalcopyrite Chalcocite pyrite disseminated in feldspar porphyry and  
flow breccia, fracture controlled. Nickel Volcanic

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:

5480075 / 5480076

Next Page



TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
<b>GEOLOGICAL (scale, area)</b>			
Ground, mapping	—		
Photo interpretation	—		
<b>GEOPHYSICAL (line-kilometres)</b>			
Ground	2.35 Km		
Magnetic	—	<del>1624072</del> , 1624072	\$2800.00
Electromagnetic	—		
Induced Polarization	—		
Radiometric	—		
Seismic	—		
Other	—		
Airborne	—		
<b>GEOCHEMICAL (number of samples analysed for...)</b>			
Soil	—		
Silt	—		
Rock	—		
Other	—		
<b>DRILLING (total metres, number of holes, size)</b>			
Core	—		
Non-core	—		
<b>RELATED TECHNICAL</b>			
Sampling/assaying	—		
Petrographic	—		
Mineralogical	—		
Metallurgical	—		
PROSPECTING (scale, area)	(Snow covered area)	—	—
<b>PREPARATORY / PHYSICAL</b>			
Linegrid (kilometres)	—		
Topographic/Photogrammetric (scale, area)	—		
Legal surveys (scale, area)	—		
Road, local access (kilometres/trail)	3 kilometres (snow)		
Trench (metres)	—		
Underground dev. (metres)	—		
Other	—		
			TOTAL COST: \$2800.00 CAD
			Total Applied \$2213.30 = AV