# NI 43-101 TECHNICAL REPORT

On the Big Onion Property

Omineca Mining Division, British Columbia, Canada NTS Map Sheet 093L/15W 54° 48' 35" North latitude 126° 53' 46" West longitude

> Prepared for: Gama Explorations Inc

**Prepared by:** Derrick Strickland P. Geo March 11, 2022

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# 1 Summary

This report was commissioned by Gama Explorations Inc. ("Gama"" or "the Company") and was prepared by Derrick Strickland P. Geo. As an independent professional geologist, the author were asked to undertake a review of the available data, review geological fieldwork, and recommend (if warranted) specific areas for further work on the Big Onion Property ("Property"). This technical report was prepared to support a listing on the Canadian Securities Exchange and an associated equity financing.

The Big Onion property is located 16 kilometres east of the town of Smithers, British Columbia, Canada at 126° 53' 46" West longitude and 54° 48' 35" North latitude. The Big Onion property consists of thirteen contiguous non-surveyed mineral claims comprising a total area of 4,493.18 hectares. Derrick Strickland visited the Big Onion Property on December 8, 2021.

In an agreement dated December 6, 2021 Gama Exploration Inc. of Vancouver, British Columbia can earn a 100% undivided interest in Big Onion Property from Lloyd Minerals Inc. by paying \$500,000 cash, issuing 2 million shares, and incurring \$1.5 million exploration expenditures within 48 months.

In the Skeena Arch of northwest BC, there are numerous "porphyry-style" copper and molybdenum occurrences, showings and prospects related to plugs and dykes of Late Cretaceous Bulkley Plutonic Suite rocks that have intruded the lower Jurrasic Hazelton Group. On the Big Onion property, northeast trending dykes of quartz-feldspar porphyry (QFP) and quartz-diorite porphyry (QDP) of the Babine Plutonic Suite intrude andesitic volcanic rocks of the Hazelton Group. Mineralization is hosted by all three lithologic units. The principal hypogene minerals, chalcopyrite and molybdenite, occur within northeast trending veinlets which are parallel to the fault-controlled intrusions. Initiation of Basin and Range tectonism resulted in segmentation of the mineralization into the South, North and Northeast Zones with different erosional levels preserved in each zone. Recent weathering has produced a leached cap and a supergene zone up to 100 metres thick, characterized by chalcocite and covellite mineralization coating chalcopyrite.

The Big Onion Porphyry is roughly centered on Astlais Creek and is underlain by a plutonic mass of late Cretaceous to early Tertiary quartz diorite porphyry and quartz feldspar porphyry that intruded Jurassic Hazelton Group mafic volcanics and sediments. The multiphase intrusive formed in a northeast trending lineament which likely prepared the host rock for plutonic emplacement and provided the conduit for mineralization. The intrusive has formed in an elongate mass around which an intensive alteration and mineralization system has developed. A large pyrite halo marks the outer limits of the intrusive complex.

Hydrothermal alteration includes intense quartz-sericite and propylitic assemblages surrounding the emplaced plutonic mass. Argillic alteration is associated with quartz stringers and fault zones. Supergene alteration is represented by secondary copper minerals that formed under reducing conditions after the acidic dissolution of chalcopyrite in the oxidized zone.

Copper and molybdenum mineralization is largely contained within northeast trending, northwest dipping shears and veinlets that parallel the fault controlled intrusive. Hypogene mineralization consists predominantly of chalcopyrite and molybdenite. Supergene enrichment is represented by chalcocite, covellite, and subordinate bornite. Pyrite is also tarnished with secondary copper mineralization.

There is a well-documented history of mineral exploration on the property. The most intensive work was conducted during the 1960's, the1970's and the 2000's when almost 55,000 m of core and rotary drilling was completed. Early exploration work recognized the property's potential to host a large, low grade bulk tonnage copper resource. Work further developed the premise that a significant portion of the mineralization is hosted within a near-surface zone of supergene enrichment. Early diamond and percussion drill programs suffered from poor core recovery with lower apparent grades in percussion holes when compared to diamond drill holes. Several workers have hypothesized that the grade of the Big Onion Porphyry as computed from drill results is lower than the true in-place grade.

In 2021 Blue Lagoon Resources Inc. undertook an exploration program and collected 612 soils samples and undertook 256.106 line-km of Drone airborne magnetics over the Big Onion Porphyry.

In order to evaluate the potential of the Big Onion Property, a two phased work program is suggested. Phase one includes compilation of all the historical drilling, geological, geophysical, and geochemical data available and rendering this data into a digital database in GIS formats to aid further interpretation. Soil sample should continue to tie the entire area together and infill and expand upon anomalous areas define by the 2021 program. Work will include georeferencing historical survey grids; samples, trenches, geophysical survey locations, and detailed property geological maps. The over 50,000 metres of drilling should be compiled and put into 3D modeling software to better understand the Big Onion Porphyry's mineralization. The three areas identified by the 2015 airborne magnetic survey should also be investigated. This should Include mapping and Induced polarization (IP) ground geophysical lines and Drone Mag to tie each area together. The expected cost of this program is \$253, 880

Phase two is based on the results of phase one and is expected to include drilling at an expected cost of \$750,000.

# 2 Introduction

This report was commissioned by Gama Explorations Inc. ("Gama"" or "the Company) and was prepared by Derrick Strickland P. Geo.. As an independent professional, geologist, the author were asked to undertake a review of the available data, perform geological fieldwork, and recommend (if warranted) specific areas for further work on the Big Onion Property. This technical report was prepared to support a listing on the Canadian Securities Exchange and an associated equity financing. Gama Explorations Inc. is a junior exploration company based in Vancouver.

In the preparation of this report, the authors utilized both British Columbia and Government of Canada geological maps, geological reports, and claim maps. Information was also obtained from British Columbia Government websites such as:

- Map Place www.empr.gov.bc.ca/Mining/Geoscience/MapPlace;
- Mineral Titles Online www.mtonline.gov.bc.ca; and
- Geoscience BC www.geosciencebc.com

Mineral assessment work reports (ARIS reports) from the Big Onion Property area that have been historically filed by various companies were also reviewed. A list of reports, maps, and other information examined is provided in Section 27.

Derrick Strickland visited the Big Onion Property on December 8, 2021. During the site visit the author collected five rock sample from the 2013 drill program. Unless otherwise stated, maps in this report were created by the authors.

The authors were retained to complete this report in accordance with National Instrument 43-101 ("NI 43-101") and the requirements of Form 43-101F1. The authors are "Qualified Persons" within the meaning of NI 43-101. The authors have no reason to doubt the reliability of the information provided by Gama Explorations Inc.

This evaluation of the Gama Explorations Inc. Property is partially based on historical data derived from British Columbia Mineral Assessment Files and other regional reports. Rock sampling and assay results are critical elements of this review. The description of sampling techniques utilized by previous workers is poorly described in the historical assessment reports and, therefore, the historical assay results must be considered with prudence. The authors reserve the right, but will not be obliged; to revise the report and conclusions if additional information becomes known subsequent to the date of this report.

The information, opinions, and conclusions contained herein are based on:

- Information available to the authors at the time of preparation of this report;
- Assumptions, conditions, and qualifications as set forth in this report;

As of the date of this report, the authors are not aware of any material fact or material change with respect to the subject matter of this technical report that is not presented herein, or which the omission to disclose could make this report misleading.

#### 2.1 Units and Measurements

#### Table 1: Units

Units of Measure	Abbreviation	Units of Measure	Abbreviation
Above mean sea level	amsl	Milligrams per litre	mg/L
Billion years ago,	Ga	Millilitre	mL
Centimetre	cm	Millimetre	mm
Cubic centimetre	cm3	Million tonnes	Mt
Cubic metre	m3	Minute (plane angle)	1
Days per week	d/wk	Month	mo
Days per year (annum)	d/a	Ounce	OZ.
Degree	0	Parts per billion	ppb
Degrees Celsius	°C	Parts per million	ppm
Degrees Fahrenheit	°F	Percent	%
Diameter	Ø	Pound(s)	lb.
Gram	g	Power factor	pF
Grams per litre	g/L	Specific gravity	SG
Grams per tonne	g/t	Square centimetre	cm <sup>2</sup>
Greater than	>	Square inch	in <sup>2</sup>
Hectare (10,000 m <sup>2</sup> )	ha	Square kilometre	km <sup>2</sup>
Kilo (thousand)	k	Square metre	m <sup>2</sup>
Kilogram	kg	Thousand tonnes	kt
Kilograms per cubic metre	kg/m <sup>3</sup>	Tonne (1,000kg)	t
Kilograms per hour	kg/h	Tonnes per day	t/d
Kilometre	km	Tonnes per hour	t/h
Less than	<	Tonnes per year	t/a
Litre	L	Total dissolved solids	TDS
Litres per minute	L/m	Week	wk
Metre	m	Weight/weight	w/w
Metres above sea level	masl	Wet metric tonne	wmt
Micrometre (micron)	μm	Yard	yd.
Milligram	mg	Year (annum)	а

The authors found that the MacDonald (2007), Hanson & Giroux G.H. (2008), and Hanson D., (2009) were excellent sources for the background geological information and have incorporated this information in this report.

Lloyd Minerals Inc, and Metal Mountain are reported to be 100% subsidiarity of Blue Lagoon Resources Inc.

## 3 Reliance On Other Experts

For the purpose of the report, the responsible author has relied on ownership information provided by Allan Larmour of Gama Exploration on December 6, 2021, which to the author's knowledge is correct. This information was used in Section 4 of this report. A limited search of tenure data on the British Columbia Government's Mineral Titles Online ("MTO") website conducted by the author on December 14, 2021 supports the tenure data supplied by the Company.

## 4 **Property Description and Location**

The Big Onion property is located 16 kilometres east of the town of Smithers, British Columbia, Canada at 126° 53' 46" West longitude and 54° 48' 35" North latitude (Figure 1). The property is in the northeastern portion of NTS Map Sheet 093L/15W on the southeast facing flank of Astlais Mountain. A small creek, locally known as Big Onion Creek, approximately bisects the property in a northeast-southwest trend and flows southwest into Ganokwa Creek. The Big Onion property consists of thirteen contiguous non-surveyed mineral claims comprising a total area of 4,493.18 hectares. The configuration of the claims is shown in Figure 2 and the details are listed in Table 1.

Claim No	Claim Name	Issue Date	Good to	Area (ha)	Onwer Nalve	
521374		20/10/2005	15/09/2030	726.95	Lloyd Minerals Inc.	
521375	<b>ONION EXTENSION 1</b>	20/10/2005	15/09/2030	465.89	Lloyd Minerals Inc.	
521376	ONION EXTENSION 2	20/10/2005	15/09/2030	55.91	Lloyd Minerals Inc.	
588893		25/07/2008	15/09/2030	149.13	Lloyd Minerals Inc.	
570621	LITTLE ONION	24/11/2007	15/09/2030	372.99	Lloyd Minerals Inc.	
568627		25/10/2007	15/09/2030	466.20	Lloyd Minerals Inc.	
604467	ONION E1	13/05/2009	15/09/2030	465.86	Lloyd Minerals Inc.	
604468	ONION E2	13/05/2009	15/09/2030	466.09	Lloyd Minerals Inc.	
610003	ONION NW 4	22/07/2009	15/09/2030	37.29	Lloyd Minerals Inc.	
1043406	ONION W	11/04/2016	15/09/2030	279.75	Lloyd Minerals Inc.	
1043407	ONION S	11/04/2016	15/09/2030	354.42	Lloyd Minerals Inc.	
1043408	ONION SE2	11/04/2016	15/09/2030	149.17	Lloyd Minerals Inc.	
1040605	ONION SE	18/12/2015	15/09/2030	503.52	Lloyd Minerals Inc.	
Total 4493.18						

Table 2:	<b>Bia Onion</b>	Property	Claim	Information
	Dig Offiori	roporty	Ciuiii	mormation

In agreement dated December 6, 2021 Gama Exploration Inc. of Vancouver, British Columbia can earn a 100% undivided interest in Big Onion Property from Lloyd Minerals Inc. (the Optionor) by paying \$500,000 cash, issuing 2 million shares, and incurring \$1.5 million exploration expenditures within 48 months.

The cash payable, \$500,000, to the Optionor (or as may be directed by the Optionor) as follows:

- \$50,000 on or prior to the execution of this Agreement by all parties hereto (the "Signing Date"), receipt of which is acknowledged by Optionee;
- \$50,000 on or before 12 months following the Listing Date;
- \$50,000 on or before 24 months following the Listing Date;

- \$100,000 on or before 36 months following the Listing Date; and
- \$250,000 on or before 48 months following the Listing Date

The 2,000,000 shares of Gama Exploration Inc., are to be registered in the name of Blue Lagoon, and issuable as follows:

- 1,000,000 on or prior to the Signing Date, receipt of which is acknowledged by Optionee;
- 250,000 on or before 24 months from the Listing Date;
- 250,000 on or before 36 months from the Listing Date;
- 500,000 on or before 48 months from the Listing Date

With the required \$1.5 million in expenditures on the Property as follows:

- \$250,000 on or before 12 months following the Listing Date;
- an additional \$250,000 on or before 24 months following the Listing Date;
- an additional \$250,000 on or before 36 months following the Listing Date; and
- an additional \$750,000 on or before 48 months following the Listing Date.

Mineral claims 521375 and 521375 are subject to an aggregate 3% net smelter return royalty pursuant to an agreement dated October 20, 2005 between 0737141 B.C. Ltd., a private company wholly-owned by Lloyd Tattersall, and Eagle Peak Resources Inc. 0737141 B.C. Ltd. reduced its royalty to 1.875% by transfer of a 1.125% net smelter return royalty to Metal Mountain. The royalties may be reduced by 0.25% increments in exchange for payment of \$250,000 per increment.

There has been no historical production from the Big Onion Property, and the author is not aware of any environmental liabilities that have potentially accrued from any historical activity. The author is not aware of any permits obtained for the Big Onion Property.

The author undertook a limited search of the tenure data on the British Columbia government's Mineral Titles Online (MTO) website which conforms the geospatial locations of the claim boundaries and the Big Onion Property as of December 14, 2021

Directly north of the property is Babine Mountains Park, in fact a small portion of property is in the park. There are also protected access trails to Babine Mountains Park that are within the claim boundary see (Figure 2).

In British Columbia, the owner of a mineral claim acquires the right to the minerals that were available at the time of claim location and as defined in the Mineral Tenure Act of British Columbia. Surface rights and placer rights are not included. Claims are valid for one year and the anniversary date is the annual occurrence of the date of record (the staking completion date of the claim). The current mineral claims are on crown ground and no further surface permission is required by the mineral tenure holder to accesses mineral claims.

To maintain a claim in good standing the claim holder must, on or before the anniversary date of the claim, pay the prescribed recording fee and either: (a) record the exploration and development work carried out on that claim during the current anniversary year; or (b) pay cash in lieu of work. The amount of work required in years one and two is \$5 per hectare per year, years three and four \$10 per hectare, years five and six \$15 per hectare, and \$20 per hectare for each subsequent year.

Only work and associated costs for the current anniversary year of the mineral claim may be applied toward that claim unit. If the value of work performed in any year exceeds the required minimum, the value of the excess work can be applied, in full year multiples, to cover work requirements for that claim for additional years (subject to the regulations). A report detailing work done and expenditures must be filed with, and approved by, the B.C. Ministry of Energy and Mines.

The Company and author are unaware of any significant factors or risks, besides what is noted in the technical report, which may affect access, title, or the right or ability to perform work on the Property.

All work carried out on a claim that disturbs the surface by mechanical means (including drilling, trenching, excavating, blasting, construction or demolishment of a camp or access, induced polarization surveys using exposed electrodes and site reclamation) requires a Notice of Work permit under the Mines Act and the owner must receive written approval from the District Inspector of Mines prior to undertaking the work. The Notice of Work must include: the pertinent information as outlined in the Mines Act; additional information as required by the Inspector; maps and schedules for the proposed work; applicable land use designation; up to date tenure information; and, details of actions that will minimize any adverse impacts of the proposed activity. The claim owner must outline the scope and type of work to be conducted, and approval generally takes one or two months

Exploration activities that do not require a Notice of Work permit include: prospecting with hand tools, geological/geochemical surveys, airborne geophysical surveys, ground geophysics without exposed electrodes, hand trenching (no explosives) and the establishment of grids (no tree cutting). These activities and those that require permits are outlined and governed by the Mines Act of British Columbia.

The Chief Inspector of Mines makes the decision whether or not land access will be permitted. Other agencies, principally the Ministry of Forests, determine where and how the access may be constructed and used. With the Chief Inspector's authorization, a mineral tenure holder must be issued the appropriate "Special Use Permit" by the Ministry of Forests, subject to specified terms and conditions. The Ministry of Energy and Mines makes the decision whether land access is appropriate and the Ministry of Forests must issue a Special Use Permit. However, three ministries, namely the Ministry of Energy and Mines; Forests; and Environment, Lands and Parks, jointly determine the location, design and maintenance provisions of the approved road.

Notification must be provided before entering private land for any mining activity, including nonintrusive forms of mineral exploration such as mapping surface features and collecting rock, water or soil samples. Notification may be hand delivered to the owner shown on the British Columbia Assessment Authority records or the Land Title Office records. Alternatively, notice may be mailed to the address shown on these records or sent by email or facsimile to an address provided by the owner. Mining activities cannot start sooner than eight days after notice has been served. Notice must include a description or map of where the work will be conducted and a description of what type of work will be done, when it will take place and approximately how many people will be on the site. It must include the name and address of the person serving the notice and the name and address of the onsite person responsible for operations.

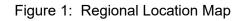
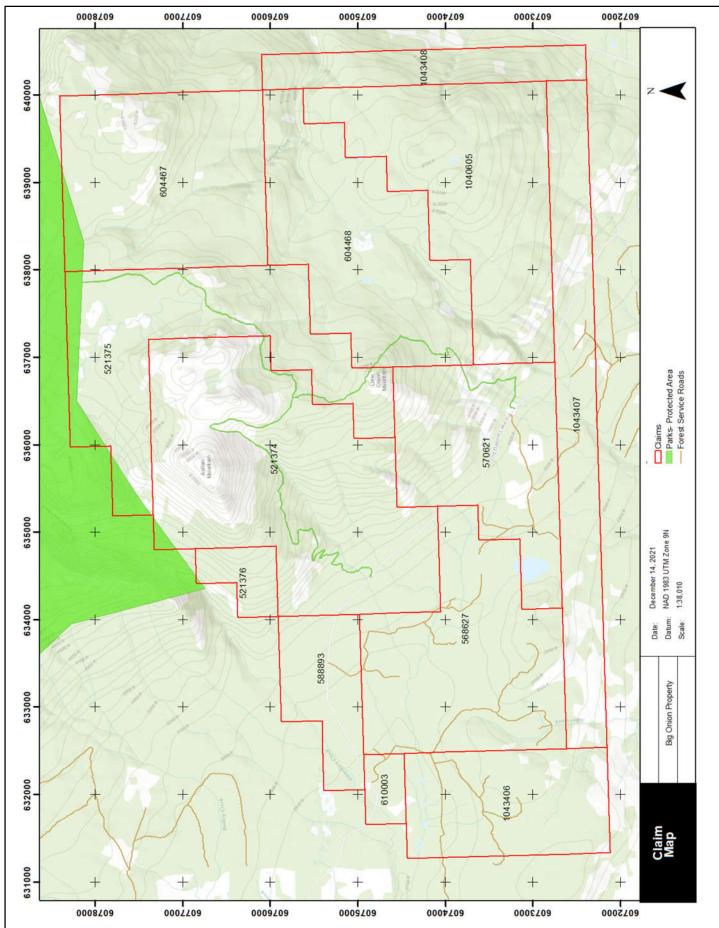




Figure 2: Big Onion Property Claim Map



# 5 Accessibility, Climate, Physiography, Local Resources, And Infrastructure

The property is accessed by the Babine and Old Babine Lake roads approximately 16 kilometres from the town of Smithers in northwest British Columbia. The Babine Lake Road connects to the paved Yellowhead Highway (Highway 16) at a point approximately 3 km southeast of Smithers. There is a network of 4-wheel drive trails that border both sides of Astlais Creek and provide access to the property from the Old Babine Lake Road.

The climate of the area is strongly influenced by the Babine Range which dominates the northeast side of the Bulkley Valley and by the Coast Range Mountains to the west that have a shielding effect. The property is found within the interior bio geoclimatic zone known as Engelmann Spruce. Historical climate data for the Smithers airport (523 masl) indicate average temperatures that range from -9°C in January to 15°C in July. The average annual snowfall is 216 cm. Rainfall can occur in any month and ranges from an average low of 6 mm in February to a high of 58 mm in October, with an annual average of 34 cm.

The Town of Smithers, with a regional population of approximately 5,000, is a major centre for resource industries operating in northwest B.C. It is located approximately 400 kilometres from deep water ocean ports in Prince Rupert, Kitimat and Stewart, has an airport with daily service to Vancouver, and has access to the to the CN rail-line. Several exploration companies and diamond drill contractors have offices in Smithers. Smithers has readily available skilled mine and construction labour as well as connections to electric power and natural gas.

Other than drill access trails, there is no surface infrastructure on the property. The terrain at the southern extent of the Big Onion property could provide a suitable site for waste dumps, tailings impoundment, mill facility and other mine infrastructure required for future development.

The Big Onion property is located within the southern part of the Babine Range, a discontinuous range of mountains found within the physiographic area known as the Skeena Ranges Mountains. The region is marked by the confluence of the Babine River with the Skeena River, and the confluence of the Morice and Bulkley Rivers. The coastal mountains lie to the west. Topography on the property varies from relatively flat-lying in the southwest, to gently rolling in the southern and western areas, to steep, locally precipitous, terrain rising up the flank of Astlais Mountain. The elevation on the property ranges from 820 m at Ganokwa Creek rising to a height of 1,840 m on Astlais Mountain. The property area ranges in elevation from a low of ~900 m at the southwest end, to a high of ~1,520 m at the northeast end.

# 6 History

#### Early Prospecting (1917-1932)

Copper occurrences were originally discovered on the property in 1917 by prospector Axel Elmsted and his partners. The three partners established a camp in 1924 and drove two short northwest trending adits into the most prospective mineralization. The lower adit was collared at the 1,150 metre elevation and ran a total length of 50 metres. The upper adit measured 15 metres long and was collared at the 1,170-metre elevation. The adits were located about 330 metres northeast of the zone of known mineralization. Samples that were taken were reported to contain only trace values and the property was deemed uneconomic at the time. Additional exploration work was conducted intermittently up until 1932 by Axel Elmsted and new partner Ben Muller. In 1930 the new partners drove a third adit and cross-cut, for a total distance of 122 metres of drift. The results from the upper adit were disappointing, with only minor amounts of chalcopyrite and molybdenite found.

#### Noranda Exploration Company. Ltd. (1964)

During the years between 1932 and 1964 the property appears to have been idle and no recorded work was undertaken. The property was claim staked by Jack Hemelspeck in the early 1960's and shortly thereafter optioned to Noranda Exploration Company Ltd. A total of 45 mineral claims were established on the south slope of Astlais Mountain.

In 1964 Noranda Exploration Company Ltd. (Noranda) completed a program of geological mapping, sampling, ground geophysics, several trenches and two short core holes totalling 250 feet (76.2 metres) in depth. A report of this work program was not available for review.

Assay of DDH-1 intersected approximately 50 feet (15.2 metres) of 0.20% copper and DDH-2 returned approximately 148 feet (45.1 metres) of 0.24% copper. A report of 15 trench samples (included in the 1967 Texas Gulf report) returned variable copper values that ranged from 0.06 to 1.63%. Trench sample B6815 (referenced as area A51) returned 1.63% Cu and 0.01%  $MoS_2$ . These results were not considered at that time to be encouraging enough to warrant further work.

#### Texas Gulf Sulphur Co. Ltd. (1966-1967)

Texas Gulf was the first company to conduct a comprehensive study of the Big Onion prospect. They conducted a two-year period of exploration on the property from 1966 to 1967. Over a two-year period, the company completed geological mapping, soil geochemical surveying, bulldozer trenching, induced polarization surveys and drilled a total of 3,993 ft. (1,217 m) in 7 BQ diamond drill holes.

The 1966 work program consisted of detailed geological mapping, a soil geochemical survey, an I.P. geophysical survey, approximately 900 m of shallow dozer trenching and a total of 2,723 ft. (829 m) of BQ diamond drilling in five holes, two of which were abandoned in poor ground conditions short of completion. The 1966 drilling returned similar grades and lengths of intersection

to that of the Noranda program, with copper values in the 0.10% to 0.29% range. The molybdenum generally ran 0.01% in 10 foot (3.05 m) sections.

A large cut grid was established for a total of 33 line-miles (53 line-kilometres) that covered an area that measured approximately 1.7 square miles (4.4 square kilometres).

Geological mapping was completed on the grid and in some areas extended beyond the grid, particularly to the south of the property. A program of soil sampling and analysis was conducted on the cut grid, including 626 soil samples taken from the first soil horizon found beneath the humus layer. The samples were tested for copper and molybdenum at the Coranex Project lab, in North Vancouver, BC. Samples were taken at 200 ft. (60.9 m) intervals on cross-lines spaced 800 ft. (243.8 m) apart (every second line). Two geochemical anomalies were identified for both copper and molybdenum and were shown to be coincident, at least in part, with two areas of high chargeabilities outlined by an induced polarization (IP) survey.

The geophysical survey was completed by Barringer Research Limited of Rexdale, Ontario. The work comprised an induced polarization and resistivity survey over 19 line-miles (30.6 line-kilometres) of grid. This early grid, consisting of a main and a parallel but off-set sub-baseline, was later modified by Canadian Superior with a wholesale change to the grid labeling system, and a skew to the sub-baseline which essentially mimicked the Northeast Zone.

Magnetic measurements of total intensity were taken through most of the central section of the grid area. Readings were taken every 100 ft. (30.5 m) or closer in areas of peak activity, for a total distance of 8 line-miles (12.9 line-kilometres). The report concluded that a limited BQ diamond drill test of four holes was warranted, targeting two holes each into the two main areas of anomalous polarization.

The 1967 program consisted of additional mapping and two BQ drill holes totaling 1,270 ft. (387 m) of diamond drilling. Intense alteration noted in the core was accompanied by only minor mineralization. Visual examination of the core at the time precluded assay because neither of the two holes were believed capable of running more than 0.2% copper.

The 1966 work program identified two copper-molybdenum soil geochemical anomalies that were in part coincident with areas of high chargeability outlined by the Induced Polarization survey. Drilling the anomalies in 1966 returned similar grades and lengths of intersection to that of the Noranda program, with copper values in the 0.10% to 0.29% range.

The 1967 drill program intersected intensely altered intrusive rock accompanied by minor copper mineralization. The core was not analyzed due to low visual estimates of copper mineralization. The results of the 1967 drill program were considered poor, and Texas Gulf felt no further work was warranted (L'Orsa, 1967).

#### Tro-Buttle Exploration Ltd. (1969-1970)

Tro-Buttle Exploration Ltd. (Tro-Buttle) conducted soil geochemistry and ground magnetic surveys on the Mert claims about 2,000 metres southeast of the Big Onion mineralized zones. Dirom (1969) reported copper and molybdenum soil anomalies coincident with outcrops of Dermo, a weakly mineralized northeast trending quartz-diorite that intrudes Hazelton Group volcanic and sedimentary rocks. Trace amounts of molybdenite and chalcopyrite were observed in the quartzdiorite on joints, in quartz veinlets and micro veins (fracture fillings), and in some aplitic veinlets. Sphalerite, galena and "grey copper" were reported along with arsenopyrite in quartz carbonate facture fillings within hornfelsed and ankeritized sediments near the intrusive contact.

#### Blue Rock Mining Corp./ Cyprus Mines Corp. (1970-1971)

Blue Rock Mining Corporation (Blue Rock), a subsidiary of Cyprus Mines Corporation, conducted an intensive program of exploration from 1970 to 1971. The work included additional induced polarization surveying, and drilling of a total of 24,026 feet (7,323 metres) in 22 core holes. Through careful core logging, Blue Rock was able to differentiate two distinct phases of quartz diorite intrusion separated by a sheared and altered border phase. Later work by Canadian Superior tended to reject the border phase concept in favour of two distinct and separate porphyry lithologies, a Quartz Feldspar Porphyry and a Quartz Diorite Porphyry.

The drilling successfully outlined a large volume of mineralized rock but did not meet Blue Rock's economic objective. The mineralized zone was traced for a distance of approximately 7,000 feet (2,133.6 metres) from the lower slopes of Astlais Mountain to near the top. The zone was believed then to still be open to the north, but truncated to the south by a monzonite dike and/or faulting. A program was proposed to investigate the north end of the mineralized zone to determine if the quartz diorite thins and terminates or continues, but was not determined.

A total of 167 soil samples were taken from the B horizon and analyzed for Cu and Mo at the Barringer Research Ltd laboratory in North Vancouver, B.C. Molybdenum samples were reported as uniformly low ( $\leq$  2ppm), with the exception of five samples that returned values in the 4-10 ppm range. Copper values were variably distributed indicating several patchy anomalies in the 100-200 ppm range. A short 7.3 line-miles (11.7 line-kilometres) of cut line was established on a new grid pattern subsidiary to that established by Texas Gulf. McPhar Geophysics conducted an IP survey of select lines within the grid, and later in the year additional lines were completed. Evergreen Explorations of Smithers, B.C., conducted a pulse-type IP survey, an electromagnetic (EM) survey and a magnetic survey Blue Rock themselves completed an EM survey and a magnetic survey, focused mainly in the center of the grid.

Blue Rock conducted an intensive program of exploration on the main project area from 1970-1971. The property at that time consisted of 118 full and fractional claims, including the aforementioned Charlie Group of claims. This work mainly focused on the known area of mineralization that had been outlined by Texas Gulf. The work included additional induced polarization surveying, and drilling of a total of 24,026 feet (7,323 m) in 21 core holes (excluding the one Charlie Group hole).

The property geology map completed by Texas Gulf was mainly adopted for use by Blue Rock with some minor modification. The map included in this report is a generalized map of the Blue Rock geology map). They believed the pluton to be the dominant lithology on the property and recognized its limited depth extent. Later work by Canadian Superior tended to reject the border phase concept in favour of two aerially distinct and separate porphyry lithologies, a Quartz Feldspar Porphyry and a Quartz Diorite Porphyry.

#### Canadian Superior Exploration Ltd. (1974-1977, 1982)

From 1974 to 1977 Canadian Superior Exploration Ltd. (Canadian Superior) conducted geologic mapping, ground magnetic and induced polarization surveys, and drilled 67 percussion holes and 21 BQ core holes.

The 1974 program was designed to drill test an area south and southwest of Blue Rock hole C-5, which returned 470 ft. (143.2 m) of 0.586% Cu. The holes were targeted based on favorable geology and coincident IP and magnetic data. A total of 1,502 ft. (457.8 m) in four BQ core holes was drilled on the previously established grid. Favorable copper grades were returned from several drill holes, including 74-1, 2 and 4. Drill hole 74-1 returned 170 ft. (51.8 m) of 0.49% copper and 0.039% MoS<sub>2</sub> starting at a depth of 40 ft. (12.2 m) downhole (vertical). Mineralization included chalcocite, bornite, chalcopyrite, native copper and molybdenite. The results were sufficiently impressive enough to warrant additional work, especially targeted drilling on the north and northeast areas of the pluton.

Canadian Superior drilled 3 diamond drill holes and 58 percussion drill holes during the 1975 season. During the 1976 field season a total of 7,645 ft. (2,330 m) of diamond drilling was completed in 15 vertical holes and 2,610 ft. (796 m) of percussion drilling completed in 9 vertical holes. All of the drilling was focused on the pluton which helped to enlarge the area of known mineralization, identify the key lithologies, alteration assemblages and structural controls, and promote the model of a supergene enrichment zone.

Canadian Superior recognized three distinct zones within the area of maximum interest. The zones, defined by a combination of lithology, alteration, mineralization and structure, are still known, from south to north, as the South Zone, the North Zone, and Northeast Zone. They also recognized the presence of the secondary copper minerals chalcocite and covellite and divided the mineralization into hypogene and supergene. Drill-hole data was composited into 40-foot benches by computing the weighted average for the assays within each bench. Cross sections showing the topography and the drill-hole data were plotted in order to illustrate and understand the geometry of the mineralization.

#### Noranda Exploration Company Ltd. (1987)

Noranda conducted a brief geochemical exploration program in 1987 to determine whether the pyritized and altered rock of the Big Onion might also host significant precious metal values, particularly gold. The work consisted of the collection of a limited number of rock chip samples taken from rock cuts and trenches made available from previous exploration work. The gold values returned were uniformly low although the company determined that further work was warranted given the highly pyritized and sheared nature of the zone and the limited sampling that had been conducted. No further work was done.

#### Varitech Resources Ltd. (1991)

Varitech optioned the property in 1991 to determine if the grades could be increased by using modern hydraulic drill equipment and large diameter (HQ) drill core. They completed a short program of 8 HQ diamond drill holes totalling 5562 feet (1695 metres) which twinned earlier holes; four in the south zone and four in the north zone. The holes were run deeper than previous drilling, with depths averaging 695 feet (212 metres).

Several thick supergene drill intersections were reported, including 360 feet (110 metres) grading 0.55% Cu and 0.02%  $MoS_2$ . Precious metal results were relatively low, averaging 0.064 g/t gold and 1.0 g/t silver. The best reported gold and silver assay was 0.305 g/t Au and 2.9 g/t silver over an interval of 10 feet (3.04 metres). The depth of the supergene enrichment was estimated by Varitech to be 360 feet (110 metres) in the North Zone and 250 feet (76 metres) in the South Zone. Hypogene intersections were measured (vertical) up to 480 feet (146 metres) grading 0.27% Cu.

Preliminary metallurgical testing of the supergene material revealed that bacterial oxidation coupled with weak sulfuric acid would return significant copper recoveries. The test sample contained 0.318% Cu as chalcopyrite and 1.22% total Cu. A 66% copper extraction rate was achieved over a 30-day leach period. By extrapolation, it was determined that a leach time of 6 to 9 months would be required to achieve 70% - 80% extraction.

#### Consolidated Magna Ventures Ltd. (1998)

In 1998 Consolidated Magna completed a short drill program of 6 NQ holes for a total depth of 3,333 feet (1,016 metres). The program targeted new anomalies identified by induced polarization (IP) and/or magnetic geophysical surveys outside the bounds of known mineralization. A northwest-trending, cross-cutting fault was believed to terminate the main zone mineralization to the southwest. Geophysics outlined several large chargeability anomalies with some coincident magnetic highs. The follow-up drill program was successful in explaining the geophysical anomalies: the magnetic highs correlated with increased magnetite content in some of the mafic lithologies; and the IP chargeability highs were explained by disseminated pyrite and/or chalcopyrite in the porphyry and volcanic rocks, and graphite ± pyrite in the sedimentary rocks. The faulted extension, however, was not discovered.

#### Eagle Peak Resources Inc. (2006-2009)

Eagle Peak optioned the core mineral claim in 2006 and completed 84 large diameter diamond drill holes totalling 21,523 metres to confirm the results of historic drilling and to explore the extent of the mineralized zones. Lustig (2006) determined that the copper increased by about 13% in the HQ diameter holes when compared to twinned percussion and BQ holes.

Preliminary flotation and leach metallurgical tests were conducted in 2007. Flotation obtained recoveries of 90% for copper, 70% for molybdenum and 70% for gold. Sulphuric acid leach tests recovered 15% copper after 168 hours retention. Additional tests were recommended for both flotation and leaching

Some of the new results include EP-06-01 which returned 70.49m of 0.28% copper and 0.016% molybdenum from 19.51 m to 90.00 m and EP-06-06 which returned 73.19 m of 0.37% copper and 0.005% molybdenum from 19.81 m to 93.0 m. EP-06-08 intersected a total of five discrete mineralized zones, including 87.00 m of 0.37% copper and 0.001% molybdenum from 206 m to 293 m. EP-06-09 also intersected five discrete intervals, including 63.00 m of 0.51% copper and 0.002% molybdenum from 144 m to 207 m.

During the summer of 2008, Peter E. Walcott & Associates Limited was contracted to implement a 44.5 line-kilometres geophysical programme on behalf of Eagle Peak Resources Inc. of Vancouver, B.C. The program consisted of magnetic and induced polarization surveying on the Big Onion property

#### Lloyd Minerals Inc. 2013 – 2016

Lloyd Minerals Inc exploration work in 2013 consisted of drilling 20 holes, HQ size, on 15 drill pads. The first 8 holes were designed as in-fill drilling and close off of the known deposit. Holes # 9 to 20 were designed to explore geophysical anomalies south-southeast of the known mineralization.

In 2016 exploration consisted of 630 line-kilometres of airborne magnetics flown with a nominal line spacing of some 100 metres on east – west orientated lines, with north-south tie lines spaced at a nominal line spacing of some 500 metres. The survey was designed to expand on existing ground magnetic coverage, and aid in locating new exploration targets similar to that of the Big Onion mineralization.

The airborne magnetic data in general shows a good correlation to mapped geology as illustrated below. In an effort to refine potential target areas, a property wide 3D inversion of the magnetic dataset was carried out using Geosoft Voxi. The survey consisted of some 630 line-kilometres of airborne magnetics carried out on east-west flight lines.

The survey identified three areas of interest outside Big Onion Property (Target area A), which may warrant follow up. While a number of other areas may be of interest, the focus was on features that appear to have depth extents.

Target area B, which is situated in the south eastern corner of the property, contains a number of discrete magnetic features. Flanking the western edge of the target area, historic copper and molybdenum soil geochemistry yield anomalous results suggesting potential for mineralization within this region. A review of all historic data should be compiled within this area. A number of deep recce IP lines should also be considered to test for sulphide mineralization. Target area C is a discrete magnetic feature on trend with the Big Onion deposit, and may be a fault offset of a larger magnetic feature which underlies the southern portion of the deposit. A single line of deep investigation IP should be conducted over the target.

Target area D is situated in the north eastern corner of the survey, immediately to the northwest of the claim block. Historical data, if available in this area should be reviewed for comparison. However, given the anomaly's proximity to the park boundary, this target is of low priority at this time.

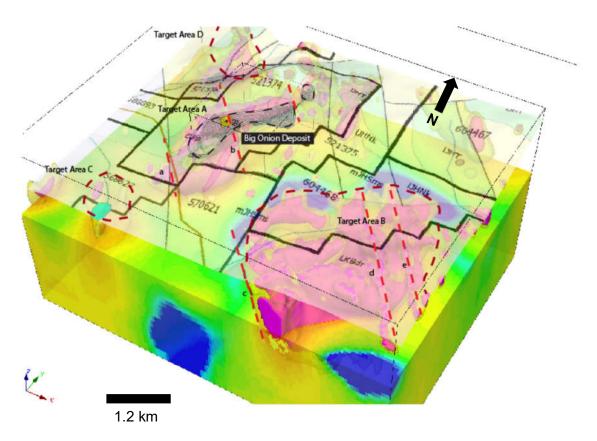
#### **Historical Drilling**

Historically the Property has seen 49,543 metres of diamond drilling and 5,002 metres of percussion drilling since the 1960 (and). The historical drilling resulted in a historical resource estimate (see section 6.1).

Company	Hole Prefex	Year	Diamond Drill Holes		Percussion Drilling	
			No. Drill holes	Total (m)	No. of Holes	Total (m)
Noranda	DDH	1964-1965	2	76		
Texas Gulf	BO	19661967	7	1,217		
Blue Rock	C-	1970-1971	22	7,356		
Canadian Superior	74	1974	4	458		
Canadian Superior	75	1975	3	269	58	4,206
Canadian Superior	76	1976	15	2,330	9	796
Varitech	91	1991	8	1,696		
Con. Magna	BO	1998	6	10,163		
Eagle Peak	EP	2006-2009	84	21,522		
Lloyd Minerals	EP	2013	20	4,456		
	Totals		163	49,543	67	5,002

#### Table 3: Historical Drilling

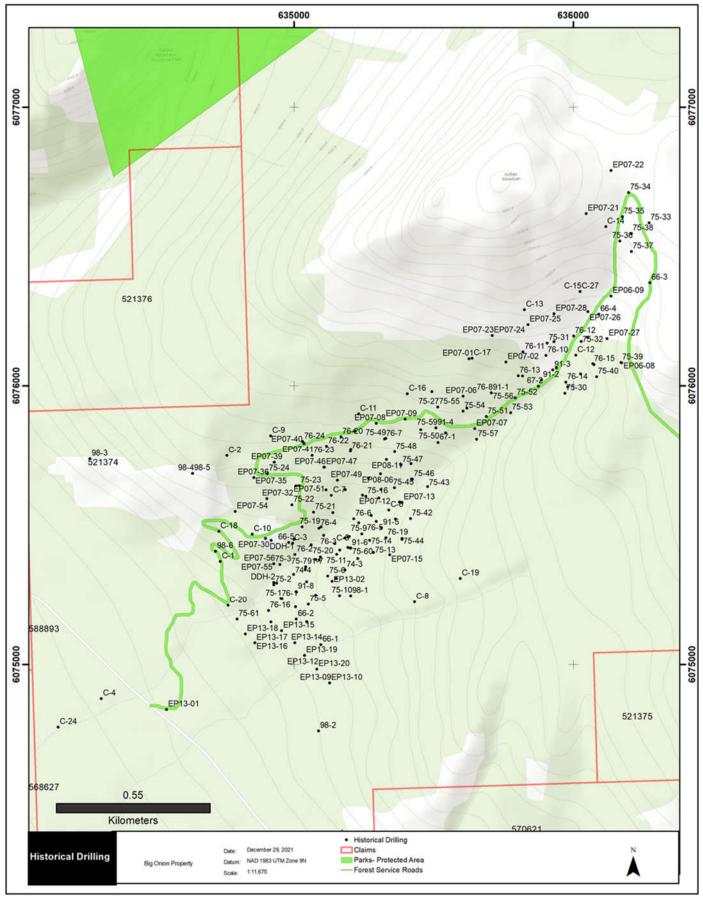
#### Figure 3: Target Areas



Perspective view looking Northwest 3D Magnetic Susceptibility Model

The historical data should be viewed with caution. For example, certain drill holes and prospecting work completed on the Property illustrate results which cannot be verified, unless they are replicated. Drill logs and old assessment reports reporting assays values do not come with lab test certificates and do not mention any quality control procedures. Several historical assay values were detected using less efficient assaying techniques with detection thresholds which are different from today. Moreover, if the historical drill log descriptions are valid, core sampling was sporadic and mostly performed when visible pyrite was present. However, numerous core lengths are described as having an alteration likely to contain metals. Most of those core lengths have not been assayed since they were described when the notions of economic, sub-economic or anomalous values were different from today. For example, the logs may describe alterations and pyrite mineralization that the author of this technical report would have sampled for gold not visible to the naked eye, as a precaution. As for more recent previous works, they show results with certificates but quality controls are weak or poorly developed.





#### 6.1 Historical Estimate

There have been several historical estimations completed on the Big Onion Property over the years but are not considered relevant. For the purpose of this technical report only the most recent one is discussed. The most recent historical resources estimate was in 2010 for Eagle Peak Resources Inc. and Metal Mountain Resources Inc, by Gary Giroux P. Eng. (Giroux, 2010).

The parameters used for the historical estimate are, as summarized from Giroux, 2010:

The historical estimate on the Big Onion property was based total of 215 drill holes, 323 down hole surveys and 14,961 samples. Of these holes 183, totaling 35,483 m, had some portion within the mineralized solids estimated. Samples in most cases were assayed for copper and molybdenum and reported in percent. All units used were metric. Assays noted as "-1.00" were missing or never sampled. Assays with 0.000 values were replaced with a nominal 0.001% in 760 copper assays. Assay values for Cu and Mo were capped to reduce the effect of a few erratic outliers. Variography was completed on 5 m composites for Cu and Mo. A bulk density of 2.73 was used based on 359 measured core samples. Blocks 10 x 10 x 5 m in dimension were estimated for Cu and Mo by Ordinary Kriging. Blocks were classified using semivariogram ranges, a measure of grade continuity. Cutoff is based on other projects and operating porphyry mines in Northern B.C. and is assumed at 0.20% Cu.

At a 0.20% Cu cut-off, the Big Onion was estimated to contain an:

- Indicated resource of 87.1 M tonnes grading 0.30% copper and an
- Inferred resource of 8.6 M tonnes grading 0.27% copper.

Using a copper equivalent, based on metal prices of US\$1.50/lb of Cu and US\$10.00/lb Mo and recoveries of 93% for Cu and 78% for Mo, the deposit contained an indicated resource of 114 M tonnes grading 0.27% copper and 0.009% molybdenum and an inferred resource of 12 M tonnes grading 0.24% copper and 0.006% molybdenum at a cut-off of 0.20% copper equivalent.

This historical estimate is relevant to the Big Onion Property as it supports that there are concentrations of mineralization present. The parameters used to calculate the historical estimate are presented above as available in Giroux, 2010. The historical estimate does not use the current resource categories as defined in CIM 2014; the categories used are likely those of earlier CIM Definition Standards, either 2005 or 2010. To verify the historical estimate the Company would need to obtain the drilling data and verify select drill holes by redrilling or twinning.

The qualified person has not done sufficient work to classify the historical estimate as a current mineral resource. The Company is not treating the historical estimates as a current mineral resource.

# 7 Geological Setting and Mineralization

The area of the Babine Range is underlain by Early Jurassic to Late Cretaceous volcanic, volcaniclastic and sedimentary rocks of the Stikine Terrane. The Stikine Terrane is one of several metallogenically important northwest trending terranes that make up the Intermontane tectonic belt of British Columbia.

The stratified rocks in the region are represented by four groups, the lowermost Hazelton Group, and the overlying and successive Bowser Lake, Skeena Group and Kasalka Group rocks. The Hazelton Group rocks are interpreted as a calc-alkaline island arc system, with the Bowser Group interpreted as a successor basin receiving post-orogenic sediments from uplifted regions to the east and south. The Skeena Group represents sediments shed eastward from the mid-cretaceous uplift of the Coast Range. The Kasalka Group represents a volcanic arc system that developed post-uplift.

Intrusive rocks in the region are believed to have been emplaced along northeast and northerly faults from Cretaceous to Eocene time. Compositions range from diorite to quartz monzonite. Multiphase intrusions are exposed southeast of Astlais Mountain and include quartz feldspar porphyry, quartz diorite porphyry and diorite.

Late Cretaceous to Early Tertiary volcaniclastic rocks have been mapped locally in the Babine Range. Bedded tuffs and argillaceous rocks are found northwest of Mt. Cronin and appear to have been deposited directly onto coarse grained feldspar porphyry.

The Hazelton Group rocks of the Babine Range are made up of subaerial to submarine volcanic, volcaniclastic and sedimentary rocks of early to middle Jurassic age. These rocks are host to a number of important mineral occurrences in the Babine Range that have been well-documented in government geological surveys (Gaba, 1992). The Hazelton group is believed to have accumulated in subaerial to submarine environments which are analogous to modern volcanic island arc systems. The Hazelton can be subdivided into four formations that in stratigraphic order from oldest to youngest are identified as the Telkwa Formation, the Nilkitkwa Formation, the Eagle Peak Formation, and the Smithers Formation.

The Sinemurian or older Telkwa Formation has been mapped extensively throughout the Babine Range. It is comprised of subaerial and submarine pyroclastics and volcanic flows and is apparently the thickest of the Hazelton Group formations. In certain areas it is mapped as intercalated with sediments. The volcanic and pyroclastic rocks are considered dacitic to basaltic in composition. The basaltic flows range in texture from massive to amygdaloidal.

The Telkwa Formation is overlain by Nilkitkwa Formation which consists of shale, siltstone, conglomerate and minor limestone. The Eagle Peak Formation overlies the Telkwa Formation and in part, the Nilkitkwa Formation. It is comprised of distinctive brick-red to maroon ash, crystal and lapilli tuff and related epiclastic rocks. There is also subordinate amygdaloidal basalt.

The overlying Smithers Formation consists of fossiliferous feldspathic sandstone and siltstone. These rocks are mapped as a marine transgressive sequence disconformably overlying the older volcanic rocks.

#### 7.1 Property Geology

Previous geological mapping on the property has identified a suite of northwest-striking volcanic and sedimentary rocks of the Jurassic Hazelton Group (Figure 5). The oldest rocks consist of a sequence of Sinemurain and Lower Pleinsbachian age Telkwa Formation volcanics. The volcanics are comprised of grey-green andesitic volcanic flows and maroon hematitic tuffs. The volcanic rocks are overlain by a succession of sediments of the Nilkitkwa Formation comprised of grey to black, intercalated mudstones, greywacke, sandstones, minor shale and lesser chert pebble conglomerate. The Nilkitkwa Formation is overlain by the lower Bajocian to lower Callovian age Smithers Formation. The Smithers Formation is represented by fossiliferous feldspathic siltstones and sandstones but its presence and location on the property has been a subject of debate.

The volcanic and sedimentary pile has been intruded by an elongate quartz feldspar porphyry (QFP) of rhyolitic composition. The unit is characterized by quartz eyes and relict feldspar phenocrysts and may be dike, measuring approximately 200 m wide by up to 3 kilometres in length. The QFP dike is itself intruded by a quartz diorite porphyry (QDP) dike that is characterized by well-developed plagioclase phenocrysts. The intrusive mass was collectively emplaced along the northeasterly trending Astlais Creek lineament, which is thought to have caused extensive fracturing and alteration to both the pluton near its margin and the country rock. The origin and timing of the intrusive mass is unclear: it has been variably assigned to Early Cretaceous Bulkley Plutonic Suite and the later Eocene Nanika Plutonic Suite. It is not completely understood if the two intrusive units share a coeval emplacement history or are separated in time. A north striking quartz monzonite porphyry dike is present at the southern limit of the mineralized zone and is characterized by fine-grained plagioclase laths. A small hornblende porphyry dike located at the north end of the mineralized zone is characterized by medium-grained hornblende. Copper and minor molybdenum mineralization is believed to be best developed at or near faulting associated with contacts between the intrusives and also in propylitized andesite at the quartz feldspar porphyry – volcanic contact.

2008 mapping on the property identified quartz diorite plugs that were believed to have penetrated through a central rhyolite flow, which together with other field evidence seemed to suggest an anticlinal structure. Mineralization was identified as widespread but mainly centered on the intrusive plugs, with the major controls identified as the contact of the rhyolite with adjacent andesite, local faulting and proximity to the intrusives. Mapping on the property has been somewhat hampered by a lack of outcrops and in some areas, the depth of overburden. Outcrops are reported as non-existent in much of the lower timber-covered area of the property. There are a few mapped cliff exposures higher up on the slopes of the property, and above timberline most representative rock types are reasonably well-exposed (L'orsa, 1967).

The zone of copper mineralization is located within the Astlais Creek valley, and outcrops on surface in some localities. The bulk of the deposit is found below the treeline, at an elevation of about 1460 m above sea level

#### 7.1.1 The Big Onion Porphyry Geology

The Property underlain by Lower-Middle Jurassic Hazelton Group volcanics and sediments of the Telkwa, Nilkitkwa ± Smithers formations (Figure 7). The underlying Telkwa formation volcanics rocks are mapped on the property as variegated red, green and maroon andesitic flows, tuffs and breccias. The volcanics are overlain by Nilkitkwa Formation marine shales, siltstones, greywacke, sandstone and minor limestone, and are themselves overlain by Smithers Formation fossiliferous marine feldspathic sandstones.

The Hazelton Group rocks are intruded by Late Cretaceous to Tertiary (Eocene) stocks comprised of two phases: an early quartz feldspar porphyry (QFP) and a later quartz diorite porphyry (QDP). The earlier intrusion is commonly believed to form a sheath around the quartz diorite porphyry. Small dikelets of the quartz feldspar porphyry are common in the andesitic rocks, near the margin of the pluton. In addition to the main plutonic rocks, there is at least one occurrence of a post-mineralization quartz monzonite dike and there are several varieties of small late hornblende andesite dikes. The quartz monzonite is sericitized and hosts disseminated pyrite and magnetite with chlorite and epidote.

The quartz feldspar porphyry is intensely altered with sericite, kaolinite and chlorite. A sample of intense sericitic alteration has given a whole rock K-Ar age of 117  $\pm$ 4 Ma (Early Cretaceous). As stated earlier, the post mineral quartz monzonite porphyry dike was dated at 48.7  $\pm$ 1.9 Ma, bracketing the age of mineralization.

Copper and molybdenum mineralization is widely distributed in minor amounts throughout the pluton, particularly near the contacts of the two phases, and near the peripheral volcanics. Mineralization of interest includes chalcopyrite, molybdenite and minor bornite. Pyrite is ubiquitous but most abundant in the volcanic rocks near the contact. Mineralization is largely contained in a stock-work of quartz-filled fractures or as disseminations throughout the pluton. The copper and molybdenum mineralization appears to be intimately associated with the quartz diorite porphyry and is best developed along its sheared southeastern contact with the andesite. Molybdenum, even in trace amounts, imparts a pale blue colour that is particularly noticeable in the fine-grained quartz feldspar porphyry.

The main elongated mineralized zone is northeasterly trending and parallel to Astlais Creek. The main zone is further subdivided into three contiguous sub-zones: the South Zone, the North Zone and the Northeast Zone. The South Zone measures roughly 1,200 m long by 300 m wide; the north zone is approximately 840 m long by 120 m wide; and the northeast zone is about the same dimension.

#### Volcanic Rocks

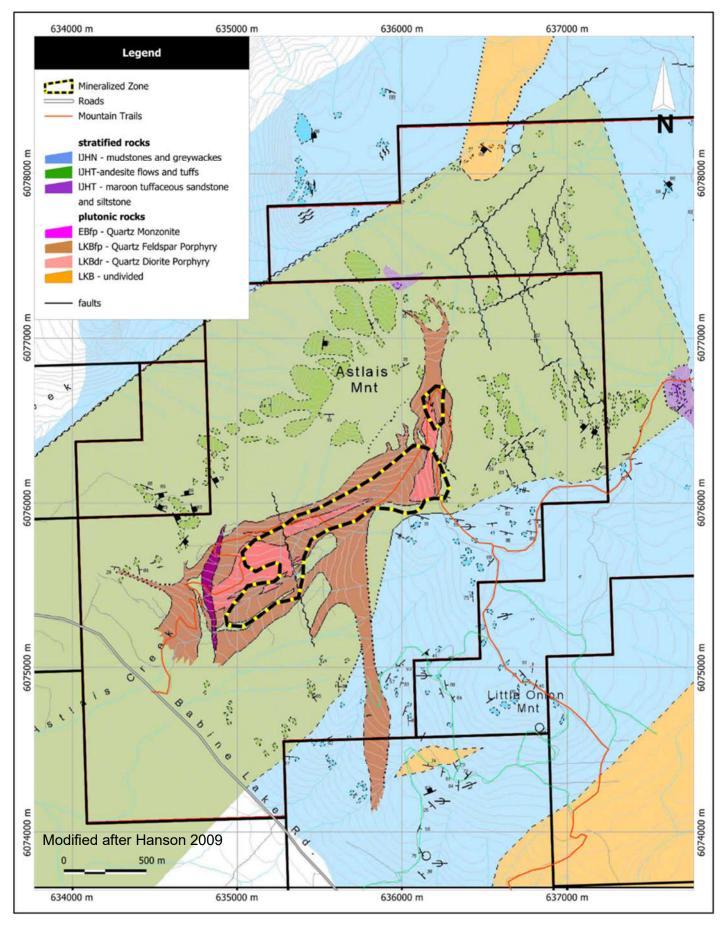
The volcanic rocks represent the oldest rocks on the property and belong to the Sinemurian Telkwa Formation. They are dominated by an assemblage of interbedded andesitic flows and tuffs that are typically green and maroon in colour. The andesitic volcanic flow unit identified in 2006 logging exhibits a dark green colour, fine grained massive texture, chlorite and epidote alteration, moderate to occasionally strong silicification and euhedral pyrite with individual flows exhibiting a strong presence of magnetite. This unit is recognized as a potential marker unit. The andesites encountered in the 2006 drill core are commonly recognized as medium to dark green, fine grained massive flows with sharp distinct contacts. However, three distinct andesitic volcanics were identified: green massive andesite, maroon hematitic and porphyritic andesite, and silicified andesite.

The green andesite is the most common volcanic encountered and exists as a fine-grained massive unit with sharp distinct contacts and a groundmass matrix consisting of chlorite and epidote with phenocrysts of hornblende and pyroxene and less commonly, magnetite. Disseminations are common in all green andesites with occasional units exhibiting a strong magnetite presence accompanied by massive, euhedral pyrite (30-75%).

The maroon andesite is the least common of the andesites and was intersected in only B0- 06-09. This andesite is distinctive in that it has a dark maroon colour, fine grained groundmass with carbonate filled amygdules and glassy and lithic texture. The unit has rare fine grained disseminated pyrite.

The silicified andesite is grey green, fine grained and similar to the green andesite except for the degree of silicification it has apparently undergone. This unit is often found as a portion of a larger andesitic package and is recognized proximal to QDP or QFP contacts with varying lengths. These silicified units are also often strongly mineralized and may constitute an important compositional and geochemical role in interpreting ore control sand constraints.

#### Figure 5: Geology



#### Sediments

Sediments assigned to the Nilkitkwa Formation of the Hazelton Group appear primarily in the east and south portion of the property and appear to extend beyond the eastern limits of 2008 mapping. The unit is represented by arenaceous sediments, argillite and shale and minor limestone. The arenaceous sediments are comprised of greywacke, sandstone, minor arkose and conglomerate with tuffs. The argillite and shale are black, thin-bedded and contain some plant fossils and coaly partings. It is reported that a graphitic argillite, when present, gives rise to a resistivity low. Also identified are argillites that locally contain considerable pyrite but with little if any copper mineralization. The limestone is reported from one thin bed that occurs in contact with volcanics west of the pluton.

#### Intrusives

The Quartz Feldspar Porphyry is generally found bound within the andesite. The QFP consists primarily of a grey, fine grained, moderately to strongly sericite/quartz/pyrite altered intrusive with recognizable quartz "eyes" and feldspar. Depending on its stratigraphic emplacement within the two zones, this unit can be strongly mineralized or devoid of mineralization altogether.

The Quart Diorite Porphyry unit is recognized intersecting the QFP and, to a lesser degree, the andesites, but also appears to have a NE-SW attitude. The unaltered QDP is granitic in texture with large millimetric scale plagioclase lathes set in a dark, fine grained mafic groundmass. More often the QDP is strongly altered and only occasionally recognized as fresh or weakly altered. The strongly altered counterpart is extremely difficult to distinguish from the altered variety of the QFP and is comprised of a grey, clay rich to sericite/quartz/pyrite altered intrusive with variably very weak to strongly mineralized sections.

There are a few outcrops of quartz feldspar porphyry in the andesites near the margin of the pluton. There are also small thin irregular feldspar porphyry dikes that have been noted cross-cutting quartz diorite, and a few dikes of quartz diorite have been mapped into the quartz feldspar porphyry. A prominent quartz monzonite dike that averages approximately 3 m in width has been mapped west of the western limit of the known area of mineralization, and appears to strike north across the entire property. Minor copper mineralization has been reported from various localities in or near all dike types.

#### 7.1.2 Big Onion Quartz Feldspar Porphyry Geology

The quartz feldspar porphyry has been previously described as the older of the two intrusive lithologies that make up the pluton. The rock was originally identified as a rhyolite but was subsequently renamed a quartz feldspar porphyry. The unit is rhyolitic in composition and characterized by quartz eyes and relict feldspar phenocrysts set in a white aphanitic groundmass. The groundmass is described as having a sugary texture and is dominated by quartz and feldspar sheathed in muscovite. The weathered exposure is often coated with jarosite or limonite. A few scattered quartz crystals that measure up to 4 mm in diameter have been noted. Relict feldspar

phenocrysts are recognized in hand specimens but rarely, and have been noted under microscope to be highly sericitized.

The sections most of the feldspar has been identified as plagioclase, with minor potassium feldspar observed. In addition, biotite altered to muscovite has been observed, with some minor opaque minerals. Feldspar phenocrysts form 5-10% of the rock; quartz 3-5% and muscovite, less than 1%. Pyrite has been noted to form up to 3% of the rock.

There were four recognized variations of the QFP encountered in the 2006 drilling: a clay rich altered QFP, sericite/quartz/pyrite/silica altered QFP, a strongly siliceous light green yellow non-mineralized flow banded QFP dyke, and a hornblende rich QFP (Hornblende Porphyry).

The altered QFP was observed as a grey, clay rich, crumbly, moderate to strongly mineralized intrusive with rare observed quartz eyes and feldspar crystals (this unit is particularly difficult to distinguish from the altered QDP.

The sericite/quartz/pyrite/silica altered QFP, observed in drill holes, BO-06-01, BO-06- 11 and B0-06-07, is a competent eggshell-coloured, fine grained, massive QFP with a very strong brecciated, stockwork jigsaw texture. The stockworks appear to be the result of intense and minute cross-cutting quartz veinlets anastomosing throughout the drill core (often referred to as crackle). This altered QFP contains fine 1-2 mm disseminated chalcopyrite, chalcocite and pyrite throughout the interval lengths. Quartz eyes and feldspar are commonly observed throughout.

#### **Quartz Diorite Porphyry**

The quartz diorite porphyry (QDP) is believed to be younger than the quartz feldspar porphyry and intrudes and forms the core of the pluton complex. The unit is described by some workers as a plug and by others as a dike. The rock is variably described in core and hand sample as a medium-grained light-grey to green-grey to pink-grey rock with a sub porphyritic texture in a pale green and siliceous matrix. It is a fairly homogenous rock with local variation due either to a coarse-grained or porphyritic variety, or variable alteration. The weathered exposure is often coated with limonite.

#### Alteration

The main mineralized zone is marked by a copper mineralization completely enveloped by a quartzsericite assemblage grading outward to propylitic alteration and then to relatively fresh rock at or near the limits of the pyrite halo.

The propylitic alteration is best developed within the margins of the andesite flows and is characterized by epidote, calcite, chlorite and weak sericitization of plagioclase. Within the quartz feldspar porphyry, the propylitic assemblage is characterized by calcite and saussauritization of the feldspars. The quartz diorite porphyry is propylitized throughout, and is characterized by hornblende altered to chlorite accompanied by weak sericitization of the plagioclase and some associated calcite.

Secondary biotite alteration has been observed throughout the quartz sericite assemblage but has typically been seen only as narrow envelopes around fractures.

#### **Propylitic Assemblage**

The propylitic assemblage is best developed in andesites that are found in contact with the pluton and is characterized by chlorite, epidote, pyrite and calcite with minor quartz and bleaching. The strongest propylitic alteration is found along the western margin of the northwest zone. There does not appear to be a direct correlation between intensity of propylitization and Cu-Mo mineralization.

#### Argillic Assemblage

Argillic alteration is best developed along the phase contact between the two porphyry bodies and is represented by kaolinite, sericite, quartz in both veins and in places as silicification, and minor calcite. Alteration, at least in part, is probably related to localized shearing. Kaolinite is reported as soft and easily dug out with a knife point. Where intensely weathered and altered, hand samples of quartz feldspar porphyry and quartz diorite porphyry are difficult to distinguish. There does not appear to be a strong correlation between Cu-Mo mineralization and this assemblage.

#### **Quartz-Sericite-Pyrite Assemblage**

Sericite and pyrite are generally most conspicuous in quartz feldspar porphyry near volcanic contacts but alteration is reported as difficult to recognize in hand sample because the lithology typically has such a fine-grained nature. However, near some contacts sericite and disseminated pyrite become more apparent.

#### Sulphide Assemblage

Weathering of primary copper sulphides has produced malachite and occasionally azurite in outcrops noted throughout the property. Weathering of pyrite (and presumably other sulphides) has formed limonite deposits on the southern slope of Astlais Mountain and in Astlais Creek. The limonite is believed to be derived from pyrite in propylitized andesites in close contact with quartz feldspar porphyry.

Limonite alteration was found present in drilling holes and also noted in all previous drill hole logs from past drilling campaigns. The limonite is believed to be derived from pyrite in propylitized andesites in close contact with quartz feldspar porphyry, however, the absolute presence of it within all lithological types that are not in association with andesite suggests a different origin.

Sulphides are disseminated throughout most of the lithological units and to varying degrees; however, the andesites exhibit the largest concentrations of massive sulphides, often as cumulative layers or cumulative zonation, with pyrite percentages locally upwards of 35-75% of the rock volume.

#### Supergene

The Big Onion Porphyry has undergone supergene enrichment over a thickness of approximately 110 m in the north zone and approximately 76 m in the south zone. Supergene mineralization consists of chalcocite with lesser covellite which replaces or coats chalcopyrite grains. Pyrite may also be tarnished with secondary copper.

Supergene development requires a hypogene source of copper as well as a permeable host rock that allows for the vertical percolation of acidified ground waters. The sericitized and partly foliated quartz feldspar porphyry is both permeable and mineralized, hence the best supergene development is associated with this lithology (McCrossan, 1991).

The best supergene grades and thicknesses are found in the North Zone and Stock (1977) has suggested that a northerly trending fault zone between the North and South Zones has allowed for the relative uplift and erosion of some of the South Zone supergene mineralization.

#### Hypogene

Hypogene mineralization consists of disseminated and fracture-controlled chalcopyrite and molybdenite which is predominantly associated with quartz feldspar porphyry. The margins of the quartz diorite porphyry and the footwall andesites are also mineralized, adjacent to contacts with the quartz feldspar porphyry. Pyrite is also widespread within the deposit and locally attains concentrations of >10%. The dissolution and oxidation of pyrite by near-surface groundwater is believed to have produced sulphuric acid which was essential for development of a supergene enrichment zone.

#### Mineralization

Copper and molybdenum mineralization is widely distributed as shear and fracture fillings and disseminations in quartz feldspar porphyry, quartz diorite porphyry and in the propylitized volcanics, particularly near the contacts zones of the two phases and of the peripheral volcanic rocks. Canadian Superior reports the mineralization is generally localized within steep, northwesterly dipping shears that parallel Astlais Creek. Canadian Superior also reported that the mineralization is largely confined to quartz feldspar porphyry with relatively minor amounts cross-cutting the thinner quartz diorite porphyry and margins of the andesite flows, and still lesser amounts observed in the margins of the main quartz diorite porphyry mass. Canadian Superior determined that the mineralization appeared restricted to rehealed, shattered and sheared zones that strike approximately 065° and dip from between 50° to 70° to the northwest. Mineralization is believed to have occurred over multiple phases of hydrothermal activity.

The mineralization appears to be fault controlled and Stock (1977) describes three hydrothermal mineralizing events:

- a) quartz, sericite, pyrite ±chalcopyrite
- b) quartz, sericite, chalcopyrite ±molybdenite
- c) quartz, sericite, molybdenite

Their relative temporal placement was not identified and would require additional study to determine. Molybdenite mineralization, although a weaker component to copper, shows a strong correlation to copper, especially in the south zone.

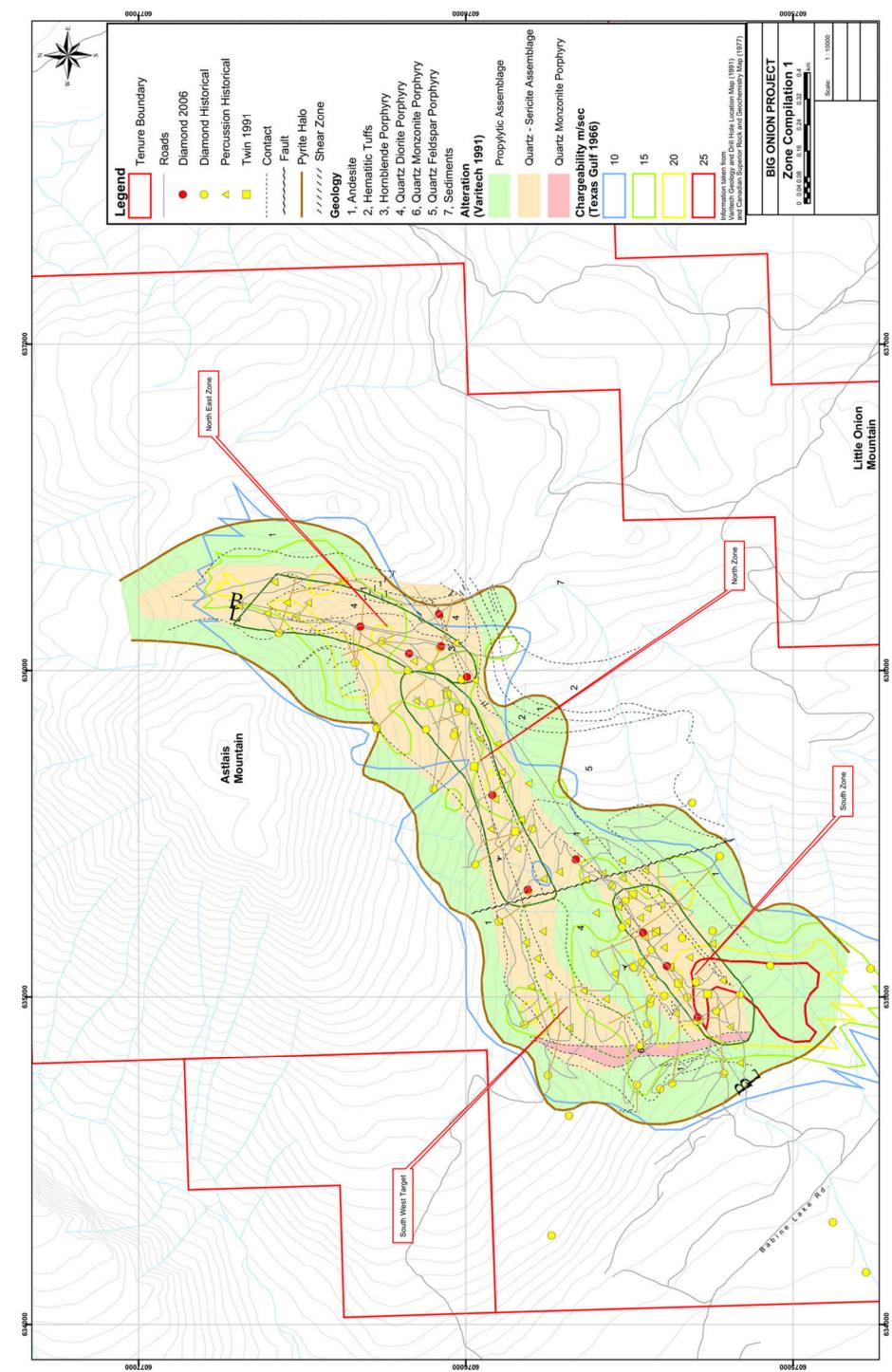
Pyrite is ubiquitous throughout the zone locally reaching >10% by volume of the rock. Interaction of surface water and pyrite within the vadose zone initiated significant secondary or supergene enrichment processes within the copper zone (McCrossan, 1991).

Oxidation of pyrite by surface water produced sulphuric acid which dissolved the available chalcopyrite. The downward percolation of this copper rich surface water ended when reducing conditions at or near the ground water table resulted in the precipitation of copper from solution. Deposition normally took place on the surface of sulphide grains. This process has been enhanced at Big Onion as a result of the intense sericitization of the mineralized quartz feldspar porphyry which has resulted in greater rock permeability and permitted relatively easier movement of water.

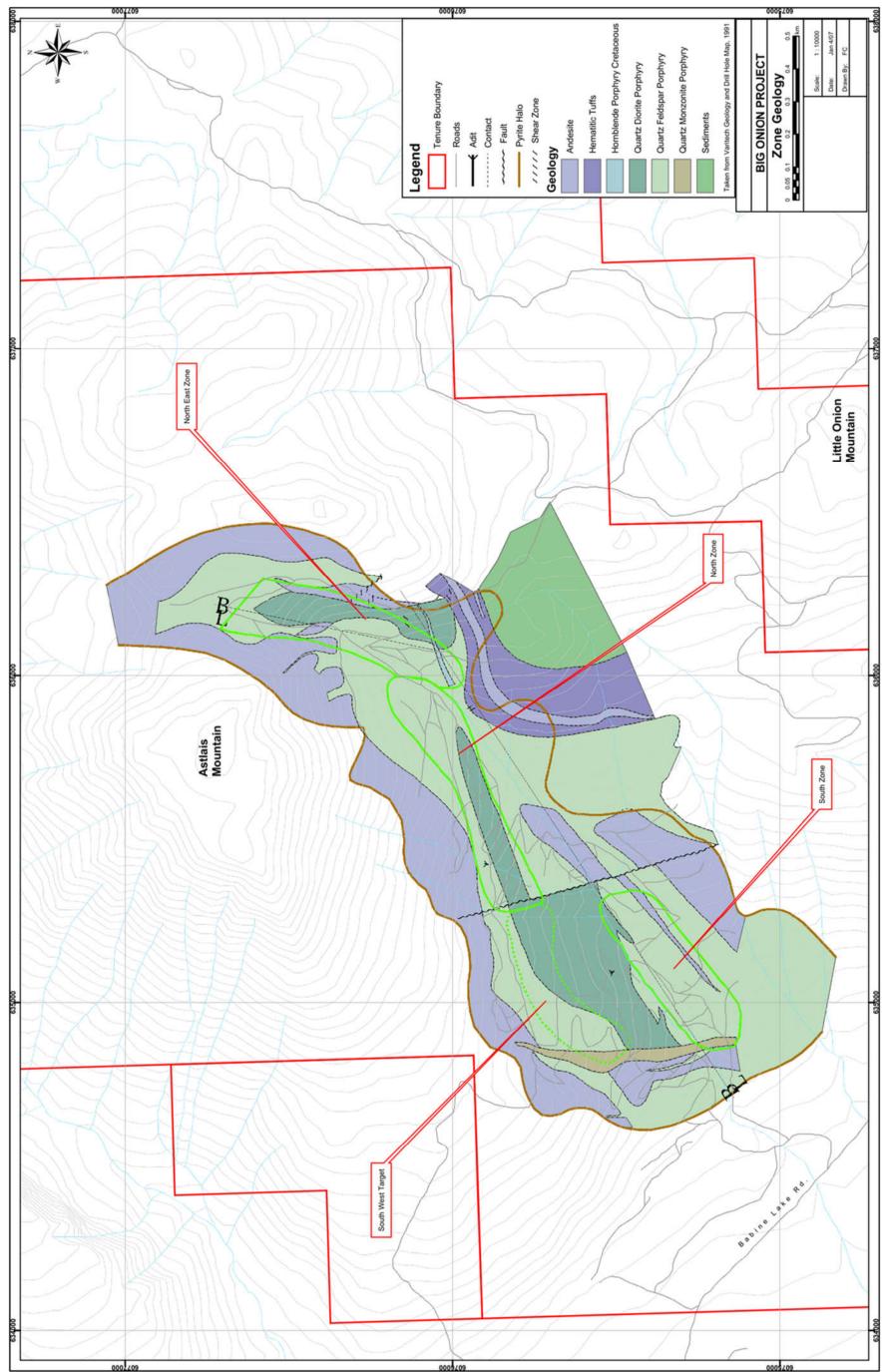
The supergene mineralization assemblage largely consists of chalcocite and covellite with subordinate bornite and rare native copper. Although pyrite is tarnished or coated with supergene mineralization it does not appear to be a significant deposition site. Chalcopyrite is the favorable site and with continuation of the secondary processes' chalcopyrite is often completely replaced by chalcocite and covellite. In this way supergene enrichment has been largely restricted to the same shear zones that carried the original hypogene mineralization.

Supergene mineralization has the greatest tenor and thickness in the north zone. Faulting may be responsible for erosion of the south zone's supergene blanket while preserving the north zone's supergene blanket. Historical soil and rock geochemical surveys and previous geophysical mapping of the property (Figure 7: Big Onion Geology) and the porphyry area (Figure 6) revealed a close correlation with the outlines of the inferred copper zone. Although the copper and molybdenum anomalies are locally discontinuous both were thought to suggest the persistence of the underlying copper zone. The molybdenum geochemical response appears more persistent. The reason for this is likely due to the greater mobility of copper within the hydrothermal system and especially within the leached cap. Canadian Superior reported a comparison of diamond and percussion drill hole assay results, with percussion results averaging 20% less than those obtained through diamond drilling. Their conclusion was to eliminate the use of percussion drilling for any future drill campaign.

#### Figure 6: Big Onion Alteration



# Figure 7: Big Onion Geology



## 8 Deposit Types

Porphyry copper systems are characterised by extensive zones of hydrothermally altered rock (>10 km<sup>3</sup>) centred on porphyritic-textured intrusions with felsic to intermediate composition (Sillitoe, 2010). Copper mineralization typically occurs as copper sulphide minerals disseminated in the altered wall rock and in closely spaced veinlets that occupy a smaller portion of the hydrothermal alteration zone. Post-mineral exhumation, weathering, and mobilization of primary copper mineralization may result in supergene enriched zones located above primary copper sulphide (hypogene) mineralization. Alteration and mineralization commonly form mappable zones based on silicate and sulphide mineral assemblages observed in outcrop and drill core. The majority of copper is deposited during potassic alteration, which forms early in the evolution of the porphyry system.

Porphyry systems are related to calc-alkaline porphyry complexes consisting of multiple intrusion phases emplaced during mineralization that is associated with a sequence of hydrothermal alteration and veining. Porphyritic intrusions range in composition from granite to diorite. Economic grades are often controlled by emplacement of fertile intrusions at or near structural zones and/or intersections. The best grades typically occur in the uppermost sections of these intrusions, where strong hydrofracturing related to depressurization of a hydrothermal fluid phase produces hydrothermal brecciation, as well as at or near the contacts with other rock types, often coincide with the best grades. Host rock type, the amount of early-formed, sulphide-bearing veinlets, and proximity to early-mineral porphyritic intrusions are the main controls on intensity of primary copper mineralization. Dilution by syn-mineral dikes and stocks intruded late in the mineralization cycle and strong overprinting by sericite-pyrite alteration causes reduction in copper grades.

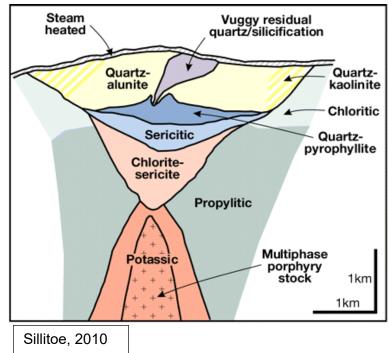
Oxidation of primary sulphides generated in porphyry systems results in circulation of acidic waters above mineralized systems. This later event has a twofold effect on porphyry deposits: it leaches rocks of all or most of the sulphides they contained above the water table; and copper rich solutions redeposit as enriched copper sulphides at or below the water table. Common sulphides found here are chalcocite, covellite and digenite. Occasionally, native copper will deposit on rocks with insignificant amounts of sulphur, such as young barren dykes. These enrichment zones (or "blankets") tend to behave as flat zones often parallel to topography. Above the secondary enrichment zone, altered rock often shows no geochemical signature due to intense leaching of all copper-bearing primary sulphides. Thus, typical Andean porphyries have a leached upper zone, an enriched supergene blanket, and a much larger mineralized, albeit at lower grades, primary (or hypogene) zone at depth.

Fluctuating water tables often result in subsequent oxidation of enrichment blankets. Common copper oxide minerals found in these zones are malachite, chrysocolla and brochantite. Occasionally, these copper oxides re-deposit some distance away from the main mineralization to form "exotic" copper deposits.

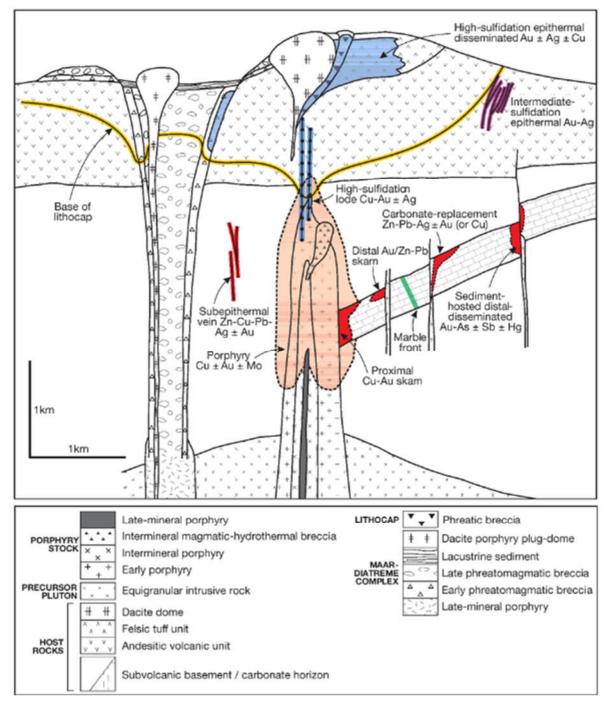
Porphyry deposits develop alteration zones distributed in time and space. Commonly documented alteration zones are: potassic, propylitic, phyllic, and sodic. Additionally, argillic, intermediate argillic and calc-sodic alteration are described in some examples. A central potassic alteration core surrounded by an outer propylitic zone normally forms early and is overprinted by phyllic and less commonly, argillic alteration.

Other deposit styles associated with porphyry copper deposits (spatially and genetically) include epithermal quartz veins and disseminated precious metal deposits, lead-zinc-silver veins and replacements, and skarns. A schematic model for porphyry deposits with respect to other styles of mineralization is shown in Figure below.

Figure 8: Deposit Alteration



### Figure 9: Deposit Model



Anatomy of a telescoped porphyry Cu system showing spatial interrelationships of a centrally located porphyry Cu ±Au ±Mo deposit in a multiphase porphyry stock and its immediate host rocks; peripheral proximal and distal skarn, carbonate- replacement (chimney-manto), and sediment-hosted (distal-disseminated) deposits in a carbonate unit and sub epithermal veins in noncarbonate rocks; and overlying high- and intermediate-sulfidation epithermal deposits in and alongside the lithocap environment. The legend explains the temporal sequence of rock types, with the porphyry stock predating maar diatreme emplacement, which in turn overlaps lithocap development and phreatic brecciation. Modified after Sillitoe, 2010.

#### **Geological Model**

The geological model proposed by Stock (1977) is illustrated in the schematic taken form the 1977 Canadian Superior report.

The volcanic and sedimentary rocks were deposited in Lower to Middle Jurassic time in an island arc environment similar to modern island arc settings (e.g., Japan). Later in Cretaceous time northeast oriented faulting providing the plumbing system into which a complex suite of intrusive rock was intruded, with some extruded tuffs also likely.

In Stock's report he postulates that:

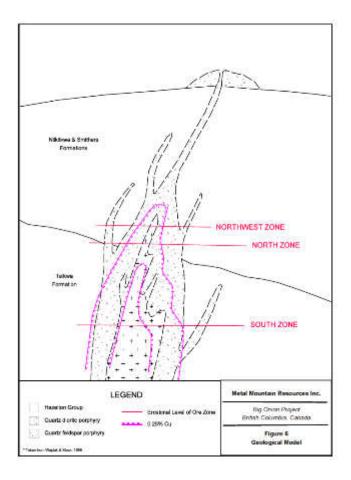
- faulting of the Hazelton sequence allowed intrusion of the QFP which vented producing a variety of acid tuffs in the general area
- Intrusion of the QDP into the still cooling core of the QFP resulted in the initial sericitization of the QFP

•

• Further stresses preferentially sheared the altered and weakened QFP thus providing the plumbing system for subsequent mineralizing fluids

•

- Hydrothermal activity completed the sericitization and locally silicified the QFP while depositing chalcopyrite and molybdenite.
- •
- Supergene processes were initiated until transverse fault systems began shifting the copper zone to its present position



Further refinement of the model is warranted and should involve more microscopy to reveal ore mineralogy and textural relationships between chalcopyrite, pyrite molybdenite and gangue minerals.



# 9 Exploration

Gama Explorations Inc. has not undertaken any exploration work on the Big Onion Property. In 2021 Blue Lagoon Resources Inc. collected 612 soils samples and undertook 256.106 line-km of Drone airborne magnetics. The 2021 soil grid and the airborne geophysics grids overlap each other (Figure 12 and Figure 13)

The soil exploration program was conducted from September 15 to 21, and September 28 to October 7 2021. Using between two and five crew members the Blue Lagoon Resources Inc. collected 612 soils and QA-QC samples on the Big Onion project over a grid 2,400 m by 2,000 m. See Section 11 of this report illustrates the sampling method for the soil sampling program.

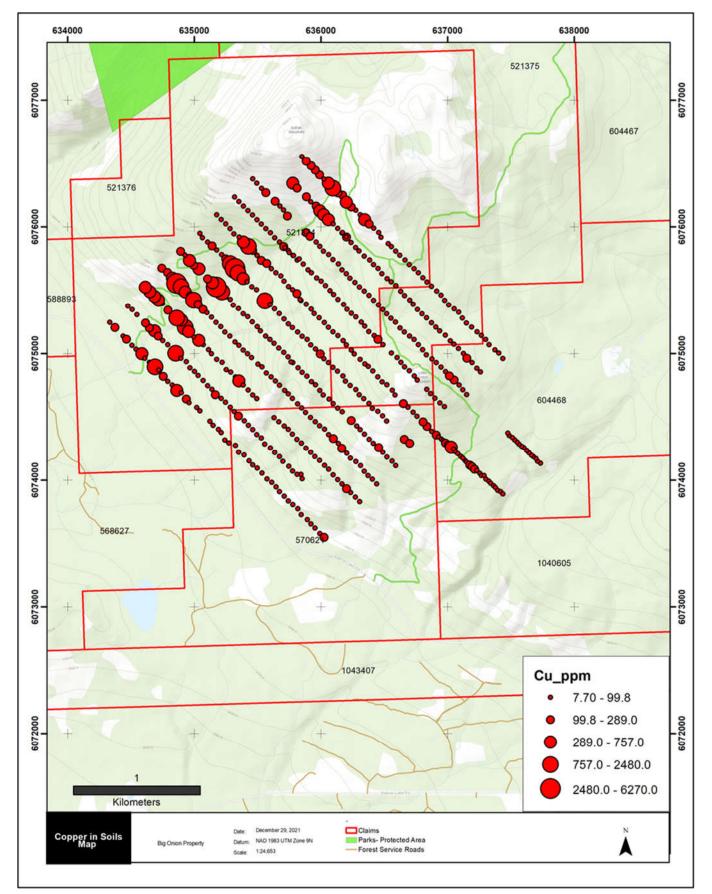
Based on a review there was no bias in the 2021 soil sampling program. The author is satisfied with the adequacy of sample preparation, security, and analytical procedures employed on 2021 Porter exploration program

Drone airborne magnetics survey was flown two field campaigns from November 9<sup>th</sup> to 20<sup>th</sup>, 2021, and from December 4<sup>th</sup> to 9<sup>th</sup>, 2021 by Pioneer Exploration Consultants Ltd. using an Unmanned Aerial Vehicle (UAV). See Section 11 of this report illustrates the sampling method for Drone Airborne magnetics.

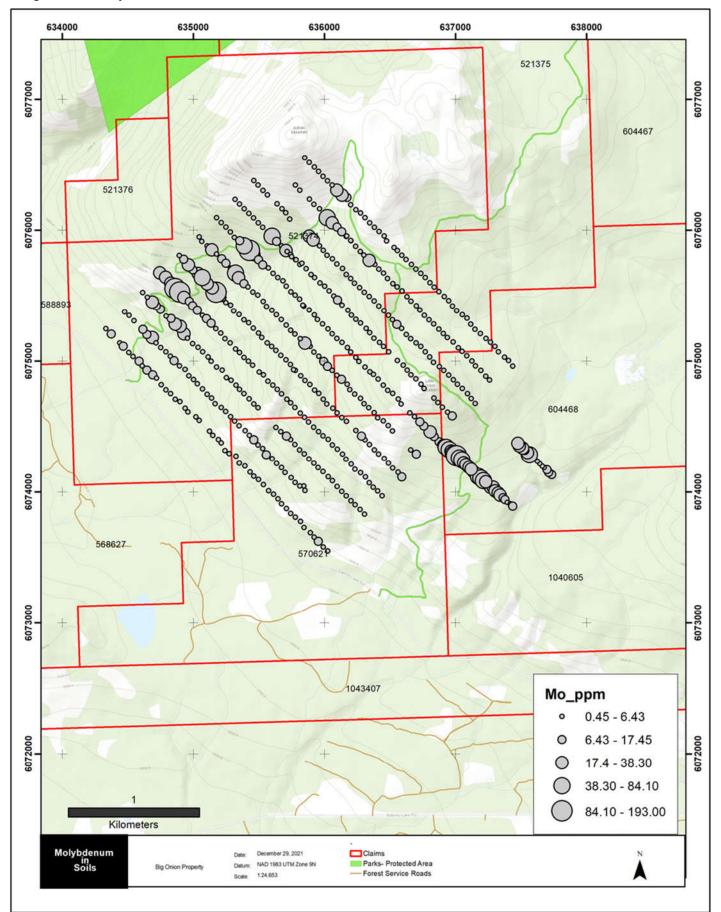
The 2021 program covered the area of know Porphyry mineralization the copper and molybdenum soils anomalies clearly reflect this (Figure 11 and Figure 12)

Figure 13 illustrates the First Vertical Derivative and also reflects the known mineralization on the property.

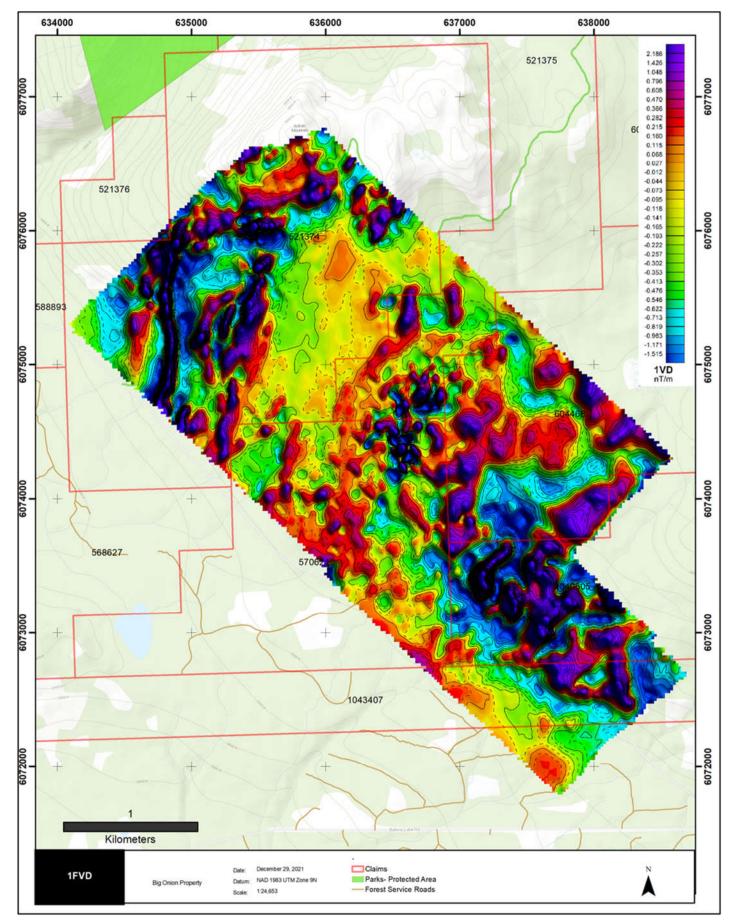
### Figure 11: Copper in Soils



#### Figure 12: Molybdenum in Soils







# 10 Drilling

The company has not undertaken a drilling program on the Property.

## **11** Sampling Preparation, Analysis and Security

### 2021 Soils Work Program

The Blue Lagoon Resources Inc exploration program conducted from September 15 to 21, and September 28 to October 7 2021. Using between two and five crew members the Blue Lagoon Resources Inc collected 612 soils and QA-QC samples on the Big Onion project over a grid 2,400 m by 2,000 m.

Access to the grid was by truck and then side by sides from Smithers. Lines were oriented at 315° and covered both untested conductivity anomalies and the known Big Onion mineralization. Line spacing was at 200 m with samples at 50 m spacing with the exception of two additional lines further to the southeast over a mag high with samples at 25 m spacing.

Locations were pre-determined on the grid and sites were located using GPS. Samples were collected from the B horizon using a shovel at between 5-40 cm depth, "A" horizon material was discarded and "B" horizon material was placed in a Hubco sample bag which was then tied with the included string and placed into an open poly ore bag with other completed samples. Unique sequential sample numbers from multi-part sample books were assigned to each sample, one section of the sample tag was placed in the sample bag, coordinates were written in the sample book, the sample number was saved on the GPS, recorded on the outside of the sample bag and on flagging tape left at site to mark the sample location. The sample number was recorded in a handheld device along with zone, elevation, datum, GPS, sample type, sample date, sampler, project, sample colour, texture, terrane, horizon, depth, moisture, oversize fragments, quality and surrounding vegetation.

QA-QC samples were inserted every 10 samples and consisted of duplicates, CDN certified standards and blanks (play sand). The play sand is not recommended for use in the future as it is too coarse and returned NSS for some of the Au-AA24 samples.

The QA-QC samples were collected and analyzed for the 2021 soil sampling program. However, none of these samples were plotted to evaluate the effectiveness of the QA/QC program. The Company should review/polt the results of the 2021 QA-QC program before commencing any future programs.

After sample collection, samples were temporarily stored at the Gavin Mines office in Smithers before being transported by Gavin Mines employees to the Dome Mine site for drying. Soils at both sites were stored under lock and key. Samples were sorted numerically and were stored for drying on plastic shelving units in an enclosed trailer. Following drying, they were packaged by groups in zap strapped poly-ore bags which were then placed in to labelled and zap strapped rice bags for shipping.

Gavin Mine employees delivered the rice bags to Bandstra in Smithers for shipping to ALS Limited of North Vancouver. After delivery to ALS Geochemistry, all samples were logged in the tracking system. Soil samples underwent PREP-41 and were dry-sieved to -180 micron, both the plus and minus fractions were retained until disposal. Samples were analyzed using ME-MS61 and Au-AA24. Au-AA24 is a Fire Assay Fusion (FA-FUS) with Atomic Absorption Spectroscopy (AAS) analytical method. Als Limited is an ISO/IEC 17025:2017 lab accredited by the Standards Council of Canada.

ME-MS61 is a four acid (HF-HNO3-HCLO4 acid digestion with HCl leach) sample decomposition with ICP-MS instrumentation. The four-acid digestion quantitatively dissolves nearly all minerals in the majority of geological materials.

A prepared sample (0.25 g) is digested with perchloric, nitric and hydrofluoric acids. The residue is leached with dilute hydrochloric acid and diluted to volume.

The final solution is then analyzed by inductively coupled plasma-atomic emission spectrometry and inductively coupled plasma-mass spectrometry. Results are corrected for spectral inter-element interferences.

### 2021 Drone Mag Survey

Pioneer Exploration Consultants Ltd. Flew the Drone survey from November 12-20 and December 4-9, 2021. The Grid was accessed by truck then skidoo from of Smithers. The Grid is 2.44km by 3.9 and 5.1km for a total of 256.105 line-km. Flown at 315° degrees with 50m line spacing using a multi-rotor UAV platform, a GEM Systems GSMP-35U potassium vapour magnetometer and GEM Systems GSM-19W Overhauser base stations.

Data collection for the Onion survey area was conducted at 50 m line spacing with 500 m spaced tie lines. The nominal magnetic sensor altitude above ground level (AGL) was set at 45 m for Onion survey. Elevation from the terrain may vary depending on the tree line and obstacles on the flight route. A 12 m resolution DSM was used to assist the UAV terrain following procedure and to minimize the possible topographic effects on the magnetic data. The nominal production groundspeed is 9 m/s for flat topography with no wind. The survey speed may vary depending on the terrain and environmental conditions.

The principal airborne sensor used was a Gem Systems Canada GSMP-35U potassium vapor sensor mounted on a UAV platform. Ancillary equipment included a laser altimeter with a 130m range, Global Positioning Satellite (GPS) system antenna and Inertial Measurement Unit (IMU). A stationary GSM-19 Overhauser magnetometer was used as a base station. Raw aerial magnetometer data was collected at a rate of 10 Hz while base station data was collected at a rate of 0.16 Hz. Total field and GPS UTC time were recorded with each data point, enabling diurnal correction to be applied during final data processing

Pioneer Exploration Consultants Ltd. Provided maps of Micro-leveling of Magnetics, Analytic Signal calculation and First Vertical Derivative calculation. In addition, the raw geophysics data (grd files), pdf maps, and geo tiffs were provided. However, Pioneer Exploration Consultants Ltd. was unable to provide the final Geosoft map files that made up the maps they created.

## 12 Data Verification

The author Strickland undertook a site visit to the Property on December 8 2021. At which point Strickland collected five core samples (see Table 4) from the 2013 drilling. The samples were delivered to Activation Laboratories Ltd. in Kamloops, British Columbia. Activation Laboratories is an ISO/IEC 17025 lab accredited by the Standards Council of Canada. All samples underwent assay package 1E3 which includes 38 element ICP analysis, and a 1A2-ICP Fire Assay. Activation Laboratories Ltd. is independent of Gama Explorations Inc, Lloyd Mineral Inc, Blue Iagoon Resources, and the author.

The author visited the nearby core storage yard was also visited. It is a locked and gated facility that stores core from the most recent drill programs performed by Lloyd Minerals and Eagle Peak. Several core boxes were opened and inspected, including BM13-03, BM13-04, and BM13-08. The boxes contained split core from the 2013 drill program. The core was split rather than sawn to avoid washing away the fine grain molybdenum, which was still evident on several joint surfaces. The mineralization observed in the core was consistent with that reported in prior technical reports and throughout this document, including pyrite, chalcopyrite, molybdenum and bornite.

The author also reviewed the sample notes and assays results for the 2021 programme and is satisfied that they meet current industry standards. The author randomly reviewed and compared 25 assays results from the 2021 electronic data against the assay certificates provided. The author did not detect any discrepancies when comparing the assay results.

Original No	Author Sample	Drill hole and Interval	Au PPM	Cu %	Pb %	Zn %	Au PPM	Cu %	Pb %	Zn %
1425769	M21-02	BM13-03-22 (93.5m to 94.5m)	0.012	0.145	<0.02	<0.01	0.0101	0.418	<0.02	0.0043
1425882	M21-01	BM13-04-19 (69.4m to 70.24m)	0.067	0.275	<0.02	<0.01	<0.005	0.192	<0.02	0.0013
1426371	M21-03	BM13-08-48 (153m to 154.8m)	<0.005	0.01	<0.02	0.01	<0.005	0.0109	<0.02	0.0088
1425780	M21-04	BM13-03-28 (112.75m to 113.25m)	1.678	0.816	<0.02	<0.01	0.0029	0.134	<0.02	0.0047
1425777	M21-05	BM13-03-26 (107 to 108m)	0.068	0.285	<0.02	<0.01	0.0016	0.107	<0.02	0.0021
			Orginal Samples		Authors					

Table 4: Author's Colle	ected Samples
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The author reviewed the select drill logs and select assay sheets. The author's collected samples are congruent with the historical sample assayed see table above.

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

In 1977 Britton Research Limited of Vancouver, BC, conducted metallurgical investigations on two 200 lb composite sample taken from drill core provided by Canadian Superior. The intent of the program was to determine the amenability of concentration of both supergene and hypogene material by flotation. No attempt was made to produce a high-grade molybdenite concentrate due to the relatively low molybdenum content of the samples. Assays were conducted by Technical Services Laboratories of Mississauga, On.

The supergene composite and hypogene composite samples were tested for metal content by assay, and put through a series of tests to measure physical parameters, including specific gravity, recovery by rougher flotation, and grindability (work index).

Based on the results obtained in the final tests, preliminary estimates were made of the expected results if similar material were treated in a full-scale mill scenario. It was noted during the earlier testing that deterioration of the floatability of copper had occurred due to surficial oxidation. Therefore, in the full-scale scenario the deterioration of the copper floatability was not taken into account as it was assumed ore would be treated as soon as possible after exposure. As there was no information regarding capital and operating costs or probable metal prices available at the time of testing, no selection of the optimum treatment or fineness of grind was made. In fact, the results were estimated at various finenesses. It was suggested that a fineness of about 53% minus 200 mesh might be close to the optimum but selection of the optimum fineness of grind would have to be based on economic conditions, balancing additional recoveries against the extra capital and operating costs of finer grinding

## 14 Mineral Resource Estimate

There are no current mineral resources estimated for the Property.

## 15 Through 22 Are Not Applicable to This Report

Items 15 through 22 of Form 43-101F1 do not apply to the property that is the subject of this technical report as this is not an advanced property.

# 23 Adjacent Properties

The Big Onion Property is directly to the west of Dome Mountain Project currently owned by Blue Lagoon Resources Inc. In 2020 Blue Lagoon Resources Inc published mineral resource on the Dome Mountain Project (Cutler et al 2020).

The Dome Mountain Project has a defined mineral resource in both the Boulder vein system and Argillite vein. The Boulder and Boulder East veins have areas of more closely spaced drilling that are classified as Indicated Resource, the remainder of the Boulder vein system as well as the Argillite vein have wider spaced drilling and are classified as Inferred Resource. A total of 304 exploration drill holes were used in this mineral resource estimation. In each of these drill holes, a mineralized zone was selected and flagged. These flagged zone assays were then composited to create a single grade value for each drill hole. Resource estimates were bound using 3D wireframe solids of vein shapes created using the flagged diamond drill hole data and calculated using the ordinary kriging algorithm in Vulcan. (Cutler et al 2020).

Three separate block models were generated for this resource estimation. One for the Boulder and Boulder East veins, one for the Boulder Hanging Wall vein, and one for the Argillite vein. These separations were made because of noticeable differences in vain orientation and in the drill hole statistics data between veins. Each block model used vein-specific orientation, search radius sizes, and grade capping values.

Solid triangulations were created using polygons based on flagged mineral resource zone locations. These solid triangulations were split into blocks representing the mineral resource body. Blocks without actual drill hole data falling within them were then assigned an estimated grade by using kriging in Vulcan block modeling software. The parameters for kriging were determined by variography on the composite dataset. Finally, a dilution script was applied to all estimated blocks. From these blocks, tonnage, grade, and gram values were calculated and reported.

The reported drill hole database contained 5,751 assayed intervals with an average Au grade of 2.81 grams/tonne. From this database, 785 sample intervals were determined to fall within the mineralized veins being evaluated in this study and were flagged as mineral resource zones of the Boulder, Boulder East, Boulder HW or Argillite Veins. The average grade of these flagged samples was 11.85 grams/tonne Au. Samples flagged as part of the mineralized zones of interest resulted in a total of 798 silver assays being used in the resource estimation.

#### Table 5: Dome Mountain

#### INDICATED RESOURCE

	AU CU	TOFF GF	RADE 3.42 g/t	onne	AG g/tonne	
MINIMUM MINING WIDTH (2.25m)	Tonnes	Gold Grade	Gold Grams	Gold Ounces	Silver Grade	Silver Ounces
Boulder Vein	166,511	12.12	2,017,497	64,864	60.30	322,790
Boulder East Vein	9,470	18.24	172,749	5,554	62.39	18,994
TOTAL	175,980	12.45	2,190,246	70,418	60.41	341,784

#### INFERRED RESOURCE

	AU C	AU CUTOFF GRADE 3.42 g/tonne			AG g/tonne		
MINIMUM MINING WIDTH (2.25m)	Tonnes	Gold Grade	Gold Grams	Gold Ounces	Silver Grade	Silver Ounces	
Boulder Vein	151,831	8.45	1,283,393	41,262	46.43	226,630	
Boulder East Vein	142,289	7.08	1,007,753	32,400	20.29	92,830	
Argillite Vein	72,694	11.20	814,290	26,180	58.18	135,970	
Boulder HW Vein	41,292	7.02	289,822	9,318	13.91	18,460	
TOTAL	408,105	8.32	3,395,258	109,160	36.12	473,890	

The qualified person has not verified the information on the adjacent properties and the information disclosed is not necessarily indicative of mineralization on the Property that is the subject of the technical report. Mineralization hosted on adjacent and/or nearby and/or geologically similar properties is not necessarily indicative of mineralization hosted on the Company's property

## 24 Other Relevant Data and Information

Not applicable

# **25 Interpretation And Conclusions**

This report was commissioned by Gama Explorations Inc. and was prepared by Derrick Strickland P.Geo. As an independent professional geologist the author was asked to undertake a review of the available data, perform geological fieldwork, and recommend (if warranted) specific areas for further work on the Big Onion Property.

The almost 50,000 metre of historical diamond drilling and surface mapping have shown that the Big Onion Porphyry mineralized zones are spatially associated with northeast trending quartz-feldspar porphyry and quartz-diorite dykes that have been indirectly assigned a Late Cretaceous age. The mineralization is hosted by the porphyritic dyke rocks and by the andesite country rocks proximal to the fault-controlled dyke contacts.

Historical magnetic and induced polarization surveys demonstrate that the Big Onion mineralized zones are characterized by low magnetic intensity, high chargeability (greater than 12 mV/V) and anomalously low resistivity. The high chargeability and low resistivity response can be attributed to pyrite and/or chalcocite associated with the mineralized zones. The magnetic low anomaly may be due to magnetite destruction in the alteration zone associated with the mineralization.

The Big Onion South Extension Anomaly characterized is interpreted as a continuation of the Big Onion mineralized zones. The higher chargeability may be due to a higher concentration of pyrite and/or chalcocite.

The Little Onion Mountain Anomaly is interpreted as a probable buried intrusive with a northeast trend parallel to the Big Onion mineralized zone. The anomaly is partially coincident with the coppermolybdenum soil anomalies and the copper, molybdenum, zinc and lead mineralization reported on the Mert Minfile showing (Dirom, 1969). The anomaly is open to the northeast and southeast. Induced polarization anomaly "C" is interpreted as a possible northeast trending buried intrusive although there is no coincident magnetic low. This anomaly is also open to the north.

The 2015 airborne magnetic data in general shows a good correlation to mapped geology as illustrated below. Walcott & Associates undertook property wide 3D inversion of the magnetic dataset was carried out using Geosoft Voxi. The survey consisted of some 630 line-kilometres of airborne magnetics carried out on east-west flight lines.

The survey identified three areas of interest outside Big Onion Porphyry (Target area A) (Figure 3), which may warrant follow up. While a number of other areas may be of interest, the focus was on features which appears to have a depth extent. Big Onion (Target Area A) – The area proximal to the Big Onion has been extensively explored by numerous exploration programs utilizing numerous types of geophysical techniques over the past 60 years.

The Big Onion Porphyry is situated within a zone of reduced magnetic susceptibility flanking the eastern edge of a north easterly high magnetic trend. In the southern portion of the deposit, a larger magnetic body appears to extend to depth beneath the deposit. This deeper body appears be bisected and truncated in both the north and the south by north westerly trending structure.

Target area B (Figure 3), which is situated in the southeastern corner of the property, contains a number of discrete magnetic features. Flanking the western edge of the target area, historic copper and molybdenum soil geochemistry yield anomalous results suggesting potential for mineralization within this region. This is a region of elevated magnetic susceptibility and is associated with a dioritic body of the Buckley Plutonic phase.

Target area C (Figure 3) is a discrete magnetic feature on trend with the Big Onion Porphyry. Target Area C lies on trend with the Big Onion Porphyry. beneath cover in the valley. This could be a fault offset of the magnetic feature which underlies the south portion of the Big Onion Porphyry.

Target Area D (Figure 3) lies immediately to the west of the claim block and on the park boundary northwest of the Big Onion Porphyry. The anomaly appears to extend to depth with limited surface expression. The anomaly is truncated in the south by a northwesterly trending feature which also appears to bisect the Big Onion Porphyry across the valley.

## 26 Recommendations

In the qualified person's opinion, the character of the Big Onion Property is sufficient to merit a two phase work program following work program:

### Phase One

The suggested work program includes compilation of all the historical drilling, geological, geophysical, and geochemical data available for the Big Onion Property and rendering this data into a digital database in GIS formats for further interpretation. This work will include georeferencing historical survey grids; samples, trenches, geophysical survey locations, and detailed property geological maps. The approximately 50,000 metres of drilling should be compiled and put into some type 3D modeling software to better understand the Big Onion Porphyry. Follow-up soils and drone Mag should be competed to follow-up on anomalous results defined by the 2021 program in the area of Target D as well as test for anomalous values at Target C.

The three areas identified by the 2015 airborne magnetic survey should be investigated. This should Include mapping and Induced polarization ground geophysics lines over each.

ltem	Unit	Rate	Number of Units	Total (\$)
Creation of GIS database	Lump Sum	\$50,000	1	50,000
Project Geologist	Days	\$1,000	35	35,000
Field Crew of three	Days	\$1,900	25	47,500
Assaying	sample	\$47	650	30,550
Accommodation and Meals	Days	\$175	110	19,250
Vehicles : 2 – 4x4 trucks	Days	\$300	25	7,500
Drome Magnetics	Lump Sum	\$30,000	1	30,000
Supplies and Rentals	Lump Sum	\$2,500	1	2,500
Reports	Lump Sum	\$8,500	1	8,500
		Subtotal		230,800
Contingency %10				23,080
TOTAL (CANADIAN DOLLARS)				\$253,880

Table 6: Proposed Budget

### Phase 2

Phase two is based on the results of phase one and is expected to include drilling at an expected cost of \$750,000. Drilling will follow up previous drill holes but focus on depth extent of Big Onion Mineralization as well as testing for mineralization at depth on Target D (based on target evaluation with soils and Drone MAG

## 27 References

Archer, R.A. & Karelse, P, 1998; Report on the 1998 Diamond Drilling Program on The Big Onion Property, Consolidated Magna Ventures Ltd., 16p

Baker, J., 1975; Persussion Drilling Report on The Big Onion Property, Canadian Superior Exploration Ltd.; BC Assessment Report 05576,

Beattie, Dr. M.T.V., 1991; Letter to Varitech Resources Ltd., Re: Proposed Metallurgical Test Program for The Big Onion Project, Bacon, Donaldson & Associates, 3p

Blanchflower, J.D., 1974; Report of Diamond Drill Programme for The Big Onion Project, Canadian Superior Exploration Limited.

Boniwell, J.B., 1966; Report of Induced Polarization and Resistivity Survey, Big Onion Property, Smithers, B.C., Barringer Research Limited, 16p

Britton, J.W., 1977; Metallurgical Investigation on Samples Of "Big Onion" Ore, Britton Research Limited, 32p

Bulkley Land and Resource Management Plan, 1998; British Columbia Ministry of Agriculture and Lands Canadian Securities Administrators, 2005; National Instrument 43-101 Standards of Disclosure for Mineral Projects,

Carter, N.C., 1981; Porphyry Copper and Molybdenum Deposits, West – Central British Columbia, British Columbia Ministry of Energy, Mines and Petroleum Resources, Bulletin 64,

Cutler, S., Evans, J., Pardoe, J (2020) NI 43-101 Technical Report, Dome Mountain Mine, British Columbia, Canada Effective Date: 21 Dec 2020 Report Prepared For: Blue Lagoon Resources.

Dirom, G.A, 1969; Geochemical Report Mert Group of Mineral Claims, Tro-Buttle Exploration Ltd., 4

Macdonald, K. & Giroux, G, 2007; Technical Report on The Big Onion Copper Molybdenum Deposit,

Ditson, G., 2000; Big Onion Property Memorandum, Gwendolen Ditson Consulting, 4p Furlong, P.J., 2007: Option Agreement Relating to The Big Onion Property, Davis LLP,

Gaba, R.G., 1992; Geology and Mineral Resources of The Babine Mountains Recreation Area, British Columbia Ministry of Energy, Mines and Petroleum Resources, Paper 1992-5, 83p

Giroux G. (2010) Technical Report on The Big Onion Copper Molybdenum Project Omineca Mining Division British Columbia, Canada NTS 93L/15W Prepared for Eagle Peak Resources Inc. And Metal Mountain Resources Inc. Www.Sedar. Com

Hanson, D.J. & Giroux, G.H., 2008; Technical Report on The Big Onion Copper Molybdenum Project, In-Depth Geological Services and Giroux Consultants Ltd.,

Hanson D., (2009) Assessment Report on the 2008 Diamond Drilling Program Big Onion Copper Molybdenum Project Babine Range Area, For Eagle Peak Resources Inc. BC Assessment Report 30852

Lehne, R.W., 2007; Ore Microscopial Investigation of Four Composite Samples From The EAGLE PEAK RESOURCES Project, Canada, Lehne & Associates L'orsa, A., 1967; Big Onion Cu-Mo Prospect, Texas Gulf Sulphur Co. Ltd., 22p

Jilson, G., 1970; Final Report on the 1970 And 1971 Diamond Drilling at The Big Onion Prospect, British Columbia, Blue Rock Mining Corporation,

Macarthur, R., 1987; Geochemical Report for Big Onion Property, Noranda Exploration Company Limited,

Mccrossan, E., 1991; Drilling Report on The Big Onion Property, Varitech Resources Ltd.,

Mintec, Inc, 1982; Summary Report, Big Onion Project, Mintec Inc,

Mcfall, C.C. & Simpson, J.G., 1970; Report on Geological, Geochemical and Geophysical Surveys on The Charlie Group, Blue Rock Mining Corporation,

Panteleyev, A., 1995; Porphyry Cu+/-Mo+/-Au, In Selected British Columbia Mineral Deposit Profiles, Volume 1 - Metallics and Coal, Lefebure, D.V. And Ray, G.E., Editors, British Columbia Ministry of Energy of Employment and Investment, Open File 1995-20, Pages 87-92

Sampson, C.J., 1991; Report on Big Onion Property, Varitech Resources Ltd.,

Stock, G.G., 1977; Big Onion Project, Summary of Exploration To 1977, Canadian Superior Exploration Limited,

Stock, G.G., 1976; Report on Percussion and Diamond Drilling Programs on The Big Onion Property, Canadian Superior Exploration Limited

Tan, G., 2007; Initial Scoping Study of Year 2006 Supergene and Hypogene Composites of The Big Onion Project, N.W. British Columbia, Process Research Associates,

Walcott, P.E., 2009; Report on Magnetic and Induced Polarization Surveying, Big Onion Project, Peter E. Walcott & Associates,

Wojdak, P. & Stock, G.G., 1995; Big Onion: A Supergene-Altered Porphyry Copper-Gold Deposit, West – Central British Columbia, In Porphyry Deposits of The Northwestern Cordillera of North America, Canadian Institute of Mining and Metallurgy, Special Volume 46, P. 410 – 415

Sillitoe, R.H., 1999, Styles of High-Sulfidation Gold, Silver and Copper Mineralization in Porphyry and Epithermal Environments: Australian Institute of Mining and Metallurgy, Pacrim 99, 29–44.

Sillitoe, R.H., 2010. Porphyry Copper Systems: Economic Geology, V. 105, P. 3–41.

Sillitoe, R.H., And Mortensen, J.K., 2010. Longevity Of Porphyry Copper Formation at Quellaveco, Peru, Economic Geology, V. 105, P. 1157-1162.

# 28 Certificate Of Author

I, Derrick Strickland, do hereby certify as follows:

I am a consulting geologist at 1251 Cardero Street, Vancouver, B.C.

This certificate applies to the technical report entitled "NI 43-101 Technical Report on the Big Onion Property Omineca Mining Division, British Columbia. Canada, NTS Map sheet 093L/15W, 54° 48' 35" North latitude 126° 53' 46" West longitude" with an effective and signature date March 11, 2022.

I am a graduate of Concordia University of Montreal, Quebec, with a B.Sc. in Geology, 1993. I am a Practicing Member in good standing of the Association of Professional Engineers and Geoscientists, British Columbia, Permit to Practice no. 1000315, since 2003. I have been practicing my profession continuously since 1993 and have been working in mineral exploration since 1986 in gold, precious, base metals, coal mineral, and diamond exploration during which time I have used applied geophysics/geochemistry across multiple deposit types. I have worked throughout Canada, the United States, China, Mongolia, South America, South East Asia, Ireland, West Africa, Papua New Guinea, Jamaica, Pakistan, and Romania.

I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional organization (as defined in NI 43-101), and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

I visited the Big Onion Property on December 8, 2021.

I am responsible sections and have read all sections of the report entitled "NI 43-101 Technical Report on the Big Onion Property Nanaimo Mining Division, British Columbia, Canada, NTS 92F14, -49° 80' North Latitude -125° 28' West Longitude" with an effective and signature date March 11, 2022.

I am independent of Gama Explorations Inc., and Lloyd Minerals Inc in applying the tests in section 1.5 of National Instrument 43-101. For greater clarity, I do not hold, nor do I expect to receive, any securities or any other interest in any corporate entity, private or public, with interests in the Big Onion Property Nor do I have any business relationship with any such entity apart from a professional consulting relationship with the Company. I do not hold any securities in any corporate entity that is any part of the subject Big Onion Property.

I have no prior involvement with the Property.

I have read National Instrument 43-101, Form 43-101F1, and this technical report and this report has been prepared in compliance with the Instrument.

As of the effective date of this technical report, I am not aware of any information or omission of such information that would make this Technical Report misleading. This Technical Report contains all the scientific and technical information that is required to be disclosed to make the technical report not misleading.

NI 43-101 Technical Report on the Big Onion Property Omineca Mining Division, British Columbia, Canada, NTS Map sheet 093L/15W, 54° 48' 35" North latitude 126° 53' 46" West longitude" with an effective and signature date March 11, 2022 is signed:

Original Signed and sealed

On this day March 11, 2022 Derrick Strickland P. Geo.