NI 43-101 TECHNICAL REPORT

Technical Report on the Louise Lake Property, British Columbia, Canada
BCGS Sheet NO93L082

Property Centre:
54°51’15” N 127°42’45” W

WORK PERFORMED:

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Prepared for:
79 Resources Ltd.

Report prepared by:
Aurora Geosciences Ltd.

AURORA GEOSCIENCES

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NI 43-101 TECHNICAL REPORT
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1 SUMMARY

1.1 INTRODUCTION

In August 2019, 79 Resources Ltd. (79) of Vancouver, British Columbia, Canada, commissioned Aurora Geosciences Ltd. (Aurora) to complete a National Instrument 43-101 Technical Report on the Louise Lake property. This is a "Property of Merit" based on the presence of the "Main Zone" copper (Cu) - molybdenum (Mo) - gold (Au) - silver (Ag) porphyry deposit in the north-central area of the property.

The Louise Lake property is located 35 air-km west of the Town of Smithers, British Columbia, Canada. The property comprises eight mineral claims comprising 1,825.12 hectares (Ha) held by Messrs. Steven Scott and Brian Scott. In July of 2019, 79 Resources Ltd. ("79") entered into an option agreement to gain a 75% interest in the property. In August 2019, "79" commissioned Aurora to conduct due-diligence mapping and rock sampling across the surface expression of the Main Zone, and to conduct preliminary surface exploration southeast of the Louise Lake waterbody. In November, a Phase 2 program of ground magnetometer surveying, centered on the "Argillic Hill" area, was completed.

The southern part of the property is accessible by logging roads extending west from Smithers, although the Main Zone is accessible by helicopter only. Terrain is gentle to moderate in the Main Zone area, but considerably more rugged in the southeastern area. The property is located along the inland limit of the coastal pacific climatic influence, while to the east, the climate trends towards a sub-arctic continental climate.

Despite a history of significant exploration including delineation-style diamond drilling from 1970 through 2008, there are no environmental liabilities on the property. The 2019 program required no permitting. However, proposed diamond drilling programs for 2020 will require permitting from the Department of Energy, Mines and Petroleum Resources, Government of British Columbia, Canada. A security bond will also be required once the program is permitted.

1.2 HISTORY

The present property area was first staked as the LOU claims in 1968 by Mastodon-Highland Bell Mines (Mastodon). In 1969, Mastodon completed geological mapping, soil geochemical and Induced Polarization (IP) geophysical surveying and trenching, the latter exposing a 490 m X 245 m area of low-grade Cu-Mo mineralization, called the "Main Zone", north of the Coal Creek fault.

Late in 1969, Canadian Superior Exploration Ltd. optioned the property, and in 1970, completed a 17-hole, 2,021 m diamond drilling program, with 16 holes focusing on or close to the Main Zone. Results were deemed sub-economic and the claims were allowed to lapse.

In 1975, Granby Mining Corporation re-staked the area as the 500-hectare (ha) LOUISE 1 and 2 claims and conducted soil geochemical surveying in 1976, delineating a 650 m X 300 m Cu soil geochemical anomaly.

In April 1979, the Bethlehem Copper Corporation staked the ROB 1-4 claims, resampled earlier core and conducted further geochemical and limited IP surveying. The geochemical survey returned two strongly anomalous Mo values, including one northwest of Bud Lake. However, the ROB claims were allowed to lapse.

In late November 1979, the LOUISE LAKE claim was transferred to Noranda Exploration Company Ltd (Noranda) which conducted airborne magnetometer and VLF-EM surveying across the Louise Lake area.

Noranda did some compilation and petrographic work and rock geochemical sampling, revealing anomalous Cu and Au values from the Main Zone area.

The property was re-staked in 1986 as the 1,600-ha TENN and TROUT claims by E. Shaede and L. Warren who then optioned it to Lacana Mining Corporation in 1987, which changed its name to Corona Gold Corporation (Corona) by 1988. In 1988, Corona conducted reconnaissance and detailed geological mapping and soil, rock and silt sampling, identifying numerous Cu ± Mo ± Au anomalies proximal to, but not always directly overlying, the Main Zone.

In 1989, Corona completed a five-hole, 916-metre diamond drilling program in the eastern Main Zone area. All holes returned strongly anomalous Cu-Au ± Mo mineralization with fairly uniform metal values but lacking notable high-grade zones. In 1989, Placer Dome Inc. (Placer) conducted a brief property visit followed by a detailed compilation of existing drill and surface data. Placer determined that mineralization at Louise Lake has both epithermal and porphyry-style characteristics, suggesting the Main Zone represents a transitional zone between upper-levels of a porphyry system and an evolved hydrothermal (epithermal) zone. Placer believed the Main Zone mineralization to be sub-economic and thus declined to enter into an acquisition of the property from Corona.

Corona terminated its option in early 1991. In November 1991, the claims were optioned by New Canamin Resources Ltd. (New Canamin), who then subsequently entered into an option with Equity Silver Mines Ltd (Equity). In 1992, Equity conducted two diamond drilling programs totaling 2,651.6 metres in 13 holes, interpreting drill results as representing an east-west trending tabular deposit, dipping shallowly northward. At a 0.2% Cu cut-off, Equity stated that the deposit contained “estimated resources of 50 million tonnes grading 0.3% Cu and 0.3 g/t Au with some payable molybdenum”. This is not a compliant resource under NI 43-101 standards and should not be relied upon. Equity drilled one hole to the east, and intersected a zone referred to as the “Lake Zone”, comprising chalcopyrite-sphalerite veins with accessory Au and Ag values.

By early 1995, Global Mineral and Chemical Ltd. (Global) entered into an option agreement to earn a 100% interest on the TENN and TROUT claims and conducted soil geochemical sampling. A moderate Zn-in-soil geochemical anomaly was identified about 350 m south of Louise Lake. In early 1996, Global conducted IP surveying followed by five diamond drill holes into the Main Zone area. No assessment reports were accessible; however, news releases stated that two holes were mineralized throughout their >200-metre extents. In 1998, Global drilled five additional holes to the east. No major zones were intersected although the company did announce “interesting but not exciting silver values”

The LOUISE 1-30 claims were staked by January of 2004 by Messrs. B. Kreft and C. Greig. In January 2004, Firestone Ventures Inc. (Firestone) entered into a joint venture agreement to obtain a 100% interest in the property and completed a six-hole, 1,718.4 m diamond drilling program focusing on the Main Zone. The program expanded known dimensions of the zone to the east and west, and confirmed previously reported results in central areas.

In December 2004, Firestone signed a “letter of intent” with North American Gem Inc. whereby North American Gem may earn a 75% interest in the property. In 2005, North American Gem conducted a seven-hole, 2,412.3 m diamond drilling program, focusing on further expansion of the Main Zone to the west, east and at depth.

In early 2006, North American Gem conducted a twelve-hole, 3,387.4m diamond drilling program on the "Main Zone" and surrounding area. This program determined the base of the deposit to be a flat-lying thrust fault, named the "Terminator". Results of this and all earlier programs were incorporated into the first Main Zone NI 43-101 resource estimate, provided by SRK Consulting (Canada) Inc. (SRK). In July, SRK released its estimate, comprising an Indicated Resource of 6.0M tonnes grading 0.214% Cu, 0.006% Mo, 0.20 g/t Au and 0.98 g/t Ag, and a further Inferred Resource of 141M tonnes grading 0.234 % Cu, 0.009% Mo, 0.23 g/t Au and 0.94 g/t Ag. A bulk density of 2.75 tonnes/m^3 was utilized. No mineral reserves were included in the resource evaluation. Despite some sources of uncertainty, SRK determined that the exploration work, including the 2006 program, was done in "a professional and reliable manner".

In late July of 2006, a 164-kg composite sample of re-split core was sent for metallurgical analysis to G & T Metallurgical Services of Kamloops, British Columbia, Canada. "Head grade" analysis by G & T stood at 0.28% Cu, 0.3 g/t Au and 0.007% Mo, showing a fair correlation with the weighted average of analytical results by ALS Chemex. Copper mineralogy comprised an even distribution of chalcopyrite and enargite. The resulting concentrate contained 28.9% Cu at an 85% recovery rate, 0.650% Mo at an 80% recovery rate, 18.7 g/t Au, at a 55% recovery rate, and 364 g/t Ag, at a 44% recovery rate. The concentrate also contained 11.4% arsenic (As), a "deleterious element", initiating research by North American Gem into alternative extraction processes. The final concentrate has a "mass percent" of 0.8% of the original flotation feed.

In 2007, North American Gem conducted a drilling program comprising 6,330.4 metres in 21 holes, focusing on deposit expansion as well as resource upgrading of the Main Zone. The program effectively outlined the deposit size and tenor, and returned the first intersection of Main Zone-style mineralization underlying the Terminator to the northwest. The latter suggested the underlying "sub-Terminator" portion occurs to the west-northwest, and the known Main Zone is hosted by a rafted block offset to the east.

In early 2008, North American Gem conducted a 16-hole, 5,042.8-metre diamond drilling program focusing on potential deep-seated "sub-Terminator" mineralization to the west. This program successfully identified the sub-Terminator zone and determined that post-depositional flat-lying faulting converted the deposit into a series of tabular blocks, each overlying unit successively displaced farther to the east-southeast.

The property was expanded by spring 2008, and a surface exploration program comprising geological mapping and geochemical sampling was conducted across the entire expanded property area. Results suggested some potential for a second porphyry-style system, centered in the Bud Lake area southeast of the Louise Lake waterbody. A detailed surface field program, based at Bud Lake, was recommended, but no further surface work was done by North American Gem.

The area covering the Main Zone deposit was acquired by Messrs. Steven Scott and Brian Scott in 2017. They allowed the property to lapse in 2018, then re-staked the core area. A single two-unit claim, covering the northeast part of the Main Zone, was acquired by an independent interest in October of 2018. As of January, 2020, this claim has not been optioned to "79".

1.3 GEOLOGICAL SETTING AND MINERALIZATION

1.3.1 *Geological Setting*

The Louise Lake property is located within the Stikinia Terrane of the Intermontane Tectonic Belt. The Stikinia Terrane consists largely of mid-late Jurassic Hazelton Group sedimentary and lesser volcanic units, Bowser Assemblage clastic sediments, and early to mid-Cretaceous Skeena Group volcanic and sedimentary units. This stratigraphy has been intruded by the granitic Topley Intrusions, occurring along the axis of the Skeena Arch, a major northeast-southwest trending transverse uplift structure. The Louise Lake property is located near the western limit of the Skeena Arch, which has also undergone block faulting and some thrust faulting. Eocene Nanika Intrusions, consisting of quartz-feldspar porphyritic granite, quartz monzonite and granodiorite, with minor rhyolite and quartz porphyritic stocks, have intruded all layered stratigraphy.

The Louise Lake property occurs along the east-northeast trending regional-scale Coal Creek lineament, forming the contact between lower Cretaceous Skeena Group sediments and volcanics to the northwest, and lower to middle Jurassic Hazelton Group volcanics and sediments to the southeast. The area north of the Coal Creek lineament is underlain by roughly east-west striking andesite flows and tuff to fragmental units, intercalated with conglomerate to sandstone units, with lesser greywacke and siltstone. Volcanic units occur primarily in the mineralized “Main Zone” area, where they have been intruded by several east-west trending, moderately north-dipping slabs of feldspar porphyritic monzonite. Mapping and drill log analysis revealed a larger quartz monzonitic stock west of the Main Zone. A small unit of argillically altered quartz-feldspar porphyritic monzonite occurs towards the Coal Creek lineament. Another feldspar porphyritic monzonite stock hosting up to 12% disseminated pyrite occurs northeast of the Main Zone.

South of the Coal Creek lineament, Hazelton Group stratigraphy comprises a dominant NNW – SSE trending assemblage of variably feldspar porphyritic basalt to andesite flows, and lesser tuff and agglomerate. This assemblage is intercalated with abundant rhyolitic flow units, variably porphyritic, and described as latite in year-2008 mapping. Two units of fairly monomictic conglomerate occur near the “terminus” of the driveable forest access road.

1.3.2 *Mineralization*

Two separate mineralized prospects occur within the core area of the Louise Lake property, the Main Zone deposit and the Lake Zone. The Main Zone is a tabular deposit dipping from 30^{o} to 40^{o} to the north, and has been traced along strike for about 1,000 metres. It comprises two major horizons extending at 80^{o} – 260^{o}: the shallower lower grade “North Horizon” and the underlying much broader, higher-grade “South Horizon”. The Lake Zone, occurring about 1.2 km to the east along the north shore of Louise Lake, hosts vein and fracture-hosted zinc-silver mineralization.

Block modeling in 2006 by SRK indicated the deposit has a footprint in plan view of almost 500 metres, extends to a depth to almost 300 metres, and showed that central portions have lower copper-equivalent grades than western and eastern portions. The geological setting comprises a series of several tabular units of feldspar porphyritic monzonite separated by sedimentary units in central areas, and andesite fragmental units in northern and western areas. Mineralization occurs within both the intrusion and host volcanic and sedimentary strata; grades do not appear to be dependent on a specific lithology.

Mineralization at the Main Zone comprises fine-grained disseminated and vein-controlled sulphides. The sulphide grains consist of an almost even mixture of fine-grained chalcopyrite and enargrite (a Cu-As sulphide) locally comprising up to 4% of the rock mass. Several pulses of vein stockwork emplacement have occurred, with quartz-pyrite veins crosscut by later nearly massive pyrite veins. Copper-gold ratios show an approximate deposit-wide average ratio of 1% Cu: 1 g/t Au. Mo-bearing quartz stringers occur on surface in the eastern Main Zone area and in basal portions of the western area. Silver values reported from drill core analysis are generally less than 2.0 g/t.

Interpretation of 2004 through 2006 results and including previous results, indicated the Main Zone is bounded by a basal flat-lying fault at depths to 300m, called the “Terminator” with a minimal displacement of several hundred metres. North-dipping mineralized zones are truncated by this flat-lying fault, forming a wedge-shaped northern terminus.

Feldspar-porphyritic monzonite units are most abundant in central and eastern portions of the Main Zone. In western areas the primary host is andesite tuff to fragmental rocks, with minor host conglomerate and sandstone. The highest copper and gold grades occur in these areas, returning values to 0.592% Cu with 0.586 g/t Au across 35.7 metres, and locally exceeding 0.800% Cu and 0.800 g/t Au. The 2007 program identified higher-grade gold mineralization at depth in northeastern areas, overlying the Terminator fault. The Au: Cu ratio is considerably higher than the 1:1 ratio occurring throughout most of the deposit. Low-grade sub-Terminator mineralization intersected to the northwest in 2007, was found to have metal ratios and rock fabric similar to outlying areas of the Main Zone.

A single hole targeting the projected underlying portion of the Main Zone to the east-northeast, somewhat west of the Lake Zone, intersected minor massive lead-zinc veining at depth.

The 2008 drilling focused partly on delineating sub-Terminator mineralization west-northwest of the Main Zone. Several holes confirmed the presence of a flat lying slab of sub-Terminator-hosted Main Zone-style mineralization. In all intercepts, the sub - “Terminator” mineralization was truncated by another flat-lying mylonitic fault, called the “Sub-Terminator fault”. The westernmost hole returned low-grade mineralization below the “Sub-Terminator” having similar grade ratios to Main Zone mineralization, indicating another mineralized slab extends farther west-northwest.

1.4 DEPOSIT SETTINGS

The Main Zone is classed as a “calc-alkaline suite” porphyry system, similar to deposits of the Eocene Babine Igneous Suite. The primary exploration model is porphyry-style mineralization, although potential satellite occurrences of base metal veining, “Bonanza-style” gold veins and zones of gold +/- silver bearing epithermal mineralization are also viable targets.

A typical porphyry deposit setting comprises bulk-tonnage-style Cu-Mo-Au mineralization centred on, and emanating from, a feldspar porphyritic monzonitic to granitic intrusion. Core areas consist of intrusive-hosted disseminated copper sulphides, largely chalcopyrite and bornite, commonly with accessory molybdenite and gold. Mineralization is spatially associated with the core intrusion, but not necessarily confined to it. Stocks are typified by concentric zones of potassic, phyllic (sericitic) and propylitic alteration, and commonly associated with argillic (clay) alteration and overlying zones of advanced argillic alteration.

Outbound from the stock, mineralization in the central deposit becomes progressively associated with quartz vein, stringer and stockwork infilling of fracture and breccia zones formed during intrusion emplacement. Farther outbound, a progression of concentric "halos" of disseminated pyrite, followed in turn by halos of lead-zinc-silver veins, bonanza veins and finally epithermal mineralized zones, typifies many porphyry systems. "Epithermal" deposits refer to those resulting from deposition of highly evolved hydrothermal fluids. These commonly occur distally from the core intrusion, and are the most outbound mineralized zones. Epithermal mineralization includes chalcedonic quartz vein, stringer and stockwork zones and hot springs-derived mineralization.

At Louise Lake, "epithermal" mineralization may be broadened to include hydrothermal mineralization in general, and include vein, vein stringer and vein stockwork zones. Mineralization may also include tabular, commonly intrusion-hosted stratabound deposits comprising fine stockwork-hosted and/or disseminated mineralization confined to a specific lithological horizon. The tabular shape is due to stratigraphic or structural controls. The Main Zone deposit may represent a transitional deposit model type between a typical porphyry system and outlying vein deposits. Copper mineralization was originally believed to be tennantite (also a Cu-Fe-As sulphide), which would have signified upper levels of a porphyry system. The revised mineralogy renders the location of the Main Zone respective to the overall setting of the porphyry system as uncertain.

1.5 Current Exploration (2019)

Phase 1 of the 2019 program comprised a one-day due-diligence visit to the Main Zone area, and eight days of exploration across the southeastern area, within the LOUISE EXTENSION claim. Exploration across the southeastern area comprised geological mapping, rock sampling, and soil geochemical sampling along existing and former logging roads. All work was done by a two-person crew, commuting on a daily basis from Smithers, and included two heli-supported traverses.

The one-day due-diligence visit confirmed the presence of Main Zone-style Cu-Mo-Au-Ag mineralization, although grades were somewhat lower than those documented from the Main Zone deposit. The remaining traverses failed to identify significantly mineralized zones or major geochemical anomalies, although elevated Mo and arsenic (As) values were returned from rock sampling of pyritic conglomerate units near the terminus of the driveable logging road. Fairly widespread fine-grained pyrite, associated with fractured to brecciated mafic volcanics, occurs near the former logging roads.

Phase 2 comprised a ground magnetic surveying program along east-west oriented lines centered on "Argillic Hill", an area of argillic (clay) alteration and pyritization in the southwest property area. A total of 52.7 line km, including 3.45 line km of north-south tie lines, was surveyed. The survey identified a NE-SW trending magnetic low feature, which may represent a significant structural lineament. This separates fairly linear magnetic signatures to the east from more arcuate features to the west, possibly representing folded stratigraphy accreted onto to more linear stratigraphy to the southeast of the lineament. The survey also revealed an ovoid magnetic high signature coincident with "Argillic Hill" alteration directly west of the magnetic low feature.

1.6 Conclusions

The Main Zone of the Louise Lake deposit is a tabular body striking at 260^{o} and dipping from 30^{o} to 40^{o} to the north. The zone comprises disseminated and vein-associated grains of chalcopyrite and enargite with late molybdenite-bearing quartz veining, occurring within a series of tabular units of feldspar porphyritic monzonite separated by sedimentary and volcanic units. The deposit model is an upper-level portion of a Cu-Mo-Au-Ag porphyry system. By 2006, the Main Zone was known to have dimensions in plan view of about 1000 m by 500 m, extending to the horizontal “Terminator” fault at a depth of almost 300 m. Mineralization does not appear to show any lithological preference, although improved correlation of geological data is recommended.

In 2006, SRK released the first NI 43-101 resource estimate. The estimate comprised an Indicated Resource of 6 M tonnes grading 0.214% Cu, 0.006% Mo, 0.20 g/t Au and 0.98 g/t Ag, for a copper equivalent (CuEq) grade of 0.369%; and an additional Inferred Resource of 141 M tonnes grading 0.234% Cu, 0.009% Mo, 0.20 g/t Au and 0.94 g/t Ag, for a CuEq grade of 0.426%. No reserves were included in this resource estimate.

Later in 2006, a metallurgical study by G & T Metallurgical Services Ltd. indicates that the concentrate, with a “mass percent” of 0.8, contains 28.9% Cu at a recovery rate of 85%. The concentrate also includes 0.650% Mo at an 80% recovery rate, 18.7 g/t Au, at a 55% recovery rate, and 364 g/t Ag, at a 44% recovery rate. Arsenic (As) concentration was 11.4%, limiting potential for treatment by conventional extraction techniques. A number of alternative extraction processes were investigated in 2006, although no further progress has occurred since then. Concentrations of other deleterious elements were minor.

A scoping study by SRK, submitted in January 2008, indicated the project was not economically viable at projected long-term metal prices, specifically a Cu price of US$1.35/lb. At a Cu price of $3.00/lb, project economics improve, but economic viability remained doubtful. North American Gem chose to respect the results, and terminated the scoping study. Prices for Cu, Mo, Au and Ag in 2019 have improved significantly, even when factoring inflation since early 2008, buoyed by a favourable CDN$: US$ exchange rate. Long term price forecasts are required when re-evaluating project economics.

The 2008 drilling program successfully identified the underlying “fixed” portion of the deposit to the west-northwest. Another flat-lying fault, called the “Sub-Terminator”, forms the basal unit of a mineralized tabular block. At least one other tabular block occurs beneath this to the west. Thus, the original deposit has been segmented into a series of blocks, each overlying segment successively displaced farther to the east-southeast. The Main Zone is hosted by the easternmost single block which extends to surface.

Results from the 2008 summer surface exploration program revealed an area of quartz and carbonate vein stockwork east of Bud Lake, with elevated Au values from nearby stream silt sampling. A second prospective target is the “Arsenic Hill” area northwest of Sandstone Lake. The “Louise Extension” claim currently covers these targets.

Due diligence rock sampling in 2019 across the surface expression of the Main Zone confirmed the presence of Cu-Mo-Au-Ag mineralization, although the 2019 values are lower than the deposit average. Geological mapping in the Bud Lake area did not identify mineralization indicative of another porphyry centre, and no significant mineralized zones were identified. Several rock samples of conglomerate returned elevated Mo and As values and slightly elevated Cu values. However, this is not considered a significant exploration target. The “Argillic Hill” occurrence was not visited in 2019.

The Phase 2 ground magnetic survey identified an ovoid magnetic “high” feature, directly west of the main NE-SW magnetic low feature, coincident with an area identified in 2008 comprising argillic alteration, pyritization, and several elevated gold-in-soil geochemical values. This may represent the overlying halo of pyritization and alteration above the core of a second porphyry system and represents a significant exploration target.

1.7 Recommendations

It is strongly recommended that 79 Resources acquires the claim (#1064060) held by Mr. B. Kreft, through an option or purchase agreement. This claim covers part of the Main Zone deposit and is required if the entire deposit is to be wholly-owned.

The 2020 program is recommended to comprise two phases. Phase 1 would target the Argillic Hill occurrence, and comprise a surface program of grid soil geochemical sampling, combined with detailed geological mapping, rock sampling and prospecting. This program would require a 4-person crew based from a field exploration camp. The program would have a total duration of 12 days, including 6 days of actual field work, 2 days of mobilization and de-mobe, and 4 travel days. Total Phase 1 expenditures, including 10% contingency, are estimated at about CDN$103,200.

The Phase 2 program would comprise a single 350-metre due diligence-style hole targeting the Main Zone, designed to confirm the extent and tenor of Main Zone mineralization. This phase would be completed using a single drill with two shifts per 24 hours. The crew would be comprised of four drillers and three geological and geotechnical staff. Drilling could be done in late winter, allowing for travel across frozen wetlands if necessary, or in summer, if wetlands can be avoided. None of the proposed drilling or support logistics would take place on Claim #1064060. Phase 2 expenditures, including 5% contingency, are estimated at about CDN$180,500. Proposed expenditures exclude payment for a necessary reclamation bond but include reclamation costs. Expenditures also exclude PST and the cost of acquiring Claim #1064060.

2 INTRODUCTION

2.1 INTRODUCTION

In August of 2019, 79 Resources Ltd. (“79”), based in Vancouver, British Columbia, Canada, commissioned Aurora Geosciences Ltd. (Aurora) to summarize the geological and mineralogical settings of the Louise Lake property, located in north-central British Columbia, Canada. In November 2019, a subsequent program of ground magnetometer surveying was completed in the southwest corner of the property, covering areas not covered in the August program. “79” is a junior mineral exploration company based in Vancouver, British Columbia, Canada, and holds the Louise Lake property. This National Instrument 43-101 Technical Report has been prepared for “79” to fulfill listing requirements for the Canadian Securities Exchange and to document the Louise Lake property as a “property of merit”. This report documents the historic work but also the recent exploration work completed by “79”at the Louise Lake property.

The Louise Lake property was optioned by 79 Resources on July 8, 2019 from Messrs. Brian Scott and Steven Scott. The property is considered an advanced-stage exploration project covering part of the Louise Lake deposit, with an established mineral resource estimate in the indicated and inferred resource categories.

The Louise Lake property is considered a “Property of Merit”.

2.2 TERMS OF REFERENCE

The author has been requested to write this report using the following terms of reference:

a) Review and compile all available data obtained by “79” and its predecessors,

b) Provide a Technical Report to the standards of Form 43-101 F1,

c) Verify and support technical disclosures by “79”.

2.3 PURPOSE OF REPORT

Acquisition of the Louise Lake property represents a material change in the asset base of “79”, currently a private company based in Vancouver, British Columbia, Canada. The NI 43-101 Technical Report for Louise Lake is written to support the public listing of “79” using the Louise Lake Property as a “Property of Merit”.

2.4 SOURCES OF INFORMATION

The author has referenced previous reports on the property that are available in the public domain as well as historic and current internal reports provided by 79 Resources Ltd.

A detailed review of the available historical exploration records pertaining to the property was undertaken. The majority of the historical data was supplied by Carl Schulze (this author), then of All-Terrane Mineral Exploration Services providing services to Fireweed Ventures Inc. (2004) and North American Gem Inc (2005 – 2008). The author has also utilized maps and information provided by the Department of Geological and Geophysical Surveys (DGGS), and interactive maps from the “Mineral Titles Online” website of the Government of British Columbia.

2.5 EXTENT OF INVOLVEMENT BY QUALIFIED PERSON

Mr. Carl Schulze, Qualified Person for Aurora Geosciences Ltd, and the consultant for the Louise Lake property, was on site from August 22-30, 2019, inclusive. Mr. Schulze is responsible for all sections of this report and managed all exploration programs, either on site or based from the Town of Smithers, British Columbia, from 2004 through 2008.

2.6 TERMS, DEFINITIONS AND UNITS

All costs contained in this report are in Canadian dollars (CDN$) unless indicated otherwise. Distances are reported in millimetres (mm), centimetres (cm), metres (m) and kilometres (km). Weights are reported in grams (g) or kilograms (kg). Units of area are measured in hectares (ha), of which 1 hectare is 100 m^2, and equivalent to 2.47 acres (ac). Some historical distances are reported in feet (ft) or miles (mi), and historical weights in troy ounces (oz.) or pounds (lbs). Temperatures are reported in degrees Celsius (^oC), whereby 0^oC is the freezing point of water.

The term “GPS” refers to “Global Positioning System” with co-ordinates reported in UTM NAD 83 projection, Zone 9. The term “nT/m” stands for nanoTeslas/metre.

“RQD” stands for “rock-quality designation” and “SG” is short for “specific gravity”. A “reference sample” is a sample of known concentration of specific metals. A “standard sample”, is a type of reference sample, in this case with known concentrations of copper (Cu), molybdenite (Mo), silver (Ag) and gold (Au), with the Certified Value or “Recommended Value” determined from an average of results from several independent laboratories. These are utilized to determine the accuracy of laboratory analysis. Another type is a “blank sample”, of known very low, normally sub-detection metal grades, that tests for the degree of contamination, if any, occurring through the analytical process.

A “ton” refers to a short ton, or 2,000 lbs. A “tonne” (t) refers to a metric tonne, which is 1,000 kg or 2,204 lbs. The term “ppm” refers to parts per million, which is equivalent to grams per metric tonne (g/t); the term “ppb” refers to parts per billion. Some historic grades are reported in “oz./ton” which is ounces per short ton. “Ma” refers to million years. The symbol “%” refers to weight percent unless otherwise stated.

For the purpose of reporting historical gold grades, one troy ounce (oz.) per short ton (T) is converted to grams (g) per tonne (t) using a factor of 34.2857.

ICP-AES stands for “inductively coupled plasma atomic emission spectroscopy”. ICP-ES stands for “Inductively coupled plasma emission spectroscopy”, and AA stands for “atomic absorption”. “QA/QC” refers to “Quality Assurance/ Quality Control”.

“NI 43-101” stands for National Instrument 43-101. “IPO” stands for “Initial Public Offering”. “CIM” stands for Canadian Institute of Mining, Metallurgy and Petroleum”. “NSR” stands for “Net Smelter Return royalty”.

Elemental abbreviations used in this report are:

Au: Gold	Mn: Manganese
Ag: Silver	Mo: Molybdenum
Al: Aluminum	Na: Sodium
As: Arsenic	Nb: Niobium
B: Boron	Ni: Nickel
Ba: Barium	P: Phosphorous
Be: Beryllium	Pb: Lead
Bi: Bismuth	Pd: Palladium
Ca: Calcium	Pt: Platinum
Cd: Cadmium	Rb: Rubidium
Ce: Cerium	Re: Rhenium
Co: Cobalt	S: Sulphur
Cr: Chromium	Sb: Antimony
Cs: Cesium	Sc: Scandium
Cu: Copper	Se: Selenium
Fe: Iron	Sn: Tin
Ga: Gallium	Sr: Strontium
Ge: Germanium	Ta: Tantalum
Hf: Hafnium	Te: Tellurium
Hg: Mercury	Th: Thorium
In: Indium	Ti: Titanium
K: Potassium	Tl: Thallium
La: Lanthanum	U: Uranium
Li: Lithium	V: Vanadium
Mg: Magnesium	W: Tungsten
Y: Yttrium	Zn: Zinc
Zr: Zirconium	

3 RELIANCE ON OTHER EXPERTS

The author has relied on a 2006 report by Christopher Lee and Marek Nowak of SRK Consulting (Canada) Inc. (SRK) titled: "Independent Technical Report and Resource Estimate for the Louise Lake Property, Omineca Mining Division, British Columbia". This report provided an initial resource estimate on the property. The author also relied on a 2006 metallurgical report authored by T. Lafreniere, T. Shouldice and J. Folinsbee of G & T Metallurgical Services Ltd. titled: "Preliminary Assessment of Louise Lake Metallurgy, North American Gem, Inc. KM1882". This author also relied on a January, 2008 memo regarding a preliminary scoping study, titled: "DRAFT Louise Lake Review", by Gordon Doerkson of SRK.

The author has independently reviewed legal title to the property and believes the statements contained within this report pertaining to the lease status to be true and complete.

All reports have been identified throughout the text. Most of the reports used for the purpose of this filing were written as reports on exploration activities or project viability to North American Gem Inc.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 LOCATION AND DESCRIPTION

The Louise Lake property is located about 35 air kilometres west of Smithers, British Columbia, Canada, and is geographically centered at 54°51'15" N Latitude, 127°42'45" W Longitude within BCGS sheet NO93L082. The property is comprised of eight British Columbia mineral claims covering a total of 1,825.12 hectares (ha), equivalent to 4,508 acres.

4.2 MINERAL TENURE AND UNDERLYING AGREEMENTS

All claims are co-owned by Messrs. Steven Scott (50.0%) and Brian Scott (50%). All claims are contiguous, unpatented (Table 1, Figure 2) and have not undergone a legal survey. All claims other than Title # 1070157 were acquired between October 25 2018 through January 20, 2019, and comprise the original block optioned to 79 Resources Ltd. Claim title #1070157 was acquired on August 7, 2019, to cover prospective ground southeast of the Main Zone deposit. Table 1 lists the claim status of all titles comprising the Louise Lake property.

Table 1: Claim titles, Louise Lake Property (as of January 28, 2020)

Title No.	Claim Name	Issue Date	Expiry Date	Area (Ha)
1058438	LOUISE	07-Feb-18	30-Dec-27	37.24
1064063		26-Oct-18	30-Dec-27	74.49
1064064		26-Oct-18	30-Dec-27	55.86

1064065	LOVABLE LOUIS	26-Oct-18	30-Dec-27	55.85
1065754	WEEZIE	14-Jan-19	30-Dec-27	37.25
1065822	LL BEAN	17-Jan-19	30-Dec-27	37.23
1065849		18-Jan-19	30-Dec-27	37.24
1070157	LOUISE EXTENSION	07-Aug-19	30-Dec-21	1,527.2
			Total area:	**1,862.36**

On July 8, 2019 (the "Effective Date"), Messrs. Steven and Brian Scott, (the "Optionors") entered into an option agreement to grant 79 Resources Ltd, as the "Optionee", a 75% undivided interest in and to the Louise Lake Property. The Optionors allow 79 Resources to acquire this interest in the property through two options: a "First Option" to acquire a 51% undivided legal and beneficial interest; and a "Second Option" to acquire an additional 24% undivided legal and beneficial interest, for a total interest of 75%. Both will be free and clear of any liens, charges and encumbrances, but are subject to a 2% net smelter returns royalty. The Louise Extension claim was automatically included in the option agreement.

The property excludes one claim, #1064060, held by Mr. B. Kreft of Whitehorse, Yukon. This covers part of the Louise Lake deposit and is wholly surrounded by the claim block held by 79 Resources Ltd.

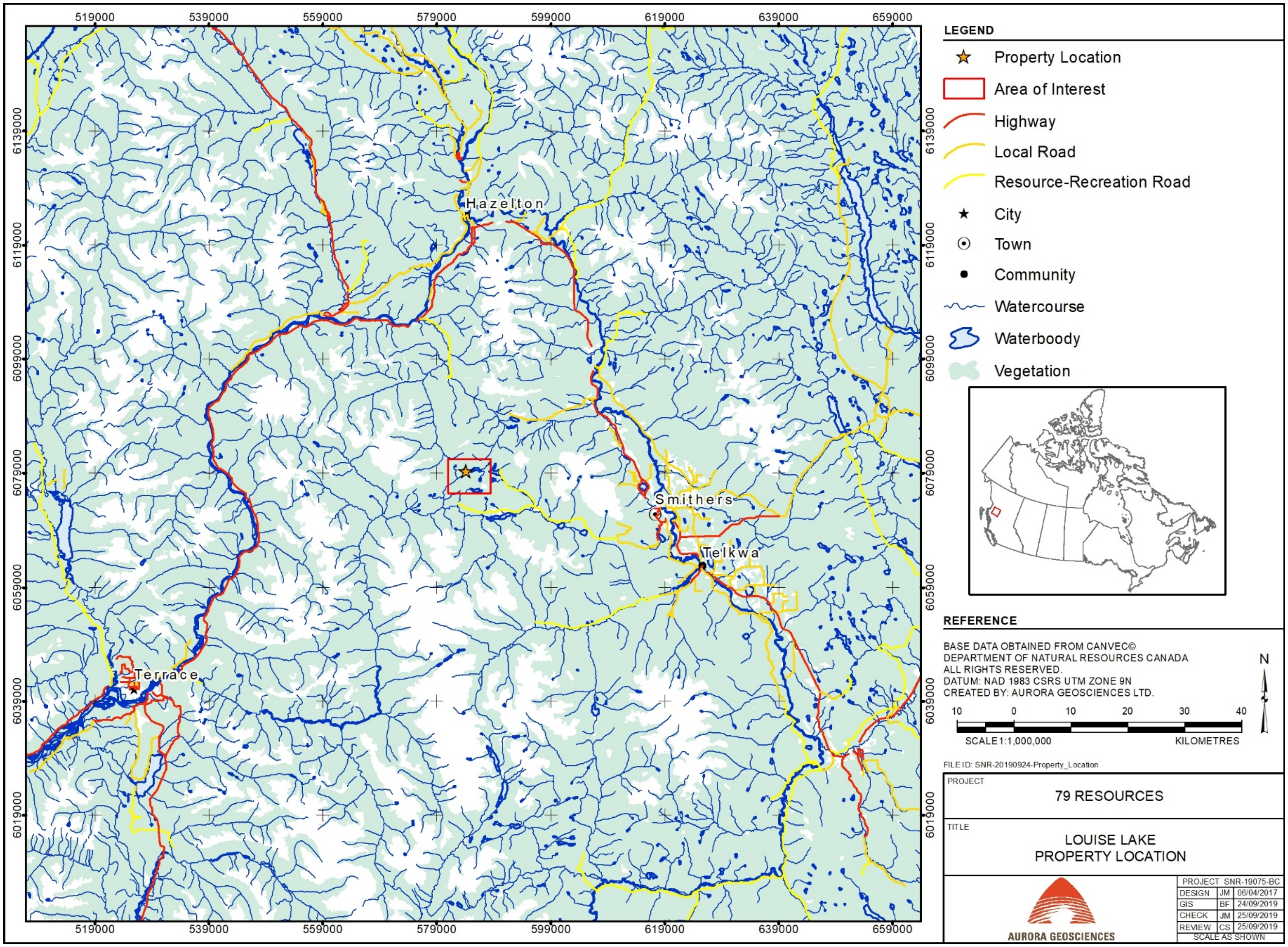

Figure 1: Location Map

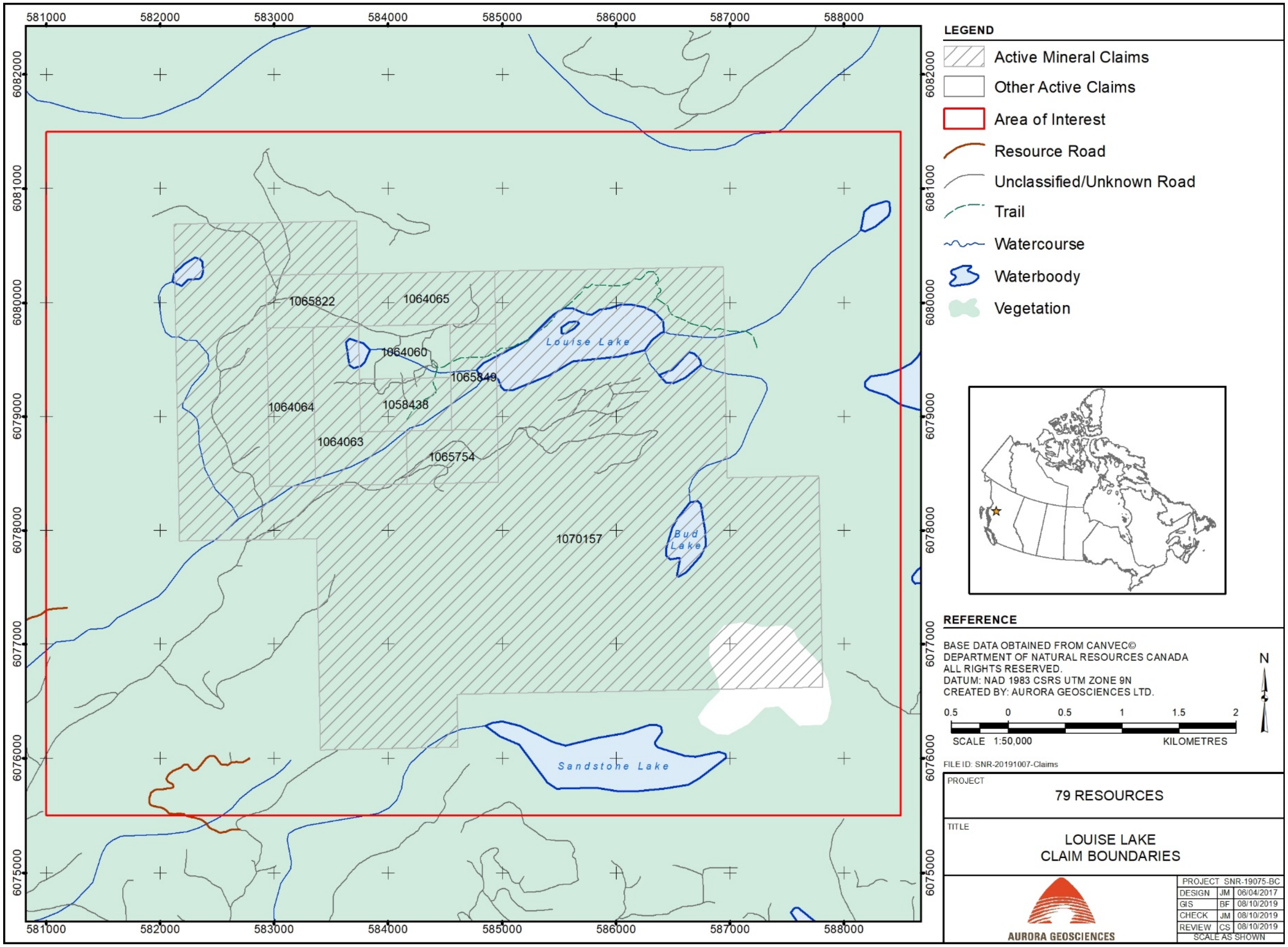

Figure 2: Mineral Tenure Map

4.3 ROYALTIES AND ENCUMBRANCES

The First Option can be exercised by the Optionee by paying the Optionor an aggregate of $5,000.00, and by issuing to the Optionors an aggregate of 100,000 Consideration Shares at a deemed issuance price of $0.02 per share. The Second Option may be exercised by paying the Optionors an aggregate of $10,000.00, issuing an aggregate of 100,000 Consideration Shares to the Optionors, and incurring a total of $225,000.00 of exploration expenditures on the property. To obtain a 75% interest, the payment of $10,000.00 must be made on or before the first anniversary of the Effective Date. Expenditures totalling $75,000.00 must be incurred on or before the first anniversary of the Effective date, and expenditures totalling $150,000.00 must be made on or before the first anniversary of the initial listing of the shares on the Canadian Securities Exchange.

A "Net Smelter Return" (NSR) royalty of 2% will be retained by the Optionors. If either the First Option or Second Option are exercised, the Optionee may, within three (3) years of the commencement of commercial production, purchase 50% of the NSR (1% of production) from the Optionors for $1,000,000.00.

4.4 ENVIRONMENTAL LIABILITIES

There are no environmental liabilities on the property. Reclamation of the 2004 through 2008 drill sites was ongoing during those programs. In 2015, the sites were inspected by this author and a government official, who recommended minimal further reclamation, mainly to the access road from existing forestry access roads. The reclamation was completed as requested. In 2019, the access road was inspected and found to be undergoing natural revegetation, as were the former drill access roads in the deposit area.

Figure 3: Natural revegetation along trail to logging road

Figure 4: Natural revegetation of former drill site and access road

4.5 PERMITS

At present, no permits are in place for exploration on the Louise Lake property. Activities completed during the 2019 program did not require permitting.

Exploration activities which have a more significant environmental “footprint”, such as drilling and mechanized trenching, require a “Multi-Year Area-based Permit” (MYAB) and a Notice of Work (NOW) permit. The MYAB authorizes exploration activities typically for up to 5 years within identified activity areas within the mineral tenure. The NOW is also required for permitting of a “major mine” under the British Columbia Mines Act. An annual report of exploration activities must be provided in an “Annual Summary of Exploration Activities” (ASEA) document. A reclamation security will be required, based on a risk assessment of the proposed work.

The MYAB process incorporates an “Archaeological Chance Find Procedure” (CFP), which must be prepared, tailored and implemented for the particular work program. A “Mine Emergency Response Plan” must be also be provided to the inspector prior to issuance of the MYAP permit. Timber cutting permits, if applicable, include a “Free Use Permit” (FUP) for cutting of up to 50m^3 of merchandisable timber, or an “Occupant Licence to Cut” (OLTC) for amounts greater than 50m^3. An “Explosives Storage and Use Permit” may also be required as part of the MYAB permitting process (Mines and Mineral Resources Division, BC Ministry of Energy and Mines).

The on-site project manager of any exploration program will require a Mine Supervisor Certification from the Ministry of Energy, Mines and Petroleum Resources, Government of British Columbia.

4.6 Reporting and Notification Requirements

The MYAB requirements include written notification that must be provided to the inspector no less than 10 days prior to commencing an exploration program, and no less than 7 days prior to completion of exploration activities each season. If exploration activities take place during several separate time periods within a calendar year, the above notification must be provided for each exploration program. If the scope of work exceeds that outlined in the MYAB Work Program Annual Update, the proponent must notify the inspector in writing prior to the revised program, and ensure the program remains within the scope of the approved permit.

4.7 Other Significant Factors and Risks

To the best of the author's knowledge, there are no other significant factors and risks pertaining to the Louise Lake project.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Topography, Elevation and Vegetation

The core area, hosting the Main Zone deposit of the Louise Lake property, is located within gently rolling terrain ranging in elevation from 3,100 to 3,400 feet (945 m to 1,035 m). Portions of the property, directly northwest of the Main Zone, are swampy to boggy. Newly acquired areas to the southeast are more rugged, with elevations ranging from 3,230 to 4,130 feet (985m to 1,260m) with locally inaccessible sections.

The property is heavily wooded with thick coniferous forests of hemlock, pine and spruce. Areas northeast of the Main Zone and along the unmaintained logging roads south of the Louise Lake waterbody were clear-cut in the late 1990s. Within the core area, directly overlying the deposit, vegetation comprises smaller trees, mainly pine, fir and hemlock. The area to the southeast comprises mature to over-mature balsam fir and hemlock forest, with trees attaining 40 m in height. Clear-cut areas are marked by immature pine and fir forest and lush annual undergrowth.

5.2 Access

The southeastern property area is accessible by an unmaintained logging road extending ENE from the currently maintained McDonnell Lake Road, itself extending from the all-weather "Hudson Bay Mountain Road" leading to Smithers. Commuting time from Smithers is about 1.25 hours. The unmaintained road is accessible by 4WD vehicles to a "terminus" southeast of the Louise Lake waterbody, although this required some brushing in 2019 along its final 1.3 km to the terminus (Figures 1 and 2). The core area hosting the property is now inaccessible by road, following emplacement of a barrier on the Coal Creek Road extending from the aforementioned logging road. Minor logging roads extending from the remaining accessible road are overgrown and impassable for 4WD vehicles. Access to the core area, and to areas east of Bud Lake, is by helicopter from Smithers.

During August, 2019, the McDonnell Lake Road was an active logging haul road. A two-way radio with the same frequency as that utilized by the logging companies is required during active logging episodes.

5.3 Local Resources

The property is about 35 km west of Smithers, British Columbia, with a population of about 5,700 servicing roughly 11,000 people. Smithers is a major service centre along both the Yellowhead Highway and the northern Canadian National Railway line, midway between the City of Prince George and tidewater at the City of Prince Rupert, British Columbia. The town has abundant accommodation, fuel, hardware and other industrial services, an available workforce for exploration and mining, and access to abundant electrical power. A local mining recorder's office and other government services are also available. A major regional airport, with daily scheduled flights to Vancouver, also services the town.

5.4 Climate

The property occurs along the inland limit of the coastal pacific influence, and areas to the east towards Smithers have a progressively more continental climate. Summers are mild and winters are fairly cold with temperatures to -25°C with abundant snowfall typically attaining depths of 1.3 metres. The exploration season extends from early May to mid-October, although drilling can be done into early November. Drilling may also be done from early February to late March in flat, accessible areas, particularly boggy areas, due to snow and ice cover.

The climate of Smithers is described as a borderline humid continental/subarctic climate (Köppen climate classification, Wikipedia, 2019). Daily high and low temperatures in Smithers for July are 21.6°C and 8.6°C respectively; daily high and low temperatures in January are -3.5°C and -11.0°C respectively. Occasional summer heat waves and winter cold snaps occur. Annual precipitation averages 508.5 mm (20.2"), comprising 367.2 mm of rain and 182.7 cm snow (Wikipedia, 2019).

5.5 Surface Rights

No fee-simple surface rights have been allocated within property boundaries. The majority of the property is covered by five (5) Land Act Survey Parcels, specifically Parcels #5579, 5866, 5572, 5865 and 5580, covering the property area to Bud Lake. These are parcels that are, or have been, within the purview of the B.C. Crown Land Management program, but have no private ownership.

5.6 Infrastructure

At this time no significant infrastructure exists within the property. The property size and gentle terrain in the core area are sufficient to accommodate mining facilities, accommodations and mine infrastructure support facilities, potential mill processing sites, heap leach pads, and waste disposal sites. In the core area, water is readily accessible from Coal Creek and a tributary stream, and several ponds within the property (Figure 2). Permanent streams and small ponds are abundant throughout most of the property, and the southeastern area hosts the Louise Lake and Bud Lake waterbodies.

Smithers is located along a major transportation and infrastructure corridor, including Highway 16 and the Canadian National Railway line, both extending west to tidewater at Prince Rupert, British Columbia.

A major electric power line also extends about 28 km south of the property. Sufficient electrical power for a small to medium-scale mining operation could be supplied by a spur line from this current infrastructure.

6 HISTORY

6.1 OVERVIEW

This section of the report, concerning exploration activities to 2008, is based on the 2008 technical report titled: "NI 43-101-Compliant Report on the Year-2006 through 2008 Diamond Drilling Program, including: Summary of 2008 Surface Programs, Summaries of 2006 Resource Estimate and Metallurgical Studies on the Louise Lake Property, North American Gem Inc", by Carl Schulze.

The present property area was first staked as the LOU claims in 1968 by Mastodon-Highland Bell Mines (Mastodon), following identification of anomalous Cu values from outcrop and stream silt sampling west of Louise Lake. In 1969, Mastodon completed geological mapping, soil geochemical and Induced Polarization (IP) geophysical surveying. It also completed 220 metres of trenching, exposing a 1,600 ft by 800 ft (490 m – 245 m) area of low-grade Cu-Mo mineralization, called the Main Zone, along the north side of the ENE – WSW trending Coal Creek fault. Late in 1969, Canadian Superior Exploration Ltd. optioned the property and conducted further IP surveying early in 1970, delineating a chargeability anomaly coincident with the mineralized area and a second anomaly of similar signature about 1.0 km to the east, along the south limb of the fault.

From January to March 1970, Canadian Superior completed a 17-hole, 6,632-foot (2,021m) diamond drilling program utilizing "BQ-sized core", with 16 holes focusing on or close to the Main Zone. Results from the Main Zone area ranged from 104.1 m grading 0.161% Cu, 0.0024% Mo, 0.127 g/t Au and 0.8 g/t Ag to 115.8m grading 0.201% Cu, 0.0055% Mo, 0.127 g/t Au and 0.8 g/t Ag. In 1986, several unsampled intervals were sampled by L. Warren and E. Shaede. Results from this sampling combined with the 1970 sampling returned a 146-metre interval grading 0.255% Cu and 0.297 g/t Au and a 100.9-metre interval grading 0.357% Cu and 0.364 g/t Au. Results were deemed sub-economic and the claims were allowed to lapse.

In 1975, Granby Mining Corporation re-staked the area as the LOUISE 1 and 2 claims comprising 20 units (500 hectares) and conducted soil geochemical surveying in 1976. This program, involving collection of 251 soil samples along a grid extending west from Louise Lake, delineated a 650 m by 300 m Cu soil geochemical anomaly. Granby also re-evaluated the 1970 IP results, and determined that areas having highly anomalous chargeability signatures coincide with strongly pyritic zones. Areas having moderate to weak chargeability signatures may represent higher-grade but less pyritic Cu mineralization, and are thus more viable exploration targets. Granby also re-logged the 1970 drill core and re-assayed much of it. By 1977 the property was reduced to a four-unit (100-ha) claim covering the central Main Zone area.

In April 1979, the Bethlehem Copper Corporation staked the ROB 1-4 claims comprising 61 units, obtained representative core samples at 50-foot intervals and conducted further geochemical and limited IP surveying. The geochemical survey, focusing on Cu and Mo analyses, systematically covered the entire claim block, revealing scattered weakly anomalous Cu values. Two strongly anomalous Mo values were returned, one of 45 ppm Mo south of the west end of Louise Lake, and another of 150 ppm Mo roughly 400 m northwest of Bud Lake. The IP surveying was done along the Coal Creek fault zone beyond the southwestern and northeastern limits of the 1970 surveying. The IP geophysical equipment was inadequate for the conditions encountered due to insufficient power. However, the survey identified an anomalous chargeability signature to the southwest, and a coincident narrow high chargeability and low resistivity signature to the northeast, possibly representing vein or fault-controlled "chargeability materials" (White, 1979). The ROB claims were then allowed to lapse.

In late November 1979, the LOUISE LAKE claim was transferred to Noranda Exploration Company Ltd (Noranda). In 1980, Noranda conducted airborne magnetometer and VLF-EM surveying across the Louise Lake area, identifying three VLF-EM anomalies (Myers, 1983). Noranda did some compilation and petrographic work and took 17 rock samples, revealing anomalous Cu and Au values from the Main Zone area.

The property was re-staked in 1986 as the TENN 1-3 and TROUT claims by Eric A. Shaede of Sicamous, B.C. and Lorne B. Warren of Smithers, B.C. (Klassen, 1989). The 64-unit (1,600-hectare) block was optioned by Lacana Mining Corporation in 1987, which changed its name to Corona Gold Corporation by 1988. From 1987 to 1988 Lacana systematically re-analyzed and re-logged the 1970 core. In 1988, Corona conducted reconnaissance and detailed geological mapping and silt sampling, followed by a 33-km surface VLF-EM survey, a 4.2 km soil geochemical survey and 485 metres of mechanized trenching. A total of 205 soil and 192 rock samples were taken (Klassen, 1989), identifying numerous Cu ± Mo ± Au anomalies located close to, but not always directly overlying, the Main Zone. The VLF-EM survey provided limited response across the entire grid.

In 1989, Corona drilled five further holes for 916 metres in the eastern Main Zone area, targeting a major shear zone, for potential high-grade Cu-Au mineralization. All holes returned strongly anomalous Cu-Au ± Mo mineralization with intercepts ranging from 117.3 m grading 0.167% Cu, 0.0072% Mo, 0.118 g/t Au and 0.5 g/t Ag to 189.4 m grading 0.264% Cu, 0.0103% Mo, 0.313 g/t Au and 1.0 g/t Ag. Grades were fairly uniform, lacking notable high-grade zones.

In 1989, Placer Dome Inc. conducted a brief property visit followed by detailed compilation of existing drill and surface data, which was completed early in 1990. Placer Dome determined that mineralization at Louise Lake has both epithermal and porphyry-style characteristics, suggesting the Main Zone represents a transitional zone between upper-levels of a porphyry system and an associated evolved hydrothermal (epithermal) zone, possibly remobilized along the Coal Creek fault zone. In 1990, Placer Dome collected 5 rock and 65 soil samples; soil sampling revealed a Cu-Au anomaly southeast of the Main Zone, and a Cu ± Zn anomaly to the southwest. Placer Dome believed the eastern anomaly may be "a southeastern continuation of known alteration/ mineralization onto (the) eastern lines" (G. Ditson, 1990) rather than a major structurally controlled zone in the Coal Creek fault zone. The western anomaly likely represents a narrow zone (Ditson). Placer Dome believed the Main Zone mineralization to be sub-economic and that grades of potential mineralization indicated by the southeastern anomaly were not likely to be higher than within the trenches. Placer thus declined to enter into acquisition of the property.

Corona terminated its option in early 1991 and in March 1991, the claims were sold to numbered company 402774 B.C. In October 1991, the TENN 4-12 claims were added, bringing the total number of units to 164 covering 4,100 hectares. In November 1991, the claims were optioned by New Canamin Resources Ltd, who then subsequently entered into an option agreement with Equity Silver Mines Ltd (Equity). In

March and June of 1992 respectively, Equity conducted two diamond drilling programs totaling 2,651.6 metres in 13 holes. Phase I consisted of nine NQ-core holes, of which six tested the Main Zone area, two tested the Coal Creek fault to the south and one hole tested for fault-offset mineralization under Louise Lake. Phase II comprised three BQ-core holes testing potential western extensions of the Main Zone.

Drilling of the Main Zone area returned intervals ranging from 85.4 m grading 0.24% Cu, 0.0116% Mo, 0.241 g/t Au and 0.8 g/t Ag, to 60.9 m grading 0.363% Cu, 0.0223% Mo, 0.335 g/t Au and 1.6 g/t Ag. Drilling outside of the Main Zone area returned shorter, lower grade intercepts. Equity interpreted drill results as representing an east-west trending tabular deposit roughly 850m long and 40 to 80 metres thick, dipping northward at 20^{o} and having a shallow westward plunge (Hanson, 1992). At a 0.2% Cu cut-off, Equity stated that the deposit contained an "estimated resources of 50 million tonnes grading 0.3% Cu and 0.3 g/t Au with some payable molybdenum" (Hanson, 1992). This resource estimate was calculated prior to implementation of current standards under National Instrument 43-101, has not been independently verified by North American Gem, 79 Resources or this author, and should not be relied upon. Equity determined that the deposit was sub-economic but "considerable potential" existed for expansion of the deposit to the west, and for discovery of additional zones and of higher-grade areas within known horizons (Hanson).

Equity also drilled one hole (LL-02-10) to the east, testing the potentially offset IP anomaly under Louise Lake. This hole intersected a zone, called the "Lake Zone", comprising chalcopyrite-sphalerite veins within ash and lapilli tuff horizons intruded by feldspar porphyritic dykes. A 39.6-metre interval returned 0.129% Cu, 0.566% Zn, 13.6 g/t Ag and 0.210 g/t Au from 70.1 m to 109.7 m; this includes a 3.1-metre interval hosting a 15-cm chalcopyrite-sphalerite vein returning 1.456% Cu, 1.146% Zn, 121.7 g/t Ag and 1.920 g/t Au from 97.5 m – 100.6 m.

By early 1995, Global Mineral and Chemical Ltd. (Global) entered into an option agreement to earn a 100% interest on the TENN 1-12 and TROUT claim with 402274 B.C. Ltd, and conducted a preliminary compilation of past reports. In 1995, Global collected 93 soil and 3 rock geochemical samples south of Louise Lake, and completed five additional lines of IP surveying along the Main Zone trend. One soil sample returned 18 ppm Mo; this was taken roughly 200 metres southeast of a rock sample returning 375 ppm Mo. A moderate zinc-in-soil geochemical anomaly, with values to 574 ppm Zn, coinciding with elevated lead values to 172 ppm Pb, was identified about 350m south of Louise Lake. The IP survey consisted of five lines; two southwest of the Main Zone, one across the Main Zone and two to the northeast. The line across the Main Zone showed that the previously defined chargeability anomaly extends beyond known surface mineralization to the north of the Main Zone and is weaker and more erratic to the south. A weaker but still well-defined chargeability anomaly was identified southwest of the Main Zone to the northern end of the lines (Tennant, 1996), suggesting potential continuation of the Main Zone. No anomalous responses were returned from the eastern lines.

In early 1996, Global conducted further IP surveying followed by five diamond drill holes in the Main Zone area. No assessment reports or detailed results were accessible; however, news releases stated that two holes spaced 320m apart, were mineralized throughout their lengths of 229 and 213 metres respectively. One of these returned a 55-metre intercept from 18 m – 73 m grading 0.28% Cu and 0.47 g/t Au, the other returned a 52-metre interval from 24 m to 76 m grading 0.23% Cu and 0.29 g/t Au. Also, Hole GM-3 returned a 128-metre intercept grading 0.49 g/t Au, and all holes reported slightly enriched Mo near surface, including an interval of 0.024% Mo across 21 m.

In 1998, Global drilled five additional holes targeting the eastern geophysical anomaly. No major zones were intersected although the company did announce "interesting but not exciting silver values" (Letter from the President, 1998). No specific details were available for this work. The company planned additional drilling of the Main Zone in 1999 but no records of such work were found and the company appears to have focused its efforts elsewhere.

The LOUISE 1-8 claims were staked in October 2003 and the LOUISE 9-30 claims were staked in January 2004 by Messrs. B. Kreft and C. Greig. In January 2004, Firestone Ventures Inc. (Firestone) entered into a joint venture agreement with Messrs. Kreft and Greig to obtain a 100% interest in the property. In July and August, Firestone completed a six-hole, 5,638.4-foot (1,718.4 m) diamond drilling program using "NQ" sized core and focusing on the Main Zone. The program expanded known dimensions of the zone to the east and west, and confirmed previously reported results in central areas. Results ranged from 62.1 metres grading 0.214% Cu, 0.0044% Mo, 0.173 g/t Au and 1.5 g/t Ag from 121.0 to 183.1 m, to a 204-metre intercept grading 0.366% Cu, 0.0118% Mo, 0.354 g/t Au and 1.2 g/t Ag.

In December 2004, Firestone signed a "letter of intent" with North American Gem Inc. whereby North American Gem may earn a 75% interest in the Louise Lake property. In 2005, North American Gem conducted a seven-hole, 7915-foot (2,412.3 m) diamond drilling program, focusing on further expansion of the Main Zone to the west, east and at depth. Results ranged from 22.7 metres grading 0.159% Cu, 0.014% Mo, 0.150 g/t Au and 0.5 g/t Ag to 192.1 metres grading 0.271% Cu, 0.011% Mo, 0.255 g/t Au and 1.9 g/t Ag.

In February 2006, Firestone transferred its agreement to earn a 100% interest in the Louise Lake property, together with all obligations of the 2004 and 2003 agreements to North American Gem Inc. From February to March, 2006, North American Gem conducted a twelve-hole, 11,114-foot (3,387.4 m) diamond drilling program on the "Main Zone" and surrounding area. Results of this and all earlier programs, including historical drilling activity, were incorporated into the first Main Zone NI 43-101 resource estimate. The resource estimate was provided by SRK Consulting (Canada) Inc. (SRK). In July, SRK released its estimate, comprising an Indicated Resource of 6.0 M tonnes grading 0.214% Cu, 0.006% Mo, 0.20 g/t Au and 0.98 g/t Ag, and a further Inferred Resource of 141 M tonnes grading 0.234 % Cu, 0.009% Mo, 0.23 g/t Au and 0.94 g/t Ag.

In late July of 2006, a 164-kg composite sample of re-split core was sent for metallurgical analysis to G & T Metallurgical Services of Kamloops, British Columbia, Canada. The concentrate contained 28.9% Cu at an 85% recovery rate. The concentrate also included 18.7 g/t gold, at a 55% recovery rate, and 364 g/t silver, at a 44% recovery rate. Molybdenum grades in concentrate stood at 0.650%, at an 80% recovery rate, potentially recoverable as a separate saleable product using a "reverse flotation" procedure. The concentrate also contained 11.4% arsenic (As), a "deleterious element", initiating research by North American Gem into alternative, environmentally acceptable extraction processes through a number of consultants. The best alternative treatment process was determined to be the "CESL" hydrometallurgical extraction process, developed by Teck-Cominco.

In 2007, North American Gem conducted a drilling program comprising 6,330.4 metres (20,770 feet) in 21 holes, focusing on deposit expansion as well as resource upgrading of the Main Zone. The program targeted the northern down-dip extension of the Main Zone, and the central deposit area.

This program identified the eastern and western boundaries of mineralization, and firmed up the northern and southern boundaries, effectively outlining the deposit size and tenor. The program resulted in three other major findings: an area of higher gold grade at depth in north-eastern areas; a slight “flattening” of the Main Zone overlying a basal flat-lying fault called the “Terminator” in north-central areas, and the first intersection of Main Zone-style mineralization underlying the Terminator in the northwestern area. The latter suggests the underlying portion occurs to the west-northwest, and the known Main Zone is hosted by a rafted block offset to the east.

A scoping study submitted in January 2008 by SRK, indicated that, at then-current metal prices of US$1.35/lb for copper, $15/lb for molybdenum, $500/oz for gold and $8/oz for silver, the deposit was uneconomic. At a price of $3.00/lb for copper, with the same prices for other metals, economic viability improves but remains uncertain.

In early 2008, North American Gem conducted a 16-hole, 5,042.8-metre (16,486-foot) diamond drilling program focusing on areas of higher-grade gold mineralization in the northeastern deposit area, and potential deep-seated mineralization to the west. The 2008 program confirmed the former but also indicated that its extent is limited. This program also successfully identified the underlying “fixed” portion of the deposit to the west-northwest and determined that post-depositional flat-lying faulting converted the deposit into a series of blocks, each overlying unit successively displaced farther to the east-southeast. The depth and relatively low grades of the deep-seated portions limits their economic viability.

Two episodes of claim acquisition resulted in expansion of the claim block to 29,413.5 acres (11,908.3 ha) by spring of 2008. A surface exploration program comprising geological mapping and geochemical sampling was conducted across the entire expanded property area from May through September 2008. Results suggested some potential for a second porphyry-style system, centered roughly in the Bud Lake area. Several weak Au ± Mo soil geochemical anomalies, weakly elevated Au values from rock geochemical sampling and two areas of argillic alteration supported this hypothesis. A detailed surface field program based at Bud Lake was recommended, but no further surface work was done by North American Gem.

In 2011, North American Gem was approached by Hunter-Dickinson Inc. (HDI), which conducted desktop-style due diligence on the property. Little is known of the activities and results of this program. North American Gem allowed the property to lapse in 2016.

The area covering the Main Zone deposit was staked by Messrs. Steven Scott and Brian Scott in 2017. They allowed the property to lapse in 2018, then re-staked the core area of the property from October 2018 to January 2019. A single two-unit claim, #1064060, covering the northeast part of the Main Zone, was acquired by an independent interest in October, 2018. One further, much larger claim covering the Bud Lake area to the southeast was added in August 2019.

6.2 Mineral Processing and Metallurgical Testing

This section of the report is taken almost verbatim, with minor edits, from the 2008 technical report titled: “NI 43-101-Compliant Report on the Year-2006 through 2008 Diamond Drilling Program, including: Summary of 2008 Surface Programs, Summaries of 2006 Resource Estimate and Metallurgical Studies on the Louise Lake Property, North American Gem Inc”, by Carl Schulze. Much of this information was taken from a final metallurgical report titled: “Preliminary Assessment of Louise Lake Metallurgy, North

American Gem Inc. Km 1882", by Tom Lafreniere and Tom Shouldice of G & T Metallurgical Services (Appendix 3).

6.2.1 *Metallurgical testing results*

During the autumn of 2006, G & T Metallurgical Services Ltd. of Kamloops, British Columbia, conducted metallogenic testing on a 164-kg bulk sample of "quartered" NQ drill core from Holes LL-06-01, LL-06-02 and LL-06-10 taken from the-2006 drilling of the Main Zone. The intervals sampled were selected to represent a variety of grades and lithologies, roughly in proportion to their occurrences throughout the Main Zone deposit (Table 2). The main objectives were to determine mineralogy and locking characteristics of the sample, and to perform a series of preliminary flotation tests to assess metallurgical performance (Lafreniere and Shouldice, 2006). An estimate of ore grindability and hardness was also determined using a comparative procedure and the ore was found to be fairly friable with a Bond Index of 13.

Table 2: Year-2006 Diamond Drilling Intervals selected for Metallurgical Testing (Schulze, 2006)

Hole	From	To	From (m)	To (m)	Meterage	Lithology
DDH LL-06-01	B800706	B800710	18.35	23.90	5.55	Feldspar Porphyritic Monzonite
	B800714	B800720	23.90	33.95	10.05	Feldspar Porphyritic Monzonite
	B800756	B800770	91.10	119.40	28.30	Feldspar Porphyritic Monzonite
	B800771	B800778	119.40	15.40	16.00	Dacite - Andesite
	B800781	B800784	135.4	143.1	7.70	Dacite - Andesite
DDH LL-06-02	B800857	B800859	46.0	51.3	5.30	Heterolithic Conglomerate
	B800861	B800872	51.3	73.9	22.60	Heterolithic Conglomerate
DDH LL-06-10	B801499	B801503	90.0	97.5	7.50	Dacite - Andesite Tuff
	B801504	B801506	97.5	103.5	6.00	Feldspar Porphyritic Monzonite
	B801606	B801607	258.3	260.8	2.50	Feldspar Porphyritic Monzonite
	B801609	B801622	260.8	284.1	23.3	Feldspar Porphyritic Monzonite

"Head grade" analysis by G & T documented a 0.28% Cu, 0.3 g/t Au and 0.007% Mo grade, showing a fair correlation with the weighted average of analytical results by ALS Chemex of 0.321% Cu, 0.279 g/t Au and 0.006% Mo, particularly when rounding effects were incorporated. Copper mineralogy comprises an almost even distribution of chalcopyrite and enargite, the latter a copper-arsenic sulphide with about 20% by weight arsenic, which will affect the quality of the final concentrate (Lafreniere and Shouldice, 2006).

Upon grinding of the composite to a sizing of 162-micron K_{80}, nearly 40% of copper sulphides were freed from other mineral species. Most of the remaining Cu-sulphides occur as sulphide-rich binary interlocks with non-sulphide "gangue" minerals. These results suggest that an acceptable "rougher circuit" performance is achievable at a 160-micron K_{80} primary grind size. The concentrate from this will require re-grinding to ensure the follow-up "cleaner circuit" performance (Lafreniere and Shouldice, 2006).

Following the rougher circuit testing, three "open circuit batch cleaner" tests were performed, prior to a locked cycle test on the composite. These tests revealed that the concentrate would require re-grinding to the 25 to 30-micron K_{80} range to produce a relatively high-grade concentrate. A single locked-cycle test was performed at a 100-micron K_{80} size flotation feed which was then re-ground to 26-micron K_{80} prior to dilution cleaning. This testing revealed that a grade of 28.9% Cu in the final copper concentrate was obtainable at a recovery rate of 85%. Metal performance data listed in the report indicate that, in addition to these copper grades, the final concentrate would include 18.7 g/t Au, 364 g/t Ag and 0.650% Mo. Recoveries for Au, Ag and Mo were 57%, 44% and 80% respectively. The final concentrate has a "mass percent" of 0.8% of the original flotation feed.

Table 3 lists minor elements concentrations within the concentrate.

Table 3: Minor Element Concentrations, Louise Lake Metallurgical Sample*

Element	Symbol	Units	Value
Gold	Au	g/t	18.7
Silver	Ag	g/t	364
Molybdenum	Mo	%	0.65
Antimony	Sb	%	0.26
Arsenic	As	%	11.4
Bismuth	Bi	g/t	70
Cadmium	Cd	g/t	38
Mercury	Hg	g/t	2.2
Selenium	Se	g/t	57

*reproduction of Table 3, Report Km 1882, by G & T Metallurgical Services Ltd.

The report concluded that payable levels of gold and silver were recovered in concentrate, and that molybdenum may be worth recovering into a separate saleable product using an industry established "reverse flotation process". However, arsenic concentrations are very high, requiring marketability studies to determine salability of the concentrate. The other deleterious elements occur in minor concentrations.

Additional recommendations include the investigation of gold-arsenic values from initial analytical results and to determine if the bulk sample was obtained from an area of anomalously high arsenic content. However, copper-arsenic ratios across the deposit were found to be consistent with that of the bulk sample, indicating good representability of the deposit. Further testing work to optimize grinding and re-grinding requirements, and investigation of hydrometallurgical techniques for metal recovery from concentrate, are recommended.

The full report titled "Preliminary Assessment of Louise Lake Metallurgy, North American Gem, Inc. Km 1882", may be found in Appendix 3.

6.2.2 Potential Techniques for Metal Recovery

This section of the report is taken almost verbatim, with minor edits, from the 2008 technical report titled: "NI 43-101-Compliant Report on the Year-2006 through 2008 Diamond Drilling Program, including: Summary of 2008 Surface Programs, Summaries of 2006 Resource Estimate and Metallurgical Studies on the Louise Lake Property, North American Gem Inc", by Carl Schulze. It is important to note that these potential techniques were provided in 2006 and may now be dated.

Following receipt of the final report by G & T Metallurgical Services Ltd, several consultants were contacted regarding identification of environmentally safe extraction techniques and markets for this concentrate. Specifically, Butterfield Mineral Consultants Ltd. conducted the marketability survey, and Mr. David Dreisinger, PhD, a professor at the University of British Columbia provided information on extraction techniques.

One of the most promising extraction techniques is the "CESL" copper-gold hydrometallurgical extraction process, developed by Cominco Engineering Services Ltd. Advantages of this process include on-site processing, eliminating transportation charges, and modification of arsenic to environmentally stable ferric arsenate (CESL website, 2006). Acceptable feed ore minerals include chalcopyrite and enargite, the two copper minerals comprising almost all copper mineralization at Louise Lake.

Another potential technique is the "BIOCOP" bioleaching process developed by BHP Billiton to treat ore containing chalcopyrite and enargite. The process has been shown to be effective, with high copper recoveries. A third potential treatment is "Total Pressure Oxidation", involving chemical oxidation of the concentrate. The residue fixes arsenic as an iron-arsenic precipitate. A fourth technique involves selective leaching of arsenic and antimony using high pH (strongly alkaline) solutions. The cost of reagents for this particular process is very high; therefore, viability will depend on metal value within the deposit.

Various other copper leaching processes also exist, designed for concentrates containing chalcopyrite that may also be amenable to extraction of copper from enargite. Viability of these will depend on rates of precious metal recoveries and quality of residues.

The "PASAR" smelter in the Philippines, designed to handle high-arsenic concentrates, is an option. The roaster is specifically designed to fume off arsenic in the form of arsenic trioxide or arsenic pentoxide. The facility was originally concentrated to treat high-arsenic bearing ore from the Lepanto Mine in the Philippines.

The findings of these investigations indicate that extraction techniques for high-arsenic-bearing ores exist, together with acceptable disposability of arsenic. Economic viability will depend on costs of extraction and treatment, as well as typical mining, processing and shipping expenditures. No further investigation into alternative extraction techniques was done after 2007.

6.3 2006 Resource Estimate

This section of the report is taken almost verbatim, with minor edits, from the 2008 technical report titled: "NI 43-101-Compliant Report on the Year-2006 through 2008 Diamond Drilling Program, including: Summary of 2008 Surface Programs, Summaries of 2006 Resource Estimate and Metallurgical Studies on the Louise Lake Property, North American Gem Inc", by Carl Schulze.

In March, 2006 a due-diligence visit was conducted by SRK as part of an independently calculated resource estimate. Mr. Chris Lee, MSc, PGeo, Principal Geologist with SRK, was provided with data from 2004 through 2006 drilling, including all historical data. On June 14, 2006, Mr. Lee and Mr. Marek Nowak, MASc, PEng, Principal Geostatician for SRK, provided North American Gem Inc. with the following resource estimate (Table 4).

The following section is taken from the 2006 SRK report by Lee and Marek.

Table 4: 2006 SRK Classified Mineral Resource for the Louise Lake Deposit [t]

Mineral Resources*	Tonnes	CuEq* (%)	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)
Indicated	6,000,000	0.369	0.214	0.006	0.20	0.98
Inferred	141,000,000	0.426	0.234	0.009	0.23	0.94

* All resources quoted at 0.25% CuEq cut-off
** CuEq calculated using the following metal prices: Cu US$1.20/lb Mo US$*/lb, Au US$450/oz, Ag US$7/oz
[t] Taken from Table 14 of the 2006 Technical Report by SRK Consulting (Canada) Inc.

No reserves are included in this resource estimate.

The resource estimate incorporated data from 2,043 samples in 37 drill holes. All samples were composited to 3.0-metre intervals, resulting in 1,639 composite assays. Only these composite assays were used in the resource estimate. Samples were analyzed for copper, molybdenum, gold and silver, and assays below detection limit were given a value of half the detection limit. Missing assays and gaps were given a value of 0.0 but almost all of these were outside of the mineralized envelope.

Drill results were obtained intermittently from 1970 through 2006 and can be divided into two groups; results from pre-2004 drilling, and drilling from 2004 – 2006. Documentation for pre-2004 samples is sparse, and no independent QA/QC data exists for pre-2006 data, although ALS Chemex provided comprehensive in-house quality control for analysis of 2004 and 2005 core. Data verification, including the single twinned hole, re-sampling of some pre-2004 core and cursory checks on database consistency, revealed similar analytical results, indicating a lack of bias between old and new data (Lee and Nowak, 2006). All data was treated similarly during calculation of this resource estimate (Lee and Nowak, 2006 SRK technical report).

No geological model was constructed due to complexities of the geological setting. No preferential lithological host was identified; thus, the data were constrained within a single "Leapfrog"-generated grade shell representing a smoothed version of a 0.15% Cu isosurface. An additional 15-metre waste zone was added to this (Lee and Nowak, 2006). All core assays outside of this were excluded from the estimation.

The data utilized was extracted with an isosurface generated by "leapfrog" software, producing a three-dimensional interpolation similar to "kriging" and dividing the deposit into individual blocks. Blocks measure 25m x 25m x 15m and are aligned north-south and east-west. This isosurface captures the "Main Zone" and a small outlier slightly to the northwest encountered through drilling of DDH LL-06-04. The isosurface was inflated by 15 metres to capture a thin veneer of waste material, similar to "shoulder samples". The resource was calculated using Ordinary Kriging in Gemcom (GEMS 6.0) software, and was checked using non-commercial software (Lee and Nowak, 2006).

A bulk density of 2.75 t/m^3 determined from the three major lithologies was used. However, this was determined from 29 samples within three fairly closely spaced holes, representing low, medium and high-grade occurrences of each. No large density differences were observed as of 2006 and a single global average density was used (Lee and Marek, 2006). However, substantially more measurements are required to establish local precision of density.

Validation exercises carried out on the block model indicate that there is good correlation between estimated grades within the blocks and the actual assays. On average, the estimated blocks are almost identical to the actual assays (Lee and Nowak, 2006).

The mineral inventory is shown in Table 4 with results rounded off to the nearest 100,000 tonnes. A Cu-Equivalent (CuEq) grade was used as a cut-off grade using the following relationship:

$$CuEq = Cu + (Au*P_{Au} + Mo*P_{Mo} + Ag*P_{Ag}) / P_{Cu}$$

where:

P_{Au} is gold price of	\$450/oz
P_{Mo} is molybdenum price of	\$8.00/lb
P_{Ag} is silver price of	\$7.00/oz
P_{Cu} is copper price of	\$1.20/lb (All prices in US dollars)

The majority of the value is derived from copper (60%) and gold (20%). (Lee and Nowak, 2006).

The mineral resource was classified based on number of drill holes, average distance between samples utilized to estimate a given block, proximity to measured density locations and location relative to supporting blocks. Because a large proportion of the value of a given block was linked to its copper estimate, classification was based on parameters utilized to estimate copper grades. Blocks that used composites from at least two drill holes, with an average distance of less than 50 m between sample composites, and that were proximal to the three drill holes with measured density locations and were close to supporting blocks, were assigned as Indicated Resources. All others were assigned as Inferred Resources (Lee and Nowak, 2006). Indicated resources occur in the south-eastern portion of the deposit. Isolated blocks that are far removed from supporting blocks were dropped from the Inferred Resource category even if all other criteria were met (Lee and Nowak, 2008).

Much of the Inferred Resource may be upgraded through in-fill drilling of the deposit outside of the present Indicated Resource, with additional density sampling throughout the deposit, and proper surveying of collar co-ordinates of all holes.

Figure 5 shows the oblique (northeast) view of estimated blocks. Blocks are coloured by CuEq (%) grade (grey = 0-0.2%, blue = 0.2-0.25%, yellow = 0.25-0.3%, orange = 0.30-0.40%, red = 0.40-0.50%, magenta = >0.50%) Blocks south of 6,079,300N are not shown.

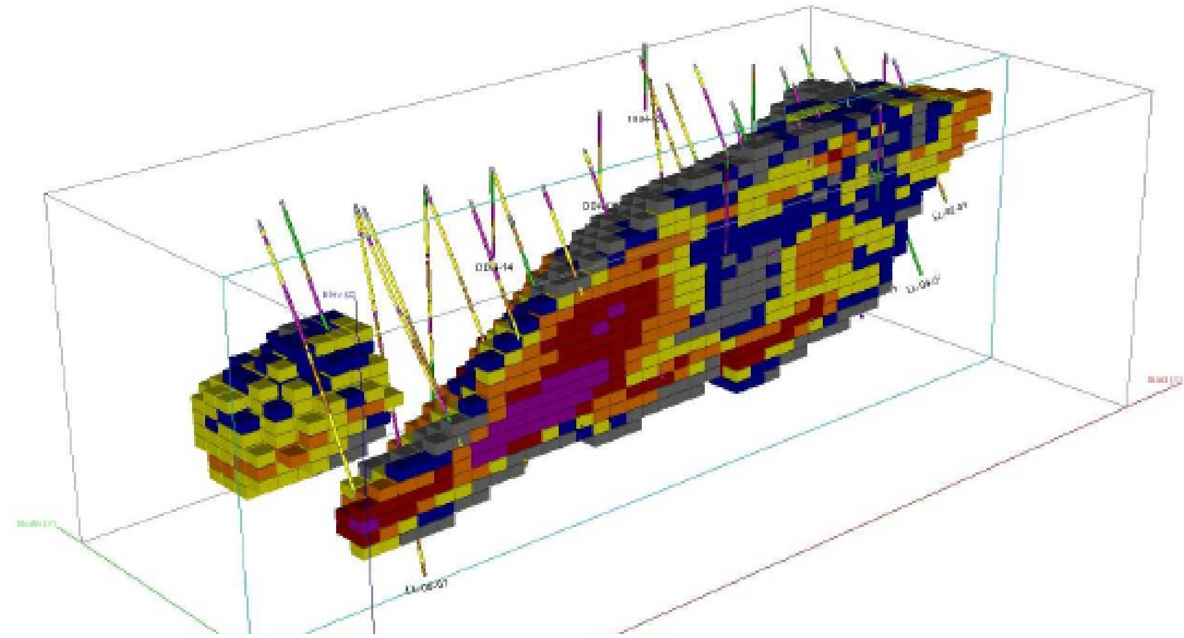

Figure 5: Oblique (northeast) view of estimated blocks, Main Zone deposit (from Lee and Nowak, SRK, 2006)

Figure 6 shows the distribution of indicated resource blocks relative to drill holes, using the same block colourization scheme.

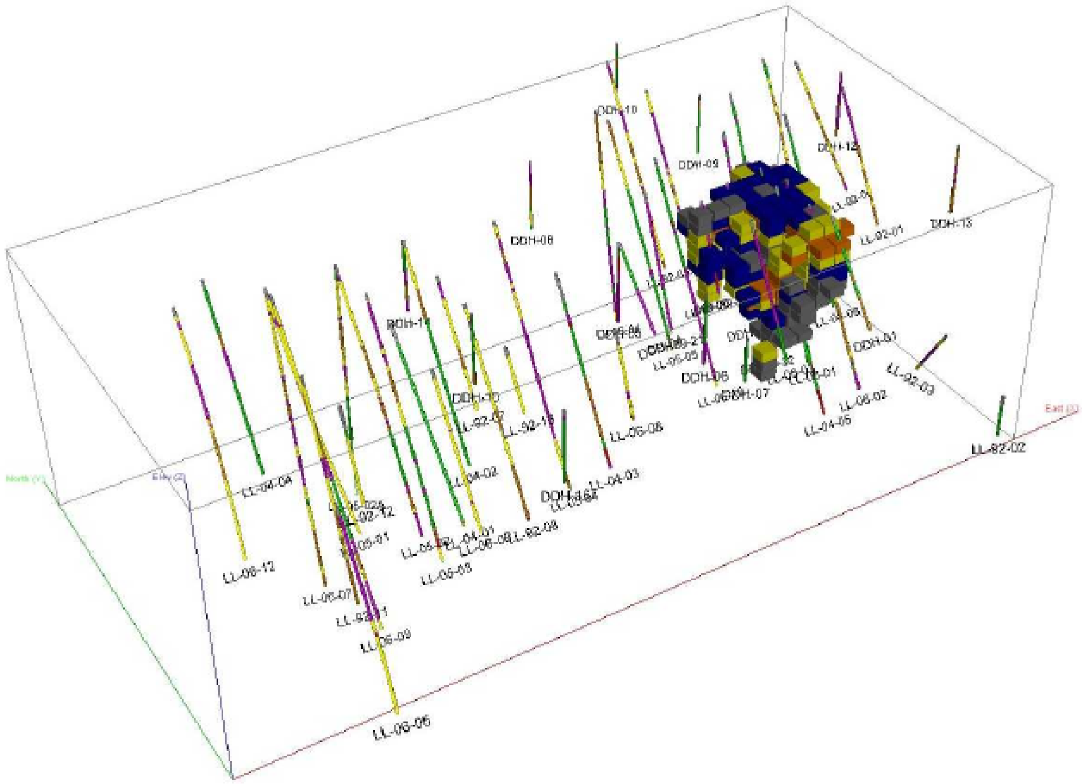

Figure 6: 3D plot showing distribution of Indicated Resource blocks (Lee and Nowak, SRK, 2006)

Major sources of uncertainty comprise: lack of adequate documentation and confirmation of pre-2004 drilling and data collection. There is also an absence of independent QA/QC data for pre-2006 data, imprecise collar co-ordinate surveys for all holes, lack of down-hole surveys for pre-2005 holes, and limited density data. However, despite these, the cumulative evidence provided by the database is considered adequate to support the 2006 resource classification. SRK determined that the exploration work, including the 2006 program, was done in “a professional and reliable manner” (Lee and Nowak, 2006).

Of six original factors affecting quality and robustness of the current resource estimate, three remain to be addressed. Firstly, a geological model is required to determine if any obvious lithological preferences for grade occur. Secondly, QA/QC procedures for most of the pre-2006 historical data are unknown and/or unverifiable. This may be mitigated by re-sampling of old core with full QA/QC data and twinning of some holes. Thirdly, bulk density sampling can be done for core from the 2004 through 2006 programs, still available at a private residence near Smithers. Much improved density sampling was done during the 2007 and 2008 programs.

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 REGIONAL GEOLOGY

This section of the report, concerning exploration activities to 2008, is based on the 2008 technical report titled: "NI 43-101-Compliant Report on the Year-2006 through 2008 Diamond Drilling Program, including: Summary of 2008 Surface Programs, Summaries of 2006 Resource Estimate and Metallurgical Studies on the Louise Lake Property, North American Gem Inc", by Carl Schulze.

The Louise Lake property is located within the Stikinia Terrane of the Intermontane Tectonic Belt. The Stikinia Terrane consists largely of mid-late Jurassic Hazelton Group sedimentary and lesser volcanic units and Bowser Assemblage clastic sediments, and early to mid-Cretaceous Skeena Group volcanic and sedimentary units. Jurassic and older formations have been intruded by the granitic Topley Intrusions, occurring along the axis of the Skeena Arch, a major northeast-southwest trending transverse uplift structure (Carter, 1995). This arch, located about 15 km south of Louise Lake, represents the southern limit of the Bowser Basin and the approximate northern limit of aerially extensive early to mid-Tertiary continental volcanic units (Carter, 1995). The Louise Lake property is located near the western limit of the Skeena Arch, which has also undergone block (normal) faulting and some thrust faulting (Hanson and Klassen, 1995).

All layered stratigraphy, including that of the Stikinia Terrane, has been intruded by late Cretaceous to early Tertiary granitic dykes and stocks. In the Louise Lake area these have been identified as Eocene (47 – 54 Ma) Nanika Intrusions, consisting of grey to pink feldspar to quartz-feldspar porphyritic granite, quartz monzonite and granodiorite, with minor rhyolite and quartz porphyritic plugs and stocks (B.C. Ministry of Energy, Mines and Resources, 1994).

7.2 PROPERTY GEOLOGY

This section of the report, concerning exploration activities to 2008, is based on the 2008 technical report titled: "NI 43-101-Compliant Report on the Year-2006 through 2008 Diamond Drilling Program, including: Summary of 2008 Surface Programs, Summaries of 2006 Resource Estimate and Metallurgical Studies on the Louise Lake Property, North American Gem Inc", by Carl Schulze. Areas revised from 2019 field work are introduced as such.

The core area of the Louise Lake property occurs along the east-northeast trending regional-scale Coal Creek lineament, comprising at least two parallel fault zones about 300 m apart (Figure 10). This fault zone forms the contact between lower Cretaceous Skeena Group clastic sediments and intercalated volcanics to the northwest, and lower to middle Jurassic Hazelton Group volcanics and sediments to the southeast. Skeena Group stratigraphy consists largely of polymictic conglomerate and sandstone, with lesser argillite and siltstone, intercalated with units of volcanic ash tuff, lapilli tuff and agglomerate. In-2004, interpretation by Schulze suggests these belong to the Kitsuns Creek Formation. Hazelton Group stratigraphy consists largely of andesitic to basaltic flows, feldspar porphyritic flows including tuff to agglomerate units, lesser rhyolitic flows, and abundant conglomerate which is more coarsely grained than Kitsuns Creek conglomerate.

The proximal area north of the Coal Creek lineament is underlain by roughly east-west striking andesite flows and tuff to fragmental units. These are intercalated with sedimentary horizons comprised largely of conglomerate to sandstone, with lesser greywacke and siltstone, locally laminated. Volcanic units occur primarily in the mineralized “Main Zone” area, where they have been intruded by several east-west trending, moderately north-dipping slabs of feldspar porphyritic monzonite. Feldspar porphyritic andesite flow units also occur southwest of the Main Zone but north of the Coal Creek lineament. Sedimentary horizons underlie areas to the north and east of the Main Zone.

In 2005, mapping and drill log analysis revealed a larger quartz monzonitic stock west of the Main Zone, with an appendage extending eastwards south of the Main Zone. A small unit of moderately limonitic and argillically altered quartz-feldspar porphyritic monzonite occurs towards the Coal Creek lineament. Although shown as a separate unit, it may instead be a quartz-porphyritic phase of the feldspar-porphyritic stock, with alteration occurring along a parallel splay of the Coal Creek fault. Another feldspar porphyritic monzonite stock occurs northeast of the Main Zone. This stock has undergone moderate argillic and silica alteration, and hosts up to 12% disseminated pyrite. The dimensions of the western and northern stocks remain undetermined.

Mapping in 2019 focused on the area southeast of Louise Lake, including the Bud Lake area. South of the Coal Creek lineament, Hazelton Group stratigraphy comprises a dominant NNW – SSE trending assemblage of variably feldspar porphyritic basalt to andesite flows. The assemblage includes lesser tuff and agglomerate units, with clast size attaining 12 cm in width. The mafic volcanic assemblage is intercalated with abundant dacitic to rhyolitic flow units, typically variably feldspar ± quartz ± biotite porphyritic. These have been described as latites from 2008 mapping, resembling these in texture and composition. Surface exposures commonly show a weakly to moderately limonitic alteration. Two units of fairly monomictic conglomerate occur near the “terminus” of the driveable road. Clast size varies from pebbles to coarse cobbles, attaining diameters to 15 cm. A small unit of gabbro was identified in the southern part of the 2019 mapping area.

7.2.1 *Brief Lithological Descriptions*

The following is a brief lithological description of each unit.

Quartz-feldspar porphyritic monzonite (“EN”): The early Tertiary Nanika Intrusive suite includes a small unit of quartz feldspar porphyritic monzonite. This is moderately limonitic with moderate argillic and silica alteration, occurring near the Coal Creek lineament. This has been designated as a distinct unit, due to higher quartz porphyry content than the larger Nanika Suite feldspar porphyritic stocks, although alteration was likely caused by fluid movement along the Coal Creek lineament.

Feldspar porphyritic monzonite (“EN”): The majority of the Nanika Intrusions, along both sides of the Coal Creek lineament, comprise 30 – 60 percent feldspar crystals in an aphanitic groundmass. The local porphyritic texture is fairly typical of core intrusions of porphyry-style deposits. Main Zone intrusive rocks display strong silicification and phyllic alteration, with minor primary biotite altered to sericite, and moderate argillic alteration. Intrusive rocks outside of this zone exhibit lesser but still moderate phyllic and silica alteration, and weak argillic alteration of feldspar laths.

Kitsuns Creek sedimentary units (“lKk”): These consist largely of heterolithic conglomerate, with somewhat lesser sandstone and siltstone units, the latter commonly laminated. Clasts within conglomerates are typically cobble-sized and moderately sorted, attaining lengths to 6 cm. Some preferential alteration and mineralization of clasts occurs. Minor black argillite units, occurring alongside greywacke units with moderately abundant argillite fragments, occur close to surface in the western portion of the Main Zone. All units within or near the Main Zone, except for the black argillite, have undergone moderate silica and argillic alteration.

Kitsuns Creek andesites and andesitic tuffs-fragmentals ("lKk"): These occur southwest of the Main Zone, and comprise fairly massive feldspar porphyritic dark grey andesite flows and minor tuffs. Northern portions of the Main Zone are hosted by andesite tuffs, commonly feldspar porphyritic, and andesite fragmentals with millimeter-scale silicified angular shards within an aphanitic matrix showing strong chlorite and sericite alteration. The strong alteration renders accurate lithological analysis difficult; some earlier workers have described these as "dacite" units.

Telkwa Formation conglomerate and minor sandstone ("lJt"): Conglomerate horizons have a higher variability in clast size (up to 15 cm long) than those within the Kitsuns Creek formation. Clasts are also variably reactive, with strong silica and/or argillic alteration and pyritization of select clasts.

Telkwa Formation rhyolite ("lJt"): A small unit of fine-grained rhyolite, commonly brecciated and locally flow-banded, occurs east of a small feldspar porphyritic stock. The siliceous composition may be partly due to silicification from the stock.

Telkwa Formation andesite - basalt ('lJt"): Mafic volcanics are commonly feldspar porphyritic within a fine grained fairly massive groundmass, similar to those of the Kitsuns Creek formation. However, these contain small units of more coarsely grained, euhedral feldspar porphyritic units that have not been mapped north of the lineament. This indicates a distinct lithological unit.

7.2.2 *Structural Geology*

The east-northeast trending Coal Creek lineament, the dominant structural feature on the property, is a district-scale transpressional structure of unknown displacement. The lineament is comprised of several smaller faults, known to occur north of Coal Creek. A strong parallel fault-related foliation occurs within all lithological units south of the lineament. This foliation also extends somewhat north of the fault. Elsewhere, particularly south of the Coal Creek lineament and to the northwest of the Main Zone, a north-south to NNW – SSE trending, steeply and variably dipping foliation occurs.

The Main Zone area comprises several tabular feldspar-porphyritic units extending at azimuths of roughly 80° - 260°, and dipping at 30° to 40° to the north. Although the strike of the local fabric is only slightly oblique to the Coal Creek lineament, the moderate northward dips suggest an earlier structural setting within the Kitsuns Creek stratigraphy. Drilling showed that faulting forms some of the contacts between intrusive and earlier units, indicating an unknown degree of displacement may have occurred. Plotting of 2005 drill sections indicates a pervasive foliation in the Main Zone which has a steeper dip than stratigraphy.

Drill-section plotting revealed a strongly developed mylonitic zone consistently encountered at a depth of 250 to 270 m. This indicates a flat-lying fault, most likely a thrust fault, forms the basal boundary of Main Zone mineralization. This fault, called "The Terminator", extends at least 1,000 metres along strike and may represent a much larger structure. Plotting of drill core data indicates the Terminator slopes upwards slightly towards the eastern limits of the deposit, and may continue to shallow further to the east.

In the western part of the Main Zone area, near-surface greywacke and black argillite horizons are sub-horizontal to very gently north-dipping, suggesting that pre-intrusive stratigraphy throughout the Main Zone area may be similarly flay-lying. Structural measurements of core suggest many of the abundant minor faults may be parallel to the "Terminator", thus indicating a flat-lying lineation. Drill sections also indicate the presence of at least one moderately north-dipping fault with a significant offset of unknown displacement, forming the footwall (south boundary) of the Main Zone. A portion of the smaller faults intersected may also parallel this.

Analysis of the expanded property area indicates that the Coal Creek Fault is the largest member of a district-scale east-northeast trending lineation, manifested by numerous drainage and topographic features. A second north-northwest trending lineament is also indicated by numerous drainage features, as well as a topographic depression with kilometric-scale widths extending northward from the Coal Creek fault west of the Main Zone to the Kitsuns Creek valley (Figure 10). A number of less prominent east-west trending structural features are also visible, with the most prominent extending from the southeastern shore of Louise Lake through Hankin Lake. Mapping in 2008 identified several lithological contacts along individual east-northeast trending lineaments, indicating fault-induced displacement along these.

Mapping by this author in 2019 revealed an area of outcrop-scale shearing, fracture-filling quartz stringer to stockwork veining and minor bleaching, argillic alteration and limonitization east of Bud Lake. This indicates the presence of a brittle deformation zone, potentially parallel to a property-scale lineament marking the west boundary of Bud Lake and the outflow stream (Figure 11). A broad unit of porphyritic rhyolite to dacite identified in 2019 has been interpreted as truncated by the Bud Lake lineament, although the degree of offsetting has not been determined. Results from 2019 mapping also suggest a NNW trend to stratigraphy, rather than an ENE trend as previously interpreted.

7.3 MINERALIZATION

7.3.1 *Main Zone-area Mineralization*

This section of the report, concerning exploration activities to 2008, is based on the 2008 technical report titled: "NI 43-101-Compliant Report on the Year-2006 through 2008 Diamond Drilling Program, including: Summary of 2008 Surface Programs, Summaries of 2006 Resource Estimate and Metallurgical Studies on the Louise Lake Property, North American Gem Inc", by Carl Schulze. Areas revised from 2019 field work are introduced as such.

Two separate mineralized prospects occur within the core area of the Louise Lake property, the Main and Lake Zones. The Main Zone consists of two major horizons extending at 80^{o} – 260^{o}: the shallower lower grade "North Horizon" and the underlying much broader, higher-grade "South Horizon" at depth. The "Lake Zone", occurring about 1.2 km to the east along the north shore of Louise Lake, hosts vein and fracture-hosted zinc-silver mineralization. This represents vein-style base metal mineralization outbound of the pyrite halo (Section 8, Deposit Types).

The Main Zone is a tabular deposit dipping from 30^{o} to 40^{o} to the north, and has been traced along strike for about 1,000 metres. In July 2006, SRK Consulting released an NI 43-101 resource estimate, consisting of an indicated resource of 6 million tonnes grading 0.214% copper, 0.006% molybdenum, 0.20 g/t gold and 0.98 g/t silver, and an inferred resource of 141 million tonnes grading 0.234 % copper, 0.009%

molybdenum, 0.23 g/t gold and 0.94 g/t silver. This estimate is compliant with the standards under National Instrument 43-101, as of 2006.

Block modeling in 2006 by SRK Consulting indicates the deposit has a footprint in plan view of almost 500 metres, and extends to a depth of almost 300 metres. Block modeling revealed central portions have lower copper-equivalent grades than western and eastern portions, although a lower density of drilling may negatively influence grades during block modeling. The deposit occurs within a series of several tabular units of feldspar porphyritic monzonite separated by conglomerate and lesser sedimentary units in central areas, and andesite fragmental units in northern and western areas. Mineralization occurs within both the intrusion and host volcanic and sedimentary units; grades do not appear to be dependent on a specific lithology.

The Main Zone deposit comprises several tabular north-dipping zones hosting fine-grained disseminated and vein-controlled sulphides. The sulphide grains consist of an almost even mixture of chalcopyrite and enargrite (a copper-arsenic sulphide). These occur within a broad area of strong pyritization, with up to 10% disseminated, fracture and vein-controlled pyrite. The chalcopyrite - enargite mixture was originally believed to be tennantite, which is similar in appearance and chemical composition.

Most of the Main Zone is marked by moderate to strong silicification and sericitic alteration, and moderate argillic alteration. Several pulses of vein stockwork emplacement have occurred, with quartz-pyrite veins crosscut by later nearly massive pyrite veins. Mineralogy consists of an assemblage atypical to most British Columbia porphyry deposits, although enargite is a common constituent of porphyry-copper systems elsewhere, including the Chuquicamata deposit in Chile. Chalcopyrite-enargite occurs as fine-grained disseminated, fracture and lesser vein-controlled grains locally comprising up to 4% of the rock mass. Copper-gold ratios show a strong correlation, with an approximate deposit-wide average ratio of 1% Cu: 1 g/t Au. Copper-silver ratios show a somewhat weaker correlation. Molybdenum values show a larger variation; molybdenum-bearing quartz stringers occur on surface in the eastern Main Zone area and in basal portions of western areas. Silver values reported from drill core analysis are generally less than 2.0 g/t; rare high values to 81.5 g/t/ 2.0m indicate vein or fault intercepts.

Interpretation of the 2004 through 2006 results, combined with past drilling results, indicate the Main Zone is bounded by a basal flat-lying fault at depths of 250 m to 270 m, called the "Terminator" (see Section 7.2.2) with a minimal displacement of several hundred metres. North-dipping mineralized zones are truncated by this flat-lying fault, forming a wedge-shaped northern terminus for the deposit against the Terminator. High grade mineralization is abruptly cut off by the Terminator; weakly anomalous to background values only were returned from underlying stratigraphy. Lower grade mineralization, comprising the North Horizon, overlies eastern and central portions of the Main Zone, and is also truncated by the Terminator.

Several cross sections indicate the south footwall boundary of mineralization dips at 40^{o} – 45^{o} to the north, slightly steeper than stratigraphic dip. The highest-grade portions, consistently exceeding 0.2% copper, occur towards the base of the South Horizon, surrounded by "halos" of progressively lower grade mineralization both overlying, and along, the footwall side of the horizon.

Feldspar-porphyritic monzonite units are most abundant in central and eastern portions of the Main Zone, where they comprise much of the host rock. These intrusive units are narrower and less abundant in western sections, where the zone has been intersected only at depth. In western areas, the primary host is andesite tuff to fragmental rocks with minor host conglomerate and sandstone. The highest copper and gold grades occur in these areas, returning values to 0.592% Cu with 0.586 g/t Au across 35.7 metres, and locally exceeding 0.800% Cu and 0.800 g/t Au. Another nearby hole returned 0.362% Cu, 0.017% Mo and 0.257 g/t Au across 66.1 metres. The highest molybdenum grades also occur here, up to 349 ppm (0.035%) Mo across the same aforementioned 35.7 m interval. Nearly massive molybdenite and minor massive enargite +/- chalcopyrite veins to 0.5 cm in width were also identified. This area also exhibits the strongest chlorite and sericite alteration, and strong silicification of andesite fragmental shards. Late pyrite veins are absent here, resulting in a more “massive” fabric.

The 2007 program identified higher-grade gold mineralization at depth in northeastern areas, overlying the Terminator fault. This is most notable in a 40.2-metre interval grading 0.408% Cu with 0.625 g/t Au. The Au: Cu ratio is considerably higher than the 1:1 ratio occurring throughout most of the deposit. The 2007 program also returned the first intercept of low-grade sub-Terminator mineralization, located northwest of the Main Zone. Although values are low, the metal ratios and rock fabric are similar to outlying areas of the Main Zone.

A single hole targeting the projected underlying portion of the Main Zone to the east-northeast, somewhat west of the Lake Zone, did not intersect Main Zone-style mineralization, although minor massive lead-zinc veining (galena and sphalerite) was intersected at depth.

The 2008 drilling program focused on two target areas. The first was the area of higher gold: copper ratios obtained along the down-dip extension of the Main Zone in northeastern areas. The best results were returned from core directly overlying the “Terminator”. The second was the down-dip extension of the Main Zone in western areas, from which drilling returned comparable values to those of earlier programs. Several holes collared progressively to the west-northwest confirmed the presence of a flat lying slab of sub-Terminator-hosted Main Zone-style mineralization. In all intercepts, the sub- “Terminator” mineralization was truncated by another flat-lying mylonitic fault of the same fabric as the “Terminator”, called the “Sub-Terminator fault”. Grades improve to the west, although intercept widths decrease. Hole LL-08-33 returned low-grade mineralization below the “Sub-Terminator” having similar grade ratios to Main Zone mineralization, suggesting the marginal areas of another mineralized slab, likely extending further west-northwest.

7.3.2 *Mineralization Outside of the Main Zone area*

This section of the report, concerning exploration activities to 2008, is based on the 2008 technical report titled: “NI 43-101-Compliant Report on the Year-2006 through 2008 Diamond Drilling Program, including: Summary of 2008 Surface Programs, Summaries of 2006 Resource Estimate and Metallurgical Studies on the Louise Lake Property, North American Gem Inc”, by Carl Schulze. Areas revised from 2019 field work are introduced as such.

The 2008 program failed to identify significant mineralized showings on surface or obvious large-scale Cu ± Mo ± Au ± Ag geochemical anomalies potentially marking a sizable surface or near-surface occurrence. However, grid-controlled soil geochemical sampling west of Bud Lake, combined with reconnaissance style mapping and sampling to the east and southwest, indicates a broad area of weakly anomalous Mo values with local areas of Au enrichment. This is hosted by a broad package of Lower Jurassic Telkwa Formation basalt to andesite flows, tuffs and agglomerates. intercalated with porphyritic rhyolite to dacite units.

Grid soil sampling in 2008 identified several small weak Au +/- Mo anomalies. The largest anomaly extends roughly 150 metres in a northwest-southeast orientation, in which Au values range from 0.014 g/t to 0.039 g/t. The anomaly includes a sample returning background Au values but with 80 ppm Mo. A stream silt sample immediately downstream returned a value of 36 ppm Mo with background Au and Ag values. Several other small, weak anomalies were identified from soil sampling; however elevated Au values show a poor correlation with elevated Mo values. Several 2008 rock samples to the north returned weakly anomalous Mo values ranging from background to 72 ppm. Two rock samples taken along a stream bank south of Bud Lake and directly east of the grid returned weakly anomalous Au values of 0.018 g/t and 0.035 g/t.

Silt sampling along a northeast-draining stream originating about 0.7 km east of Bud Lake returned anomalous Au values ranging from background to 0.040 g/t Au along its length. One rock sample returned an anomalous Mo value of 32 ppm. Volcanic units in this area have undergone strong argillic alteration, moderate stockwork silicification and weak hematization.

An occurrence of strong argillic alteration and fine pyrite enrichment occurs at the “Argillic Hill” occurrence about 2.0 km southwest of Bud Lake. Although background values were returned from rock sampling, limited soil sampling returned Au values ranging from background to 0.020 g/t Au.

7.3.2.1 Observations from 2019

Exploration in 2019 confirmed the presence of replacement-style pyritization of coarse conglomerate near the “terminus” of the driveable road. Pyritization is primarily matrix-supported, although clasts are also variably mineralized, depending on lithology (Figure 7). Sampling of basaltic flows, tuffs to agglomerate along both access roads revealed variable pyritization, silicification and phyllic alteration, with pyrite content ranging from trace to 7% (Figure 8).

Figure 7: Sample R1893518, Pyritic conglomerate near terminus of drivable road

Geologic mapping revealed an area of similarly mineralized feldspar porphyritic basalt about 0.25 km south of the terminus. Mapping indicates much of the area southeast of Louise Lake has undergone weak to moderate propylitic alteration, silicification and pyritization, signifying outlying alteration halos from the core deposit area. Alteration and pyritization is more pronounced in basaltic and andesitic rocks and intercalated conglomerates than in the rhyolitic to dacitic units, indicating the former are more reactive with incoming hydrothermal fluids. Numerous samples had undergone weak to moderate carbonate alteration and variable brecciation, the latter most pronounced west of the terminus of the driveable road (Figure 9).

Figure 8: Sample R1893529, fractured and pyritic mafic flow volcanics

Figure 9: Sample R893535, brecciated mafic volcanics

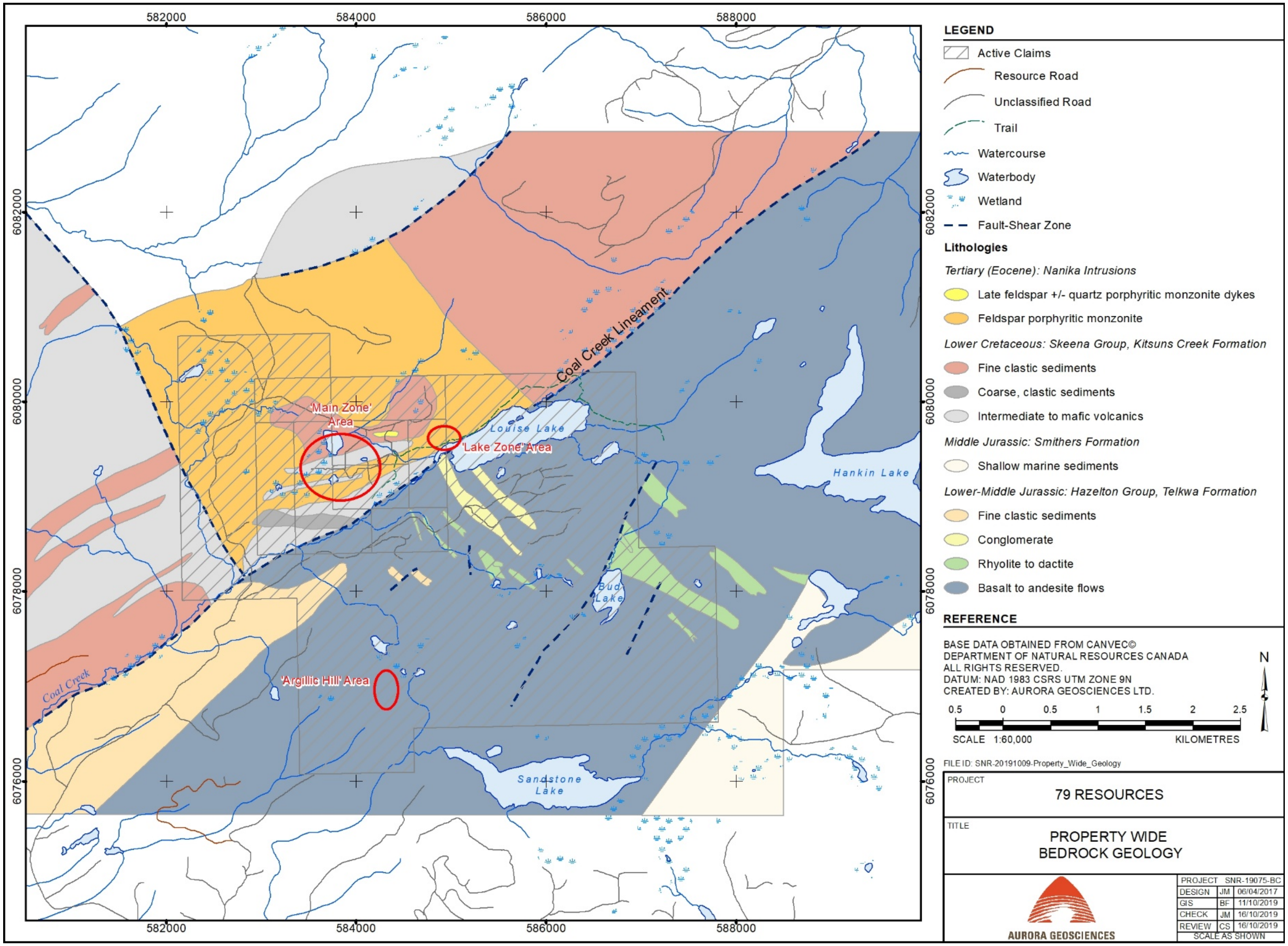

Figure 10: Property-wide Geology, 2019 work combined with 2008 mapping by North American Gem

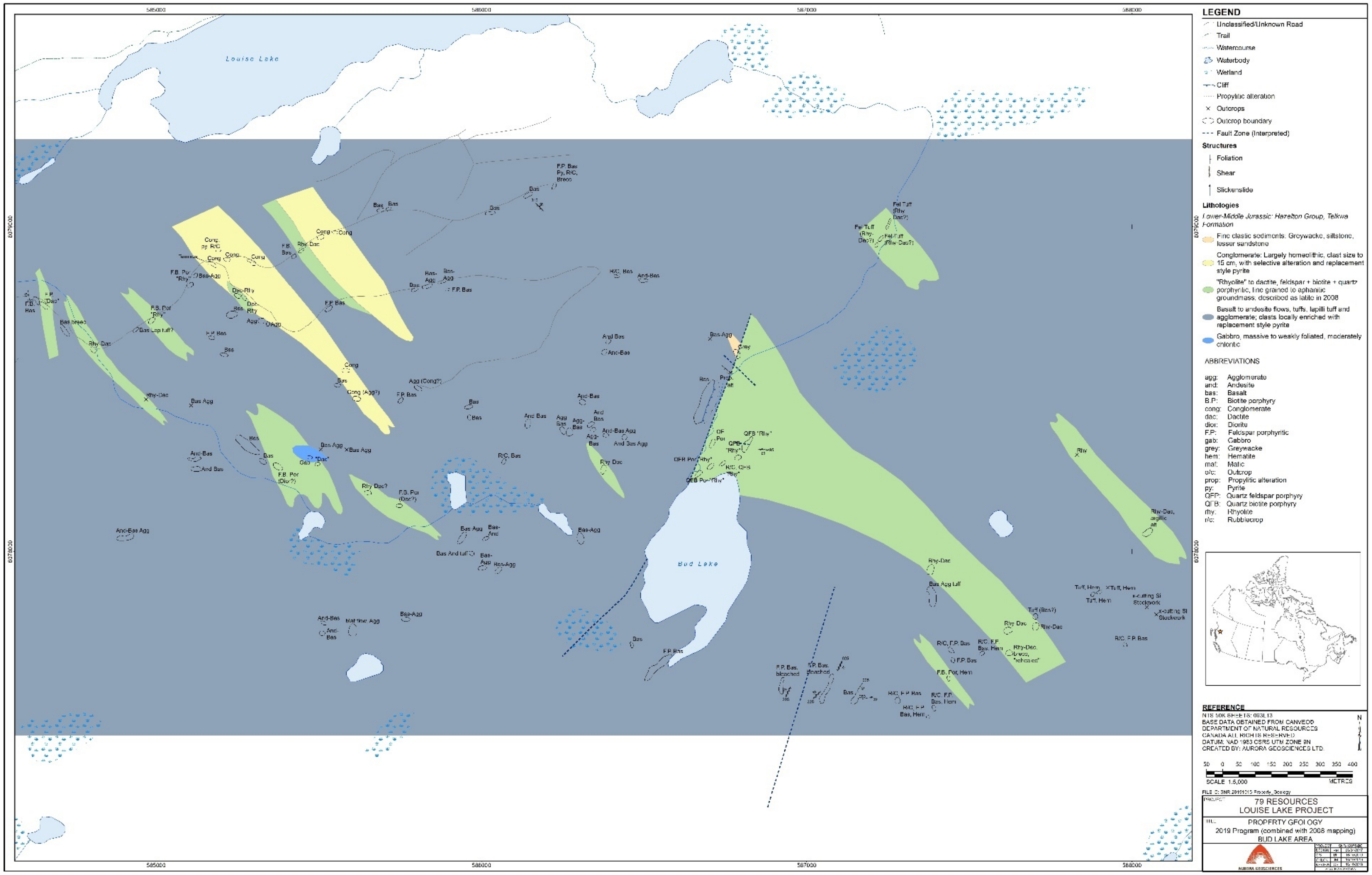

Figure 11: Detailed Geology map, 2019 Program, Southeastern Property area, Louise Lake Project

8 DEPOSIT TYPES

This section of the report is based on the 2008 technical report titled: "NI 43-101-Compliant Report on the Year-2006 through 2008 Diamond Drilling Program, including: Summary of 2008 Surface Programs, Summaries of 2006 Resource Estimate and Metallurgical Studies on the Louise Lake Property, North American Gem Inc", by Carl Schulze.

The Main Zone is classed as a "calc-alkaline suite" porphyry system, with the greatest similarity to deposits of the Eocene Babine Igneous Suite, including the past-producing Bell deposit. The primary exploration model is porphyry-style mineralization, although potential satellite occurrences of base metal veining, "Bonanza-style" gold veins and zones of gold +/- silver bearing epithermal mineralization are also viable targets.

The porphyry deposit setting comprises bulk-tonnage-style Cu-Mo-Au mineralization centred on, and emanating from, a feldspar porphyritic monzonitic to granitic intrusion. Core areas consist of intrusive-hosted disseminated copper sulphides, largely chalcopyrite and bornite, commonly with accessory molybdenum and gold. Mineralization is spatially associated with the core intrusion, but not necessarily confined to it. Stocks are typified by concentric zones of potassic, phyllic (sericitic) and propylitic alteration, commonly with argillic (clay) alteration and overlying zones of advanced argillic alteration. Surface weathering commonly results in a "leached cap" of oxidized sulphide minerals and depletion of precious and base metal ions by meteoric waters. The liberated ions are transported and deposited in an underlying zone of "supergene enrichment", marked by formation of secondary base metal oxide, hydroxide and other non-sulphide facies minerals, accompanied by precious metal enrichment.

Outbound from the stock, mineralization becomes progressively associated with quartz vein, stringer and stockwork infilling of fracture and breccia zones within zones of "structural preparation" formed during intrusion emplacement. These stockwork zones occur both within marginal areas of the intrusions and within adjacent country rock. Farther outbound, a progression of concentric "halos" of disseminated pyrite, followed in turn by halos of lead-zinc-silver veins, bonanza veins and finally epithermal mineralized zones typifies many porphyry systems. Potential also exists for distal skarn and replacement mineralization in areas where hydrothermal fluids encounter reactive country rock. Peripheral and outbound mineralization is emplaced from hydrothermal (hot water) fluids along permeable zones, particularly fault zones. These fluids may be "late" compared with the timing of emplacement of the core mineralization, and may also represent "reactivation" along structural zones.

"Epithermal" deposits refer to those originating from deposition of highly evolved hydrothermal fluids, usually at lower temperatures and pressures than "mesothermal" fluid-derived deposits closer to the intrusion. These commonly occur distal from the core intrusion, and are the most outbound mineralized zones. However, these may also be temporally, rather than spatially, distinct and can occur as superimposed zones on previously emplaced more central zones. Epithermal mineralization includes chalcedonic quartz vein, stringer and stockwork zones and hot springs-derived mineralization.

At Louise Lake, "epithermal" mineralization may be broadened to include hydrothermal mineralization in general. These may occur in several deposit settings:

1. Vein deposits. These include mineralized vein-type settings, occurring as narrow sheet-like zones within faults or other linear or thin tabular structures. Two mineralogical settings of outbound veins may occur in porphyry systems; silver bearing Pb-Zn-Cu veins, and “bonanza-style” precious metal-bearing quartz veins, commonly called “lode”-style mineralization. The chalcopyrite-sphalerite vein at the Lake Zone may represent the former setting.

2. Stringer and stockwork deposits. These are similar in genesis to vein deposits. However, stringer zones consist of abundant irregular or sheeted narrow veins, possibly fault-controlled, within altered host rock, and commonly occur across larger widths than vein deposits. Stockwork zones are similar to stringer zones, but consist of very narrow veinlets, commonly within brecciated or other fault-controlled zones, across large widths. Stringer and stockwork deposits include lower grade host rock, and thus contain lower metal grades over width. Stockwork zones are also typical of porphyry deposits marginal to the core intrusion.

3. Tabular, commonly intrusion-hosted stratabound deposits. These consist of fine stockwork-hosted and/or disseminated mineralization largely or completely confined to a specific lithological horizon, commonly comprising reactive felsic to intermediate intrusive horizons. The tabular shape is due to stratigraphic or structural controls.

The Main Zone deposit may represent a transitional deposit model type between a typical porphyry system and outlying vein deposits. Mineralization occurs as a series of tabular zones, roughly paralleling the dip of intrusive and sedimentary units, rather than as a more spherical zone concentric to a central stock. Mineralization occurs primarily as a uniform distribution of chalcopyrite and enargite/ tennantite group minerals (G & T Metallurgical Services, 2006). Chalcopyrite and enargite are both common minerals in porphyry systems, although tennantite is uncommon and typical of top levels of a porphyry system where a transitional zone may develop. Copper mineralization was originally believed to be tennantite, which would have signified upper levels of a porphyry system. The revised mineralogy renders the location of the Main Zone respective to the overall setting of the porphyry system as uncertain; it may represent somewhat lower levels than first believed.

9 EXPLORATION

Prior to the program, Aurora personnel recommended the acquisition of additional areas to the southeast, southwest and northwest onto the existing property held by Messrs. Steven Scott and Brian Scott. In response to this, 79 Resources Ltd. acquired the 1,527.2 ha LOUISE EXTENSION claim (#1070157).

The 2019 program comprised two exploration phases completed by Aurora on behalf of “79”. Phase 1, comprising geological mapping, rock and soil geochemical sampling and prospecting, was done in late August; Phase 2, comprising ground magnetometer surveying, was completed in late November.

Phase 1 was done by a two-person crew from August 22 to 30, 2019, inclusive. The following personnel comprised the 2019 Phase 1 crew:

Table 5: 2019 personnel, geological/ geochemical phase, Louise Lake Project

Carl Schulze, BSc, PGeo	Project Manager
Davin Hofmann	Geologist

The work program comprised a one-day helicopter-supported due-diligence style visit to the deposit area, and a further eight days focusing on areas southeast of the Louise Lake waterbody. A total of 6 rock samples were obtained from the deposit area. A total of 22 rock and 71 soil geochemical samples were taken from the recently acquired southeastern area.

Phase 2 was completed by a four-person crew from November 19 – 27, including four days of mobilization and de-mobe. The following personnel comprised the 2019 Phase 2 crew:

Table 6: 2019 personnel, geophysical phase, Louise Lake Project

Shawn Scott	Crew Chief/Geotechnician
Nicholas McKay	Geotechnician
Matthew Ford	Geotechnician
Adam Bouchama	Geotechnician

The work program, heli-supported on a daily basis from Smithers, was designed to comprise 80 line-km of surface magnetometer surveying along east-west oriented lines, centered on the “Argillic Hill” area. Due to time constraints and challenging topography in the southeastern grid area, a total of 52.7 line-km, including 3.45 line-km of north-south tie lines, were completed.

9.1 Phase 1 Geological and Geochemical Program

9.1.1 Central Deposit area

Analytical results from the six samples taken from the central deposit area confirmed the presence of porphyry-style disseminated and vein-hosted mineralization obtained during the 2004 – 2008 programs. Values ranged from 135 to 1,613 ppm (0.0135 – 0.161%) Cu, 88 – 888 (0.0088 – 0.0888) ppm Mo, 101 to 512 ppb (0.101 – 0.512 g/t) Au, <0.3 to 1.1 g/t Ag, and 63 – 1,599 ppm As. Further descriptions of 2019 analytical results are outlined in Section 12; Data Verification.

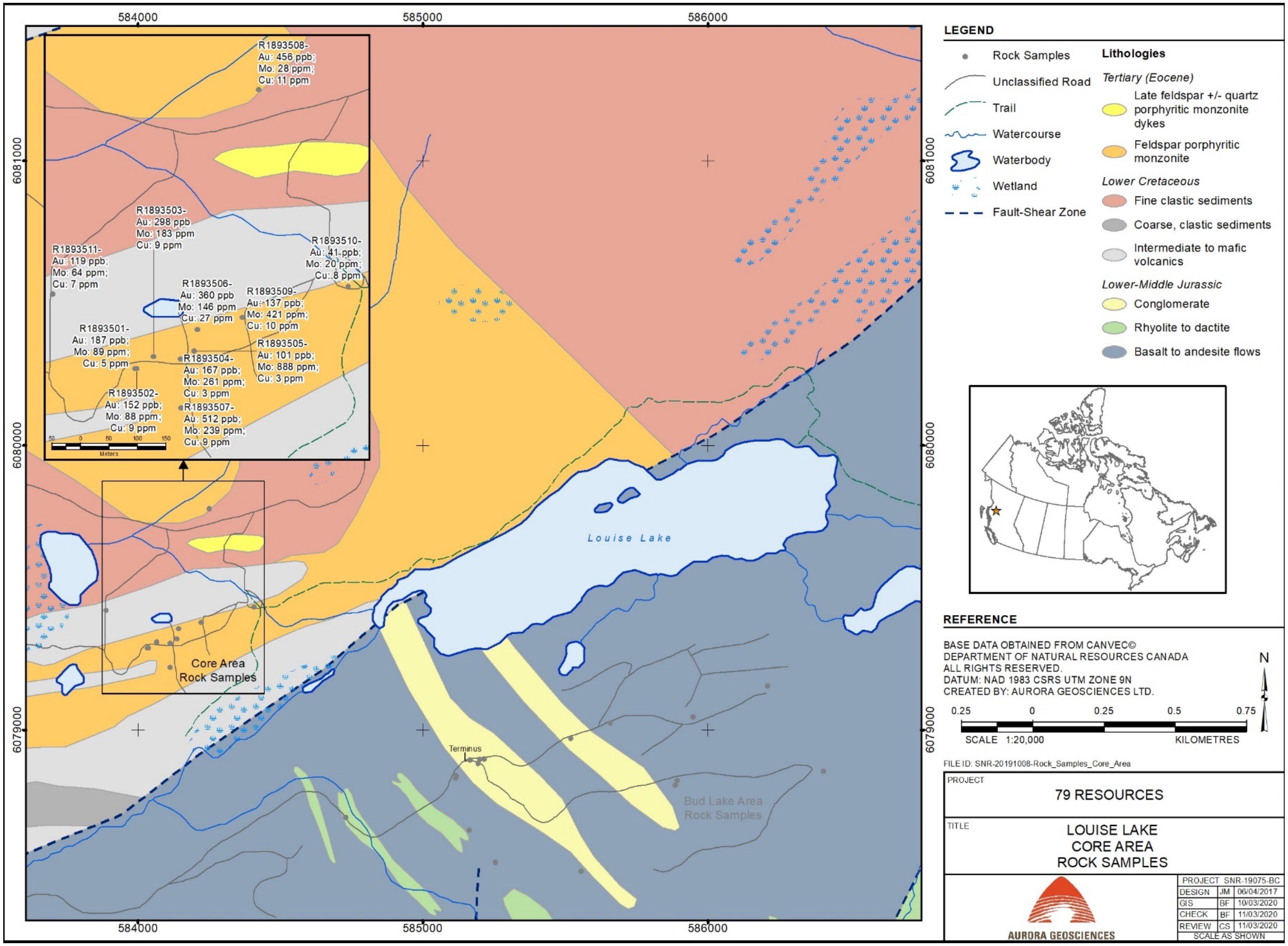

Figure 12: Rock sample locations and Cu, Mo and Au values, core deposit area

Sample #1893504 (Figure 13), which returned 1,613 ppm Cu and 261 ppm Mo, is an example of finely disseminated and fracture-hosted mineralization.

Figure 13: Sample R1893504, Central Louise Lake Deposit area

Sample R1893505 (Figure 14) is of quartz-pyrite-molybdenite veining, returning 135 ppm Cu and 888 ppm Mo.

Figure 14: Sample #1893505, Quartz-Molybdenum veining, central deposit area

9.1.2 2019 Program, Southeastern Area

The program, focusing on areas southeast of the Louise Lake waterbody, comprised three soil geochemical traverses (Figures 20-22), rock sampling along former logging roads, and five days of geological mapping and reconnaissance traversing. One day focused on areas east of Bud Lake and was helicopter-supported while the remaining days were accessed on foot from the logging roads. The soil sampling was completed along two impassable logging roads extending from the Terminus, and along the driveable 4x4 road extending west of it. Rock sampling was done mainly along the roads directly northwest of Bud Lake, and at several other sites (Figure 15). "Ground-truthing" of several anomalous Au and Mo values from the 2008 program was also undertaken.

Rock sampling returned background Au values to a maximum of 0.012 g/t from silicified pyritic basalt. No significant Ag values were returned from any non-deposit area samples. Three of four samples of conglomerate taken near the Terminus returned elevated Mo values from 30 to 34 ppm (Figure 17), associated with elevated As values from 168 – 332 ppm (Figure 19). Elsewhere, three rock samples returned Zn values exceeding 200 ppm to a maximum of 699 ppm (Figure 18); the remaining values ranged from 7 to 117 ppm. Sample R1893531 returned a value of 1,691 ppm As; elsewhere, excluding the conglomerate units, As values ranged from 3 to 313 ppm.

Soil sampling returned background Au values and background to low Mo and Cu values throughout the sampled area. Sampling returned Ag values ranging from <0.3 to 0.8 g/t. Five soil samples taken from the eastern end of the lower (northern) impassable logging road returned values from 124 to 753 ppm As (Figure 22), although no significant values of other metals. Rock sample #1893523, taken near soil sample #1893553 that returned 1,691 ppm As, returned a value of 313 ppm As. Soil sample #1893625 returned a value of 287 ppm Pb, 196 ppm Zn and 0.7 g/t Ag. All other samples returned low to background values for precious, base and pathfinder elements.

Figures 16 to 19 show rock sample values for Cu, Mo, Zn and As, and Figures 20 to 23 show soil sample values for Mo, Cu and As.

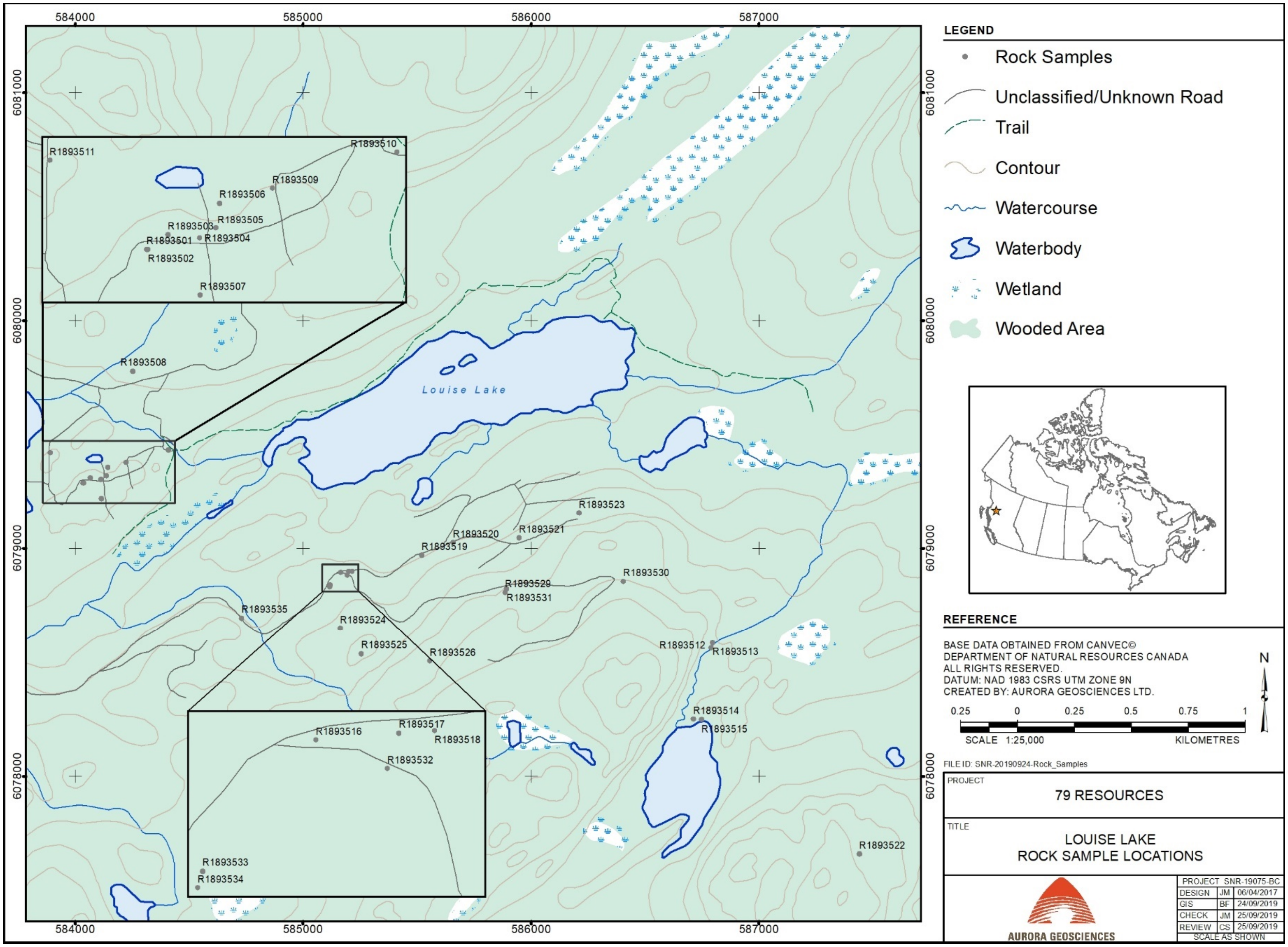

Figure 15: Rock sample locations, southeastern area

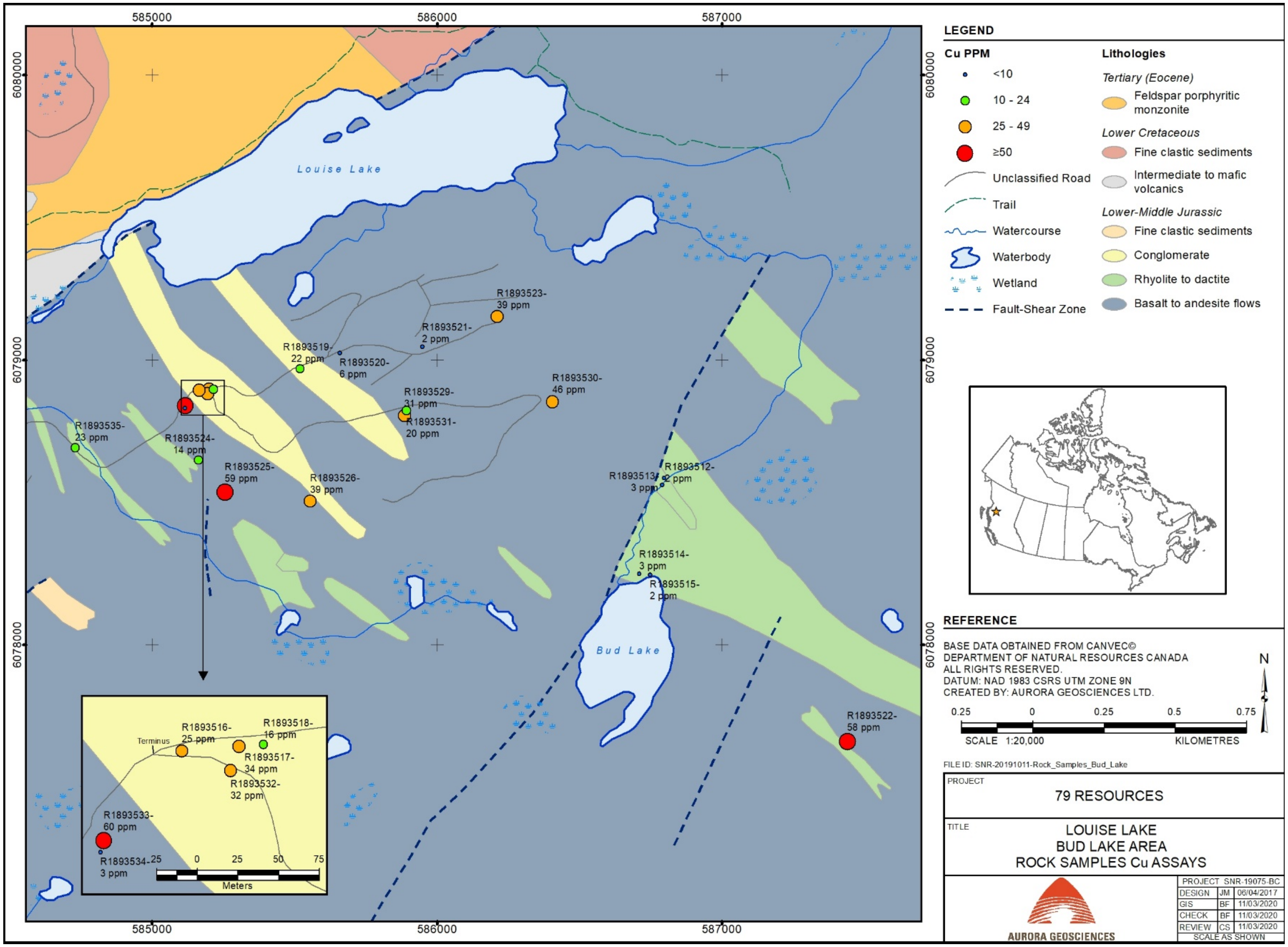

Figure 16: Cu values, rock sampling, southeastern area

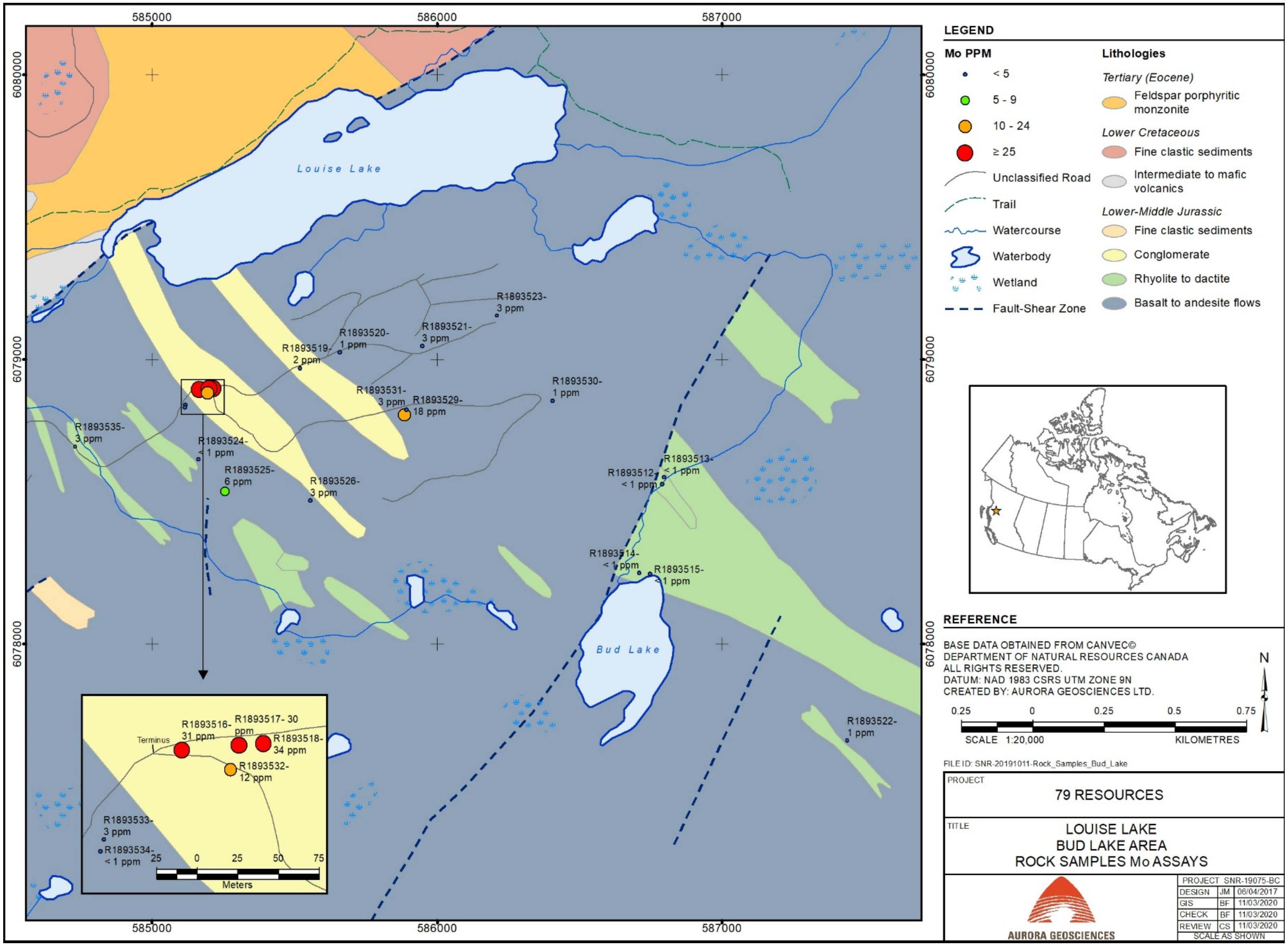

Figure 17: Mo values, rock sampling, southeastern area

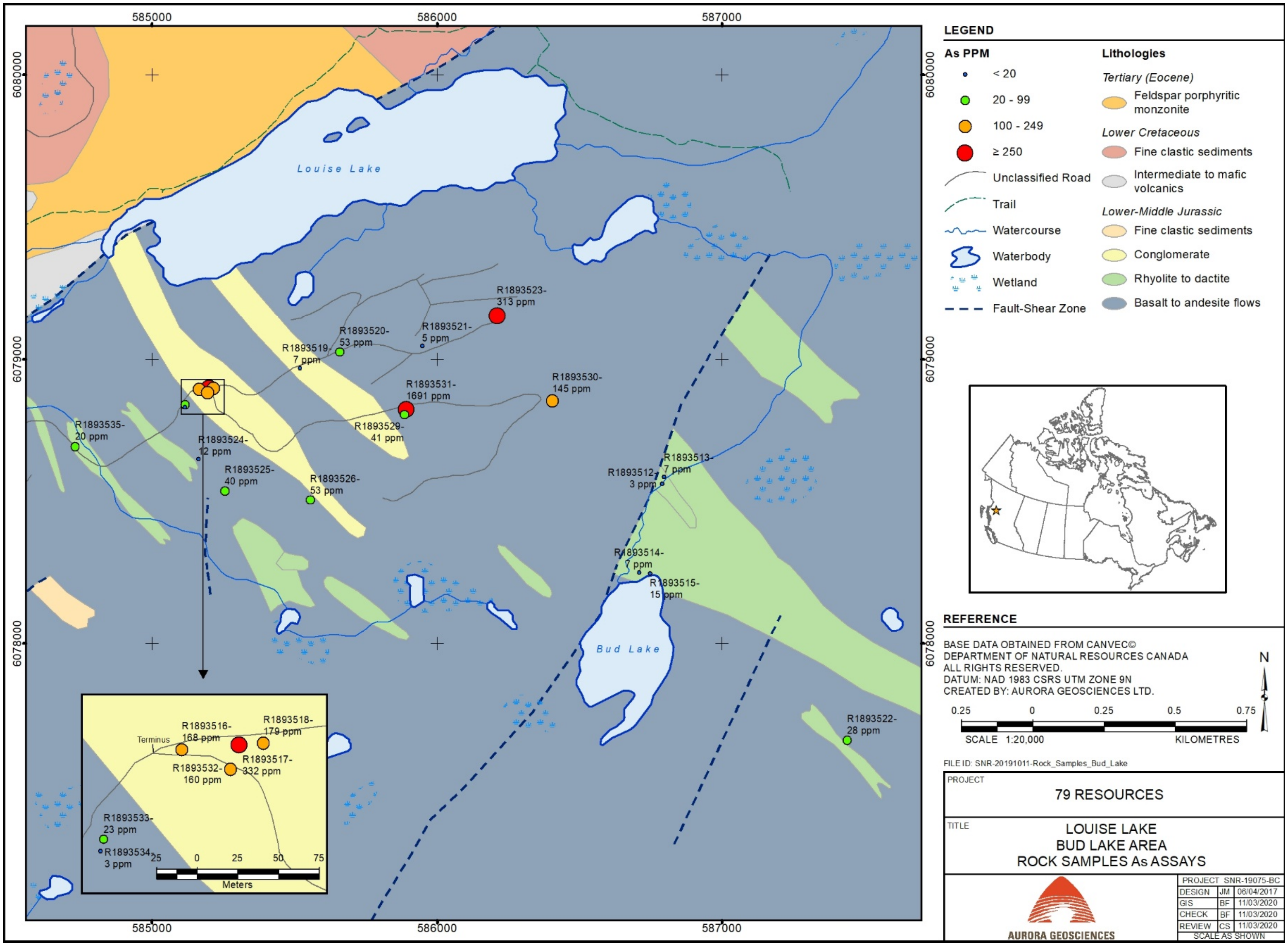

Figure 18: Zn values, rock sampling, southeastern area

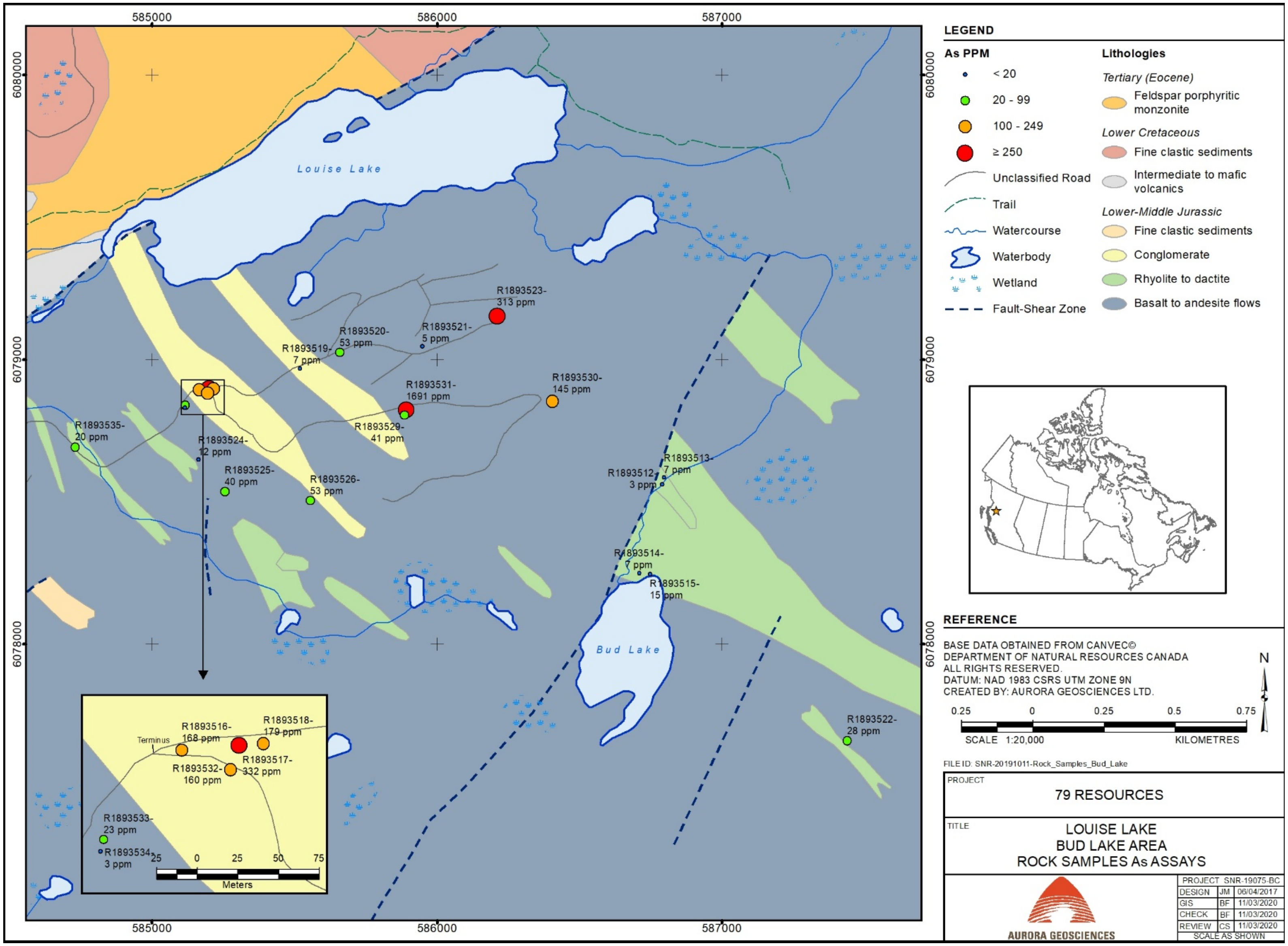

Figure 19: As values, rock sampling, southeastern area

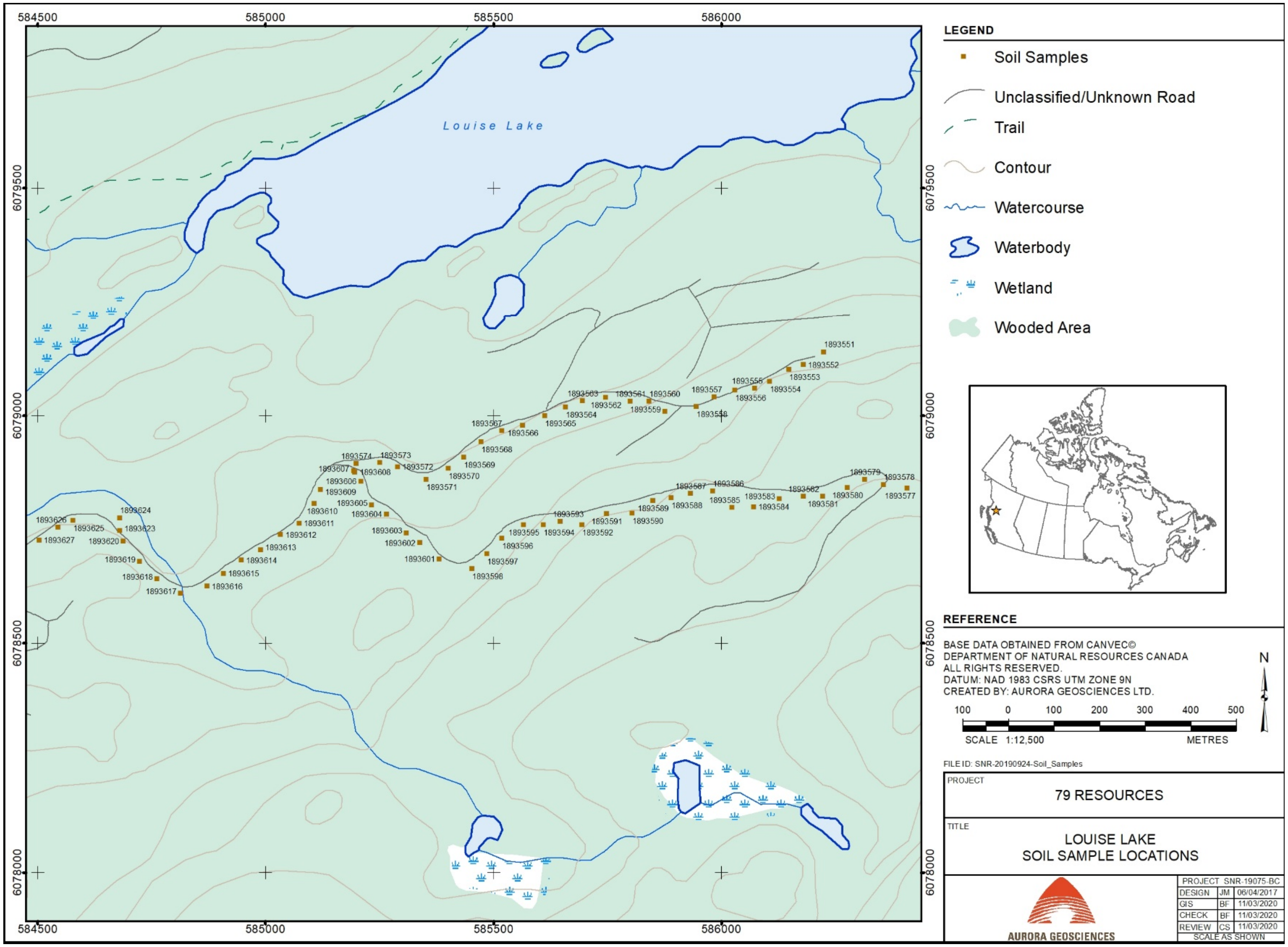

Figure 20: Soil sample locations, 2019 program, Louise Lake

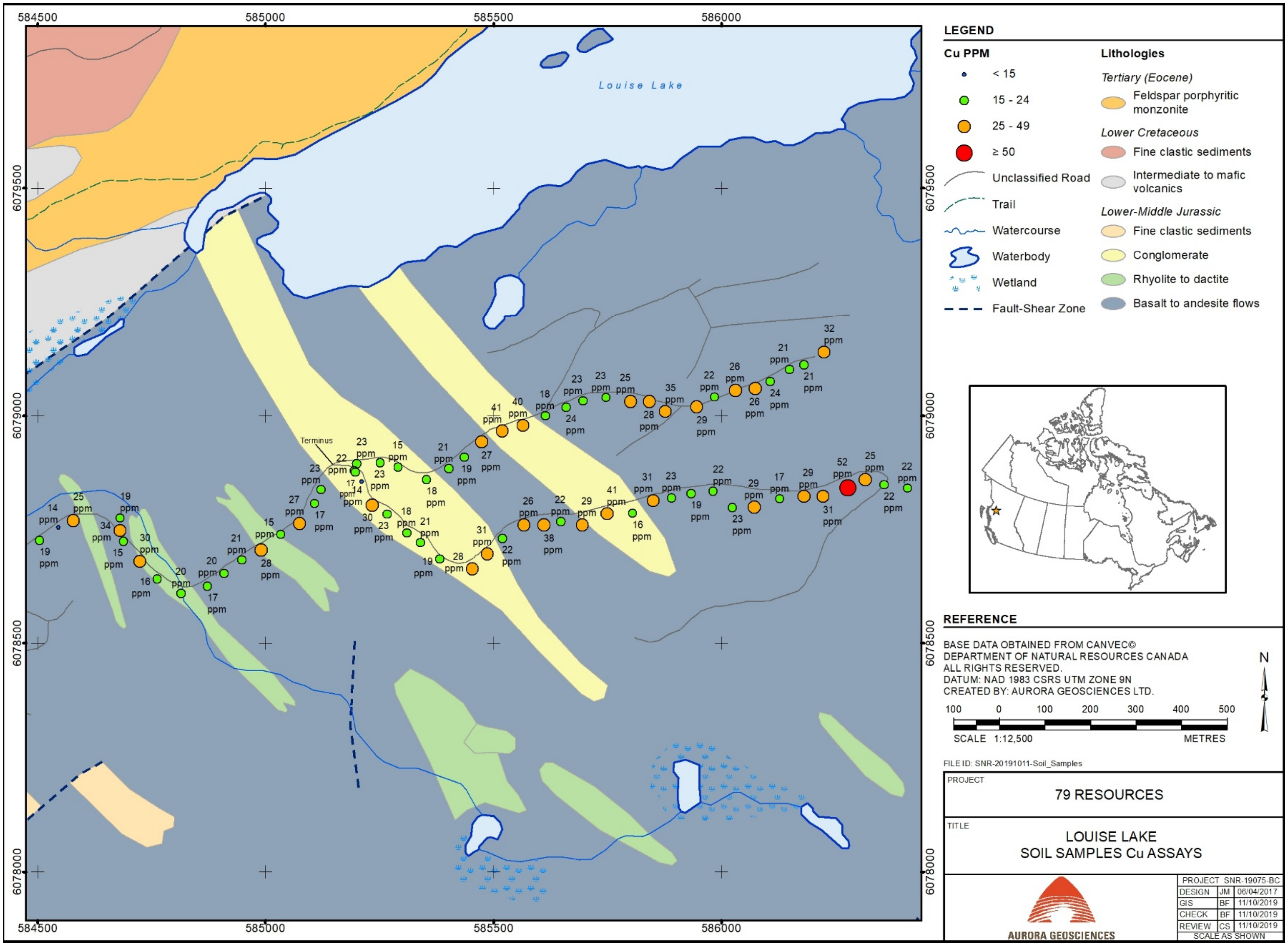

Figure 21: Cu values, soil sampling, southwestern area

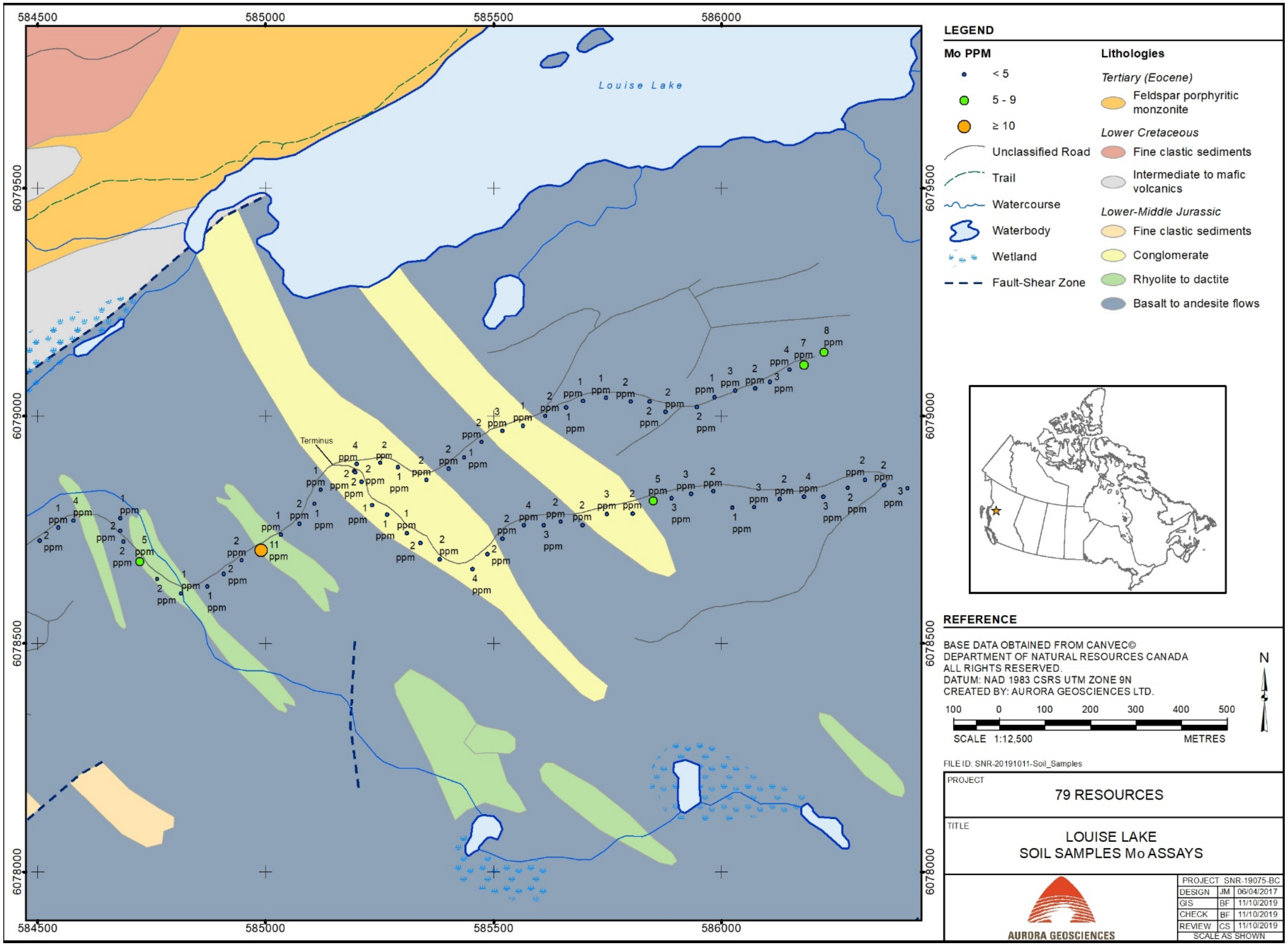

Figure 22: Mo values, soil sampling, southeastern area

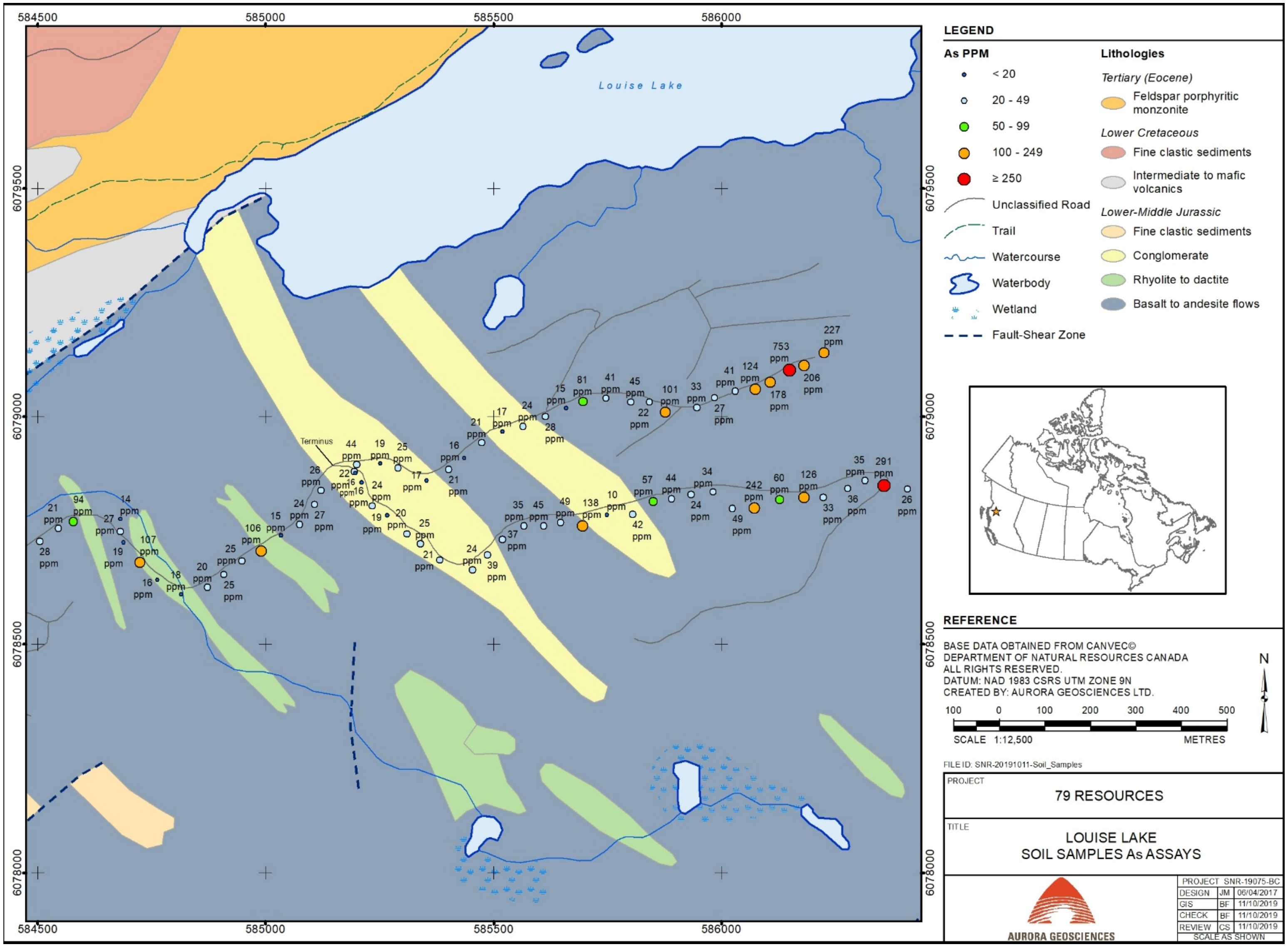

Figure 23: As values, soil sampling, southeastern are

9.2 Phase 2 Magnetometer Survey

The 2019 Phase 2 program comprised ground magnetometer surveying covering 52.7 line km, including 3.45 line km of north-south tie lines. The survey utilized UTM datum NAD83, Zone 9N. The survey was conducted on a virtual GPS grid, with a 50m line spacing, and continuous magnetic data sampling at a rate of one reading/second. Figure 24 shows the proposed layout; the actual coverage utilized 24 survey lines, from L6600N in the south to L7750N in the north. Coverage extended across the entire proposed east-west lines, except for the extreme southeast corner due to difficult terrain.

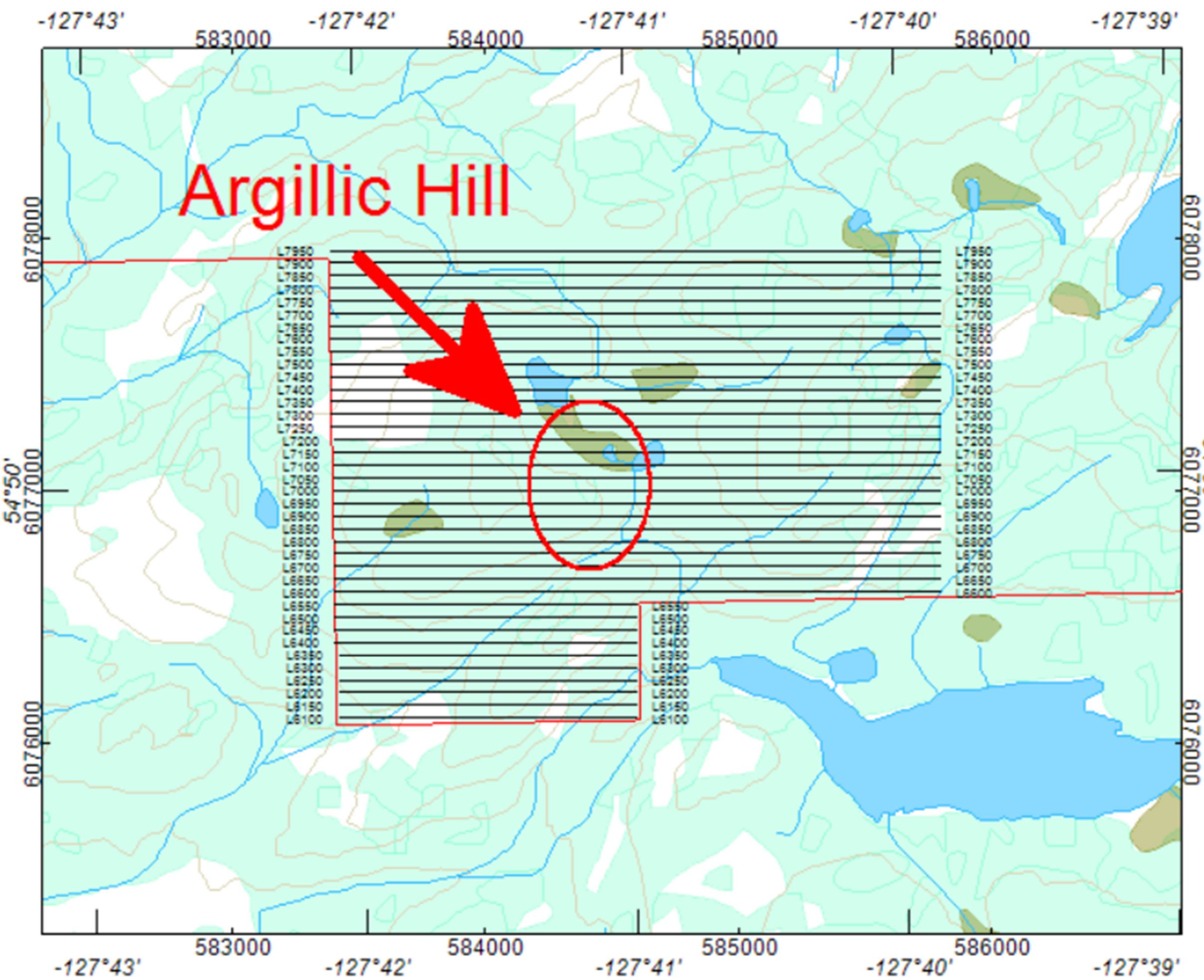

Figure 24: Grid layout, Argillic Hill area magnetometer survey

Four plots were generated from the survey: one showing "Total Magnetic Intensity" (TMI) (Figure 25); one showing the TMI data "Reduced to Pole", which refers to the North Magnetic Pole (Figure 26); one showing TMI as "Upward Continued, 10m", showing interpreted magnetic readings at an elevation of 10m above topography (Figure 27); and a First Vertical Derivative plot, showing rates of change of readings with units of nT/m (Figure 28).

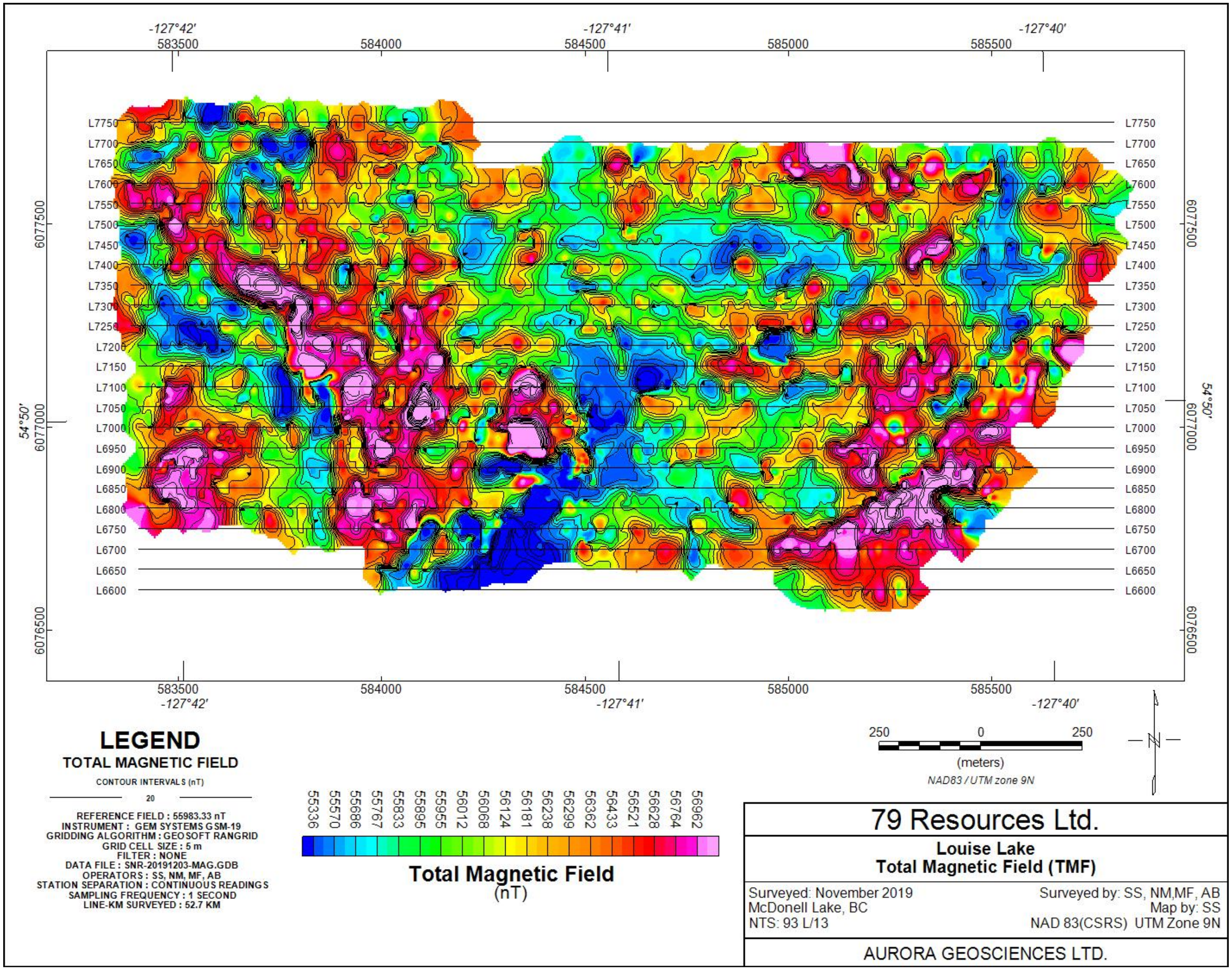

Figure 25: Total Magnetic Intensity (TMI), Argillic Hill area magnetometer survey

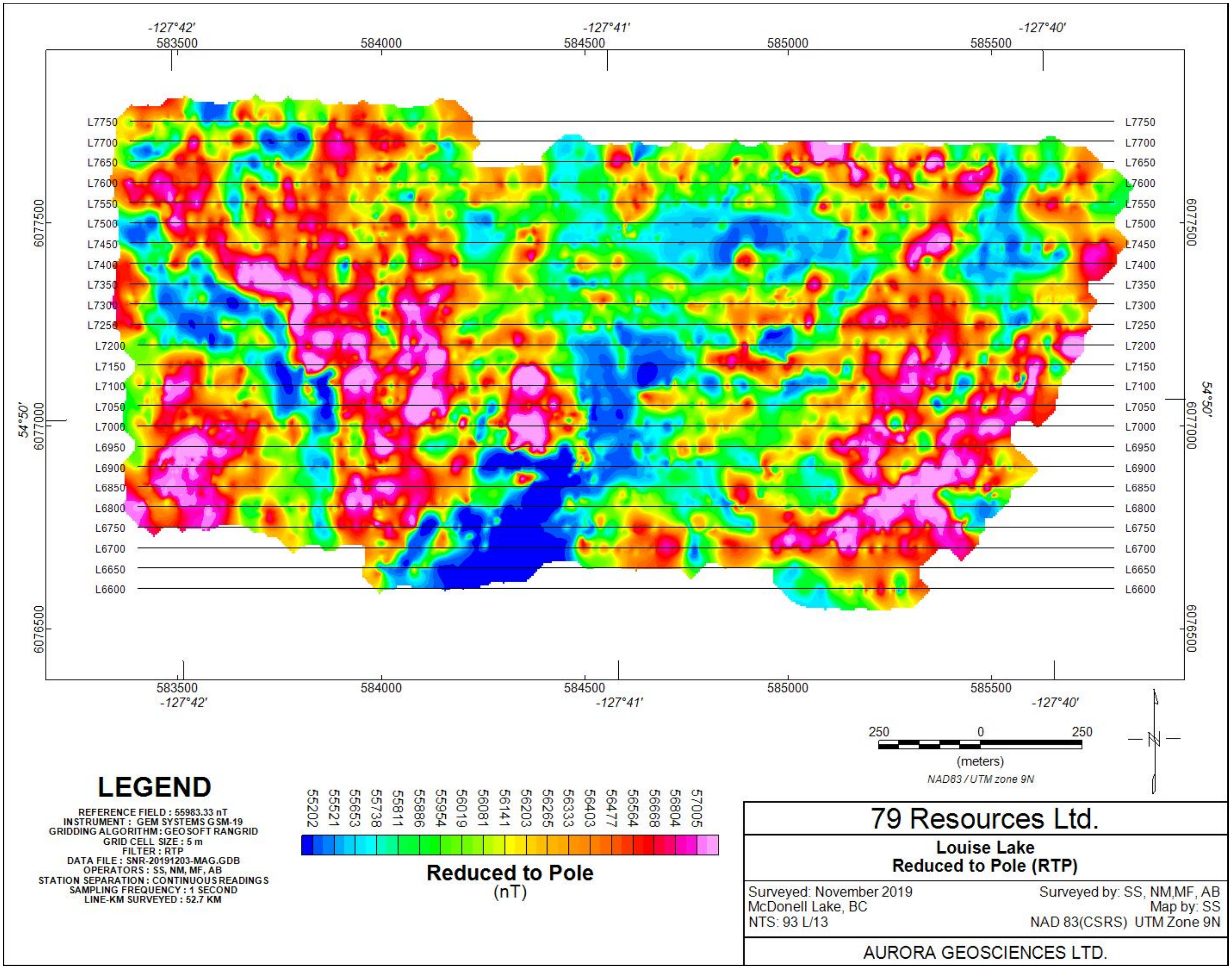

Figure 26: TMI, "Reduced to Pole" plot, Argillic Hill area magnetometer survey

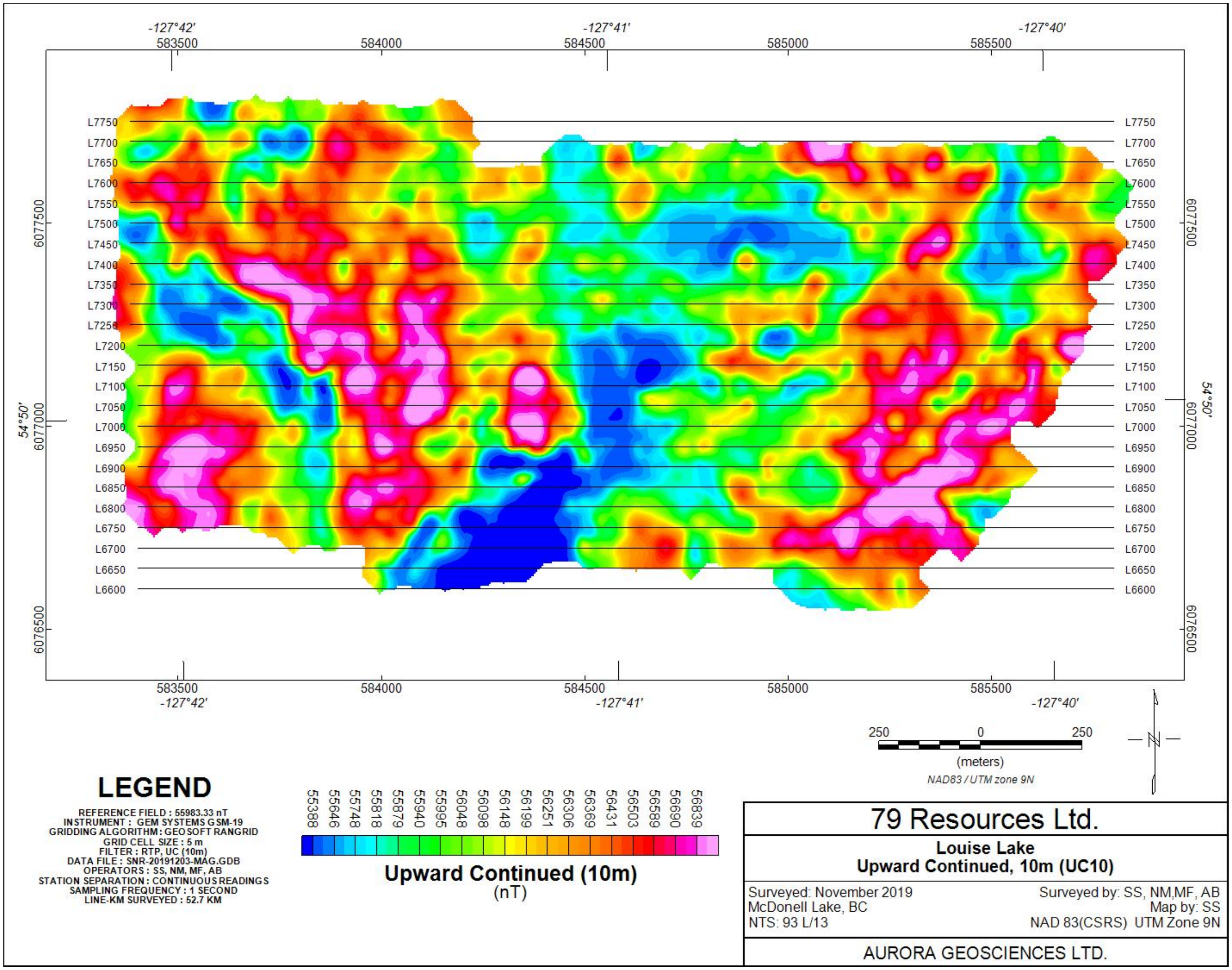

Figure 27: TMI, "Upward Continued (10m) image, Argillic Hill area magnetometer survey

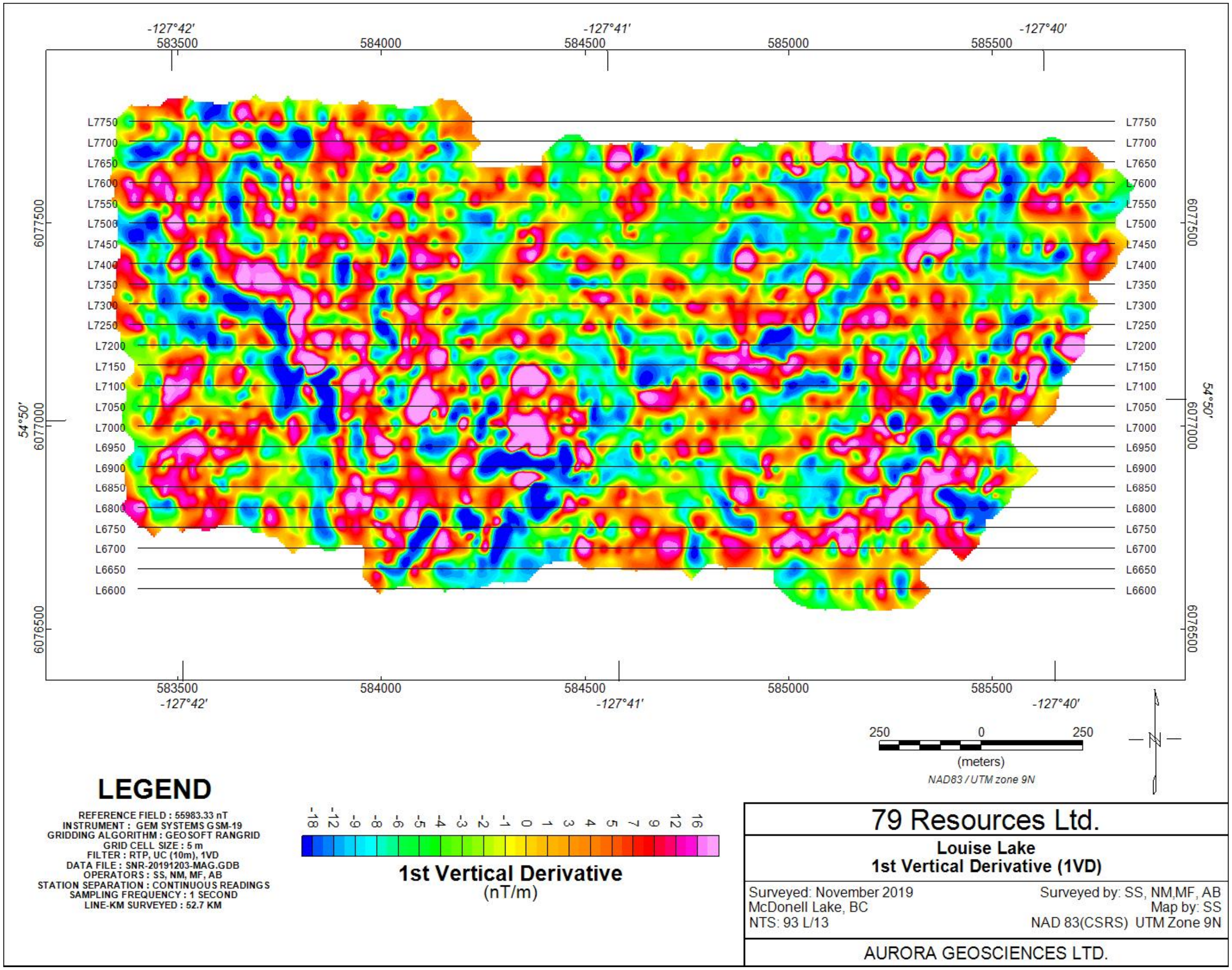

Figure 28: First Vertical Derivative, Argillic Hill area magnetometer survey

The “Reduced to Pole” plot is utilized to remove the skewness of anomalies of the TMI data. The “Upward Continued, 10m” is a low pass filter which smooths out local data spikes produced by surface features of insignificant size. Both provide a more representative image of the magnetic response of the Argillic Hill area.

All variations of the TMI plot show a marked NE – SW trending magnetic low feature in the central surveyed area (Figure 29). Overlaying this plot onto Google Earth imagery revealed much of the low signature corresponds to small lakes, ponds or wetlands. However, the signature roughly parallels NE – SW trending magnetic high signatures corresponding to topographic highs in the eastern survey area. This indicates the trends represent stratigraphic orientation, in turn marked by variances in topography resulting from differential weathering. The central magnetic low feature may be a significant structural corridor. A narrow NE-SW trending linear magnetic low feature correlates with a topographic lineament in the eastern survey area. Drainages roughly parallel the orientation of the magnetic linears.

The western surveyed area revealed a pronounced broad arcuate feature, marked by a magnetic low signature flanked by a high signature to the northeast. Again, the low signature is marked by wetlands, but extends into well drained areas to the northwest, suggesting a stratigraphic correlation as well. The arcuate features also occur in the extreme north-central survey area.

A well-defined ovoid magnetic high feature is roughly coincident with an area of argillic (clay) alteration and pyritization called “Argillic Hill”, identified during the 2008 field season. A 2008 reconnaissance soil geochemical traverse returned elevated gold values from 0.014 g/t Au to 0.020 g/t Au. This is indicative of a pyritic halo zone which typically surrounds copper-gold porphyry systems. The Main Zone is surrounded by a pyrite halo and weakly clay-altered volcanic and sedimentary rocks.

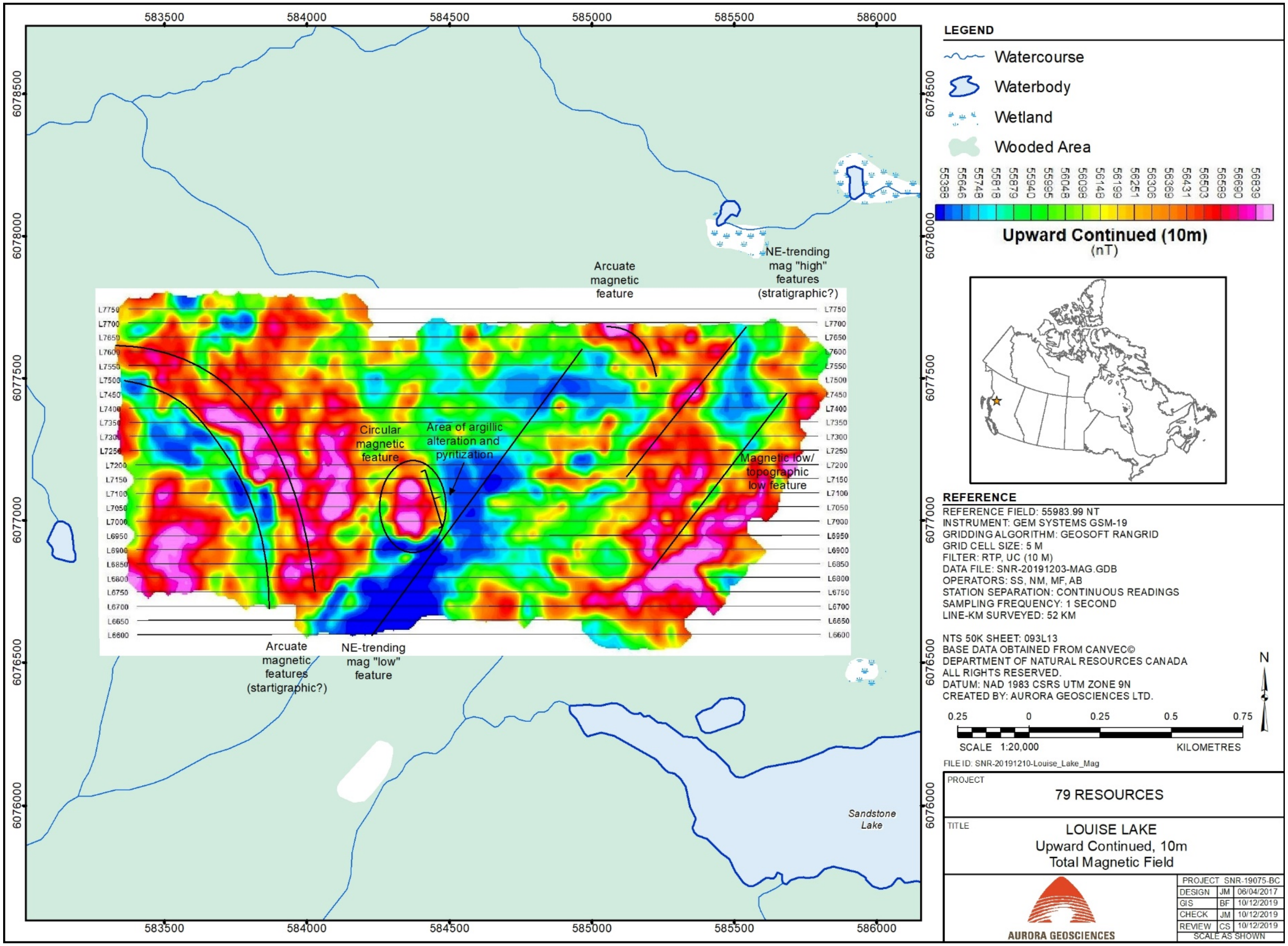

Figure 29: Interpretation of TMI data (Upward Continued, 10m), Argillic Hill area

10 DRILLING

79 Resources Ltd. has not conducted any drilling on the Louise Lake Property.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 Sampling Method and Approach

The author was unable to access any information on Quality Assurance/ Quality Control (QA/QC) practices for geochemical sampling by past workers, prior to acquisition by Firestone Ventures Inc. in 2004. This author is unable to confirm that sampling procedures underwent QA/QC controls to industry best practices at the time.

QA/QC practices for diamond drilling, between 2004 through 2006, are described in the 2006 report by Schulze, which comprises the resource estimate performed by SRK Consulting (Canada) Inc., for North American Gem, Inc. This report is titled: "Independent Technical Report and Resource Estimate for the Louise Lake Property, Omineca Mining Division, British Columbia". QC practices for the 2006 through 2008 programs are also described in the 2008 report by C. Schulze titled: "NI 43-101-Compliant Report on the Year-2006 through 2008 Diamond Drilling Program, Including: Summary of 2008 Surface Programs, Summaries of 2006 Resource Estimate and Metallurgical Studies on the Louise Lake Property, North American Gem". This author was responsible for the QA/QC practices employed during the 2006, 2007 and 2008 drilling programs. The author was also responsible for the QA and QC standards employed during the 2008 field program.

11.1.1 2019 Rock Sampling

All rock geochemical sampling was subject to rigorous parameters, including detailed descriptions of each sample. Rock samples were obtained using a "Geotool" rock hammer and documented in the field using a non-differential Global Positioning System (GPS) instrument. Samples were placed in plastic "poly" bags, either 8" x 12" or 13" by 20" in size which were designed specifically for rock sampling. A tag with the unique sample number, supplied by Bureau Veritas Labs, was placed in the bag; the sample number was written on both sides of the bag using "Magic Markers". The sample was then sealed with a "Zap Strap" (cable tie). The sample numbers were also written in pen on soft metal "butter tags" and the tags were attached to the sample locations. Two photographs were taken at each sample site: a close-up of the actual sample, and another of the sample site.

Rock samples were documented by location (UTM - NAD 83), sample type (grab, composite grab, chip, etc.), exposure type (outcrop, rubblecrop, float, etc.), formation, lithology, modifier (for textural or structural descriptions), colour, degrees of carbonate presence and of silicification, argillic, phyllic, propylitic and any other applicable alteration assemblages, types and amounts of sulphide and any other potentially economic mineralization, date, sampler and comments. Minimum sample weight was 0.50 kg, although most samples exceeded 1.0 kg. Field data was entered into Microsoft Excel spreadsheet format, and later matched with analytical results. This process was continually re-checked to ensure correct results are associated with sample numbers and the appropriate descriptions.

“Standard” samples, always immediately followed by “blank” samples, were inserted into the sample stream, at a rate of approximately one every 20 samples, to ensure one of each are included in each sample batch. No duplicate samples of field samples were taken.

Rock samples were placed in rice bags, with the sample number sequence written on the outside of each bag, and sealed with a Zap Strap. The samples were stored in a hotel room occupied by the project manager who then delivered the samples by truck to the Whitehorse prep lab of Bureau Veritas Minerals, Inc. The prep lab has ISO/IEC 17025 and ISO 9001 certification (Bureau Veritas, 2019). The chain of custody was entirely under the control of Aurora personnel.

11.1.2 2019 Soil Sampling

Soil samples were documented by location (UTM – NAD 83), sample depth, sample horizon, depth within horizon, colour, composition (% organics, % angular fragments, % gravel, % sand, % silt and % clay, total = 100), parent material, moisture content, vegetative cover, topographic position (slope angle), date and sampler. Samples were preferably comprised C-horizon material, although sampling of B/C-horizon or B-horizon soil was done where C-horizon material was unavailable. This was preferable to omitting the sample. The minimum original sample weight was 0.25 kg, although most exceeded 0.5 kg. Samples were placed in hard paper Kraft bags, with a unique sample number tag supplied by Bureau Veritas placed into the bag, and the sample number written in “Magic Marker” on both sides of the bag. The bags were then dried, as much as possible, before shipping. Field data was entered into Microsoft Excel spreadsheet format, and later matched with analytical results. This process was continually re-checked to ensure results are associated with the correct sample number and appropriate description.

“Standard” samples, always immediately followed by “blank” samples, were inserted into the sample stream at a rate of approximately one every 20 samples to ensure one of each are included in each sample batch. No duplicate samples samples were taken.

Soil samples were placed in rice bags, with the sample numbers written on the outside of each bag, and sealed with a “Zap Strap”. The samples were stored in a hotel room occupied by the project manager who then delivered the samples by truck to the Whitehorse prep lab of Bureau Veritas Minerals, Inc. The chain of custody was entirely under the control of Aurora personnel.

11.2 Analytical Methods, 2019 Field Program

The author was unable to access any information on sample preparation, analysis and security by past workers, prior to acquisition by Firestone Ventures Inc. in 2004. This author is unable to confirm that sampling procedures underwent QA/QC controls to industry best practices at the time.

Sample preparation, analysis and security practices of diamond drill core, between 2004 through 2006, are described in the 2006 report by Schulze, which comprises the resource estimate performed by SRK Consulting (Canada) Inc., for North American Gem, Inc. This report is titled: “Independent Technical Report and Resource Estimate for the Louise Lake Property, Omineca Mining Division, British Columbia”. Sample preparation, analysis and security practices for the 2006 through 2008 programs are also described in the 2008 report by C. Schulze titled: “NI 43-101-Compliant Report on the Year-2006 through 2008 Diamond Drilling Program, Including: Summary of 2008 Surface Programs, Summaries of 2006 Resource Estimate and Metallurgical Studies on the Louise Lake Property, North American Gem”. This author was responsible for the QA/QC practices employed during the 2006, 2007 and 2008 drilling programs. The author was also responsible for the QA and QC standards employed during the 2008 field program.

11.2.1 Rock Sampling

At the Bureau Veritas Whitehorse prep lab, all samples underwent crushing to ensure that 90% of the sample can pass through a 2 mm screen. The sample was then split and pulverized to achieve a 250-gram pulp capable of passing through a 200-mesh screen (prep code PRP90-250). All samples were then sent to the Vancouver, British Columbia analytical laboratory of Bureau Veritas, where they underwent analysis for Au, Pt and Pd by 50-gram lead collection fire assay with an "Inductively Coupled Plasma" (ICP) finish (analysis code FA350). Also, a 0.5-gram pulp was sent to the Vancouver, British Columbia, Canada lab for 1:1:1 digestion "Inductively Coupled Plasma Emission Spectrometer" (ICP-ES) analysis (prep code AQ300) for Ag, Al, As, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, Hg, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, Th, Ti, Tl, U, V, W, and Zn.

Analytical results were continually checked to ensure the sample numbers in the results match those in the descriptions.

Bureau Veritas Commodities is an analytical laboratory with ISO 14001 environmental certification and ISO 45001 certification for safety. Bureau Veritas is independent of 79 Resources Ltd, Aurora Geosciences Ltd. and the author.

11.2.2 Soil Sampling

At the Whitehorse Bureau Veritas prep facility, all soils underwent drying to 60°C (prep code DY060), then sieved to -180-micron (80 mesh) size (prep code SS80). All samples were then sent to the Vancouver, British Columbia analytical lab, where they underwent analysis for Au, Pt and Pd by 30-gram fire assay fusion by "Inductively Coupled Plasma Emission Spectrometer" (ICP-ES) analysis (prep code FA330). Also, a 0.5-gram pulp was sent to the Vancouver, British Columbia, Canada lab for 1:1:1 digestion ICP-ES analysis (prep code AQ300) for Ag, Al, As, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, Hg, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, Th, Ti, Tl, U, V, W, and Zn.

Analytical results were continually checked to ensure the sample numbers in the results match those in the descriptions.

Bureau Veritas Commodities is an analytical laboratory with ISO 14001 environmental certification and ISO 45001 certification for safety. Bureau Veritas is independent of 79 Resources Ltd, Aurora Geosciences Ltd. and the author.

11.3 2019 Quality Assurance and Quality Control

Aurora Geosciences incorporated two types of "reference material", comprising one type of "Standard" sample of known composition of select elements, and one "blank sample", into the rock and soil sample streams. Both types of reference material were supplied by Canadian Resource Laboratories of Langley, British Columbia. Table 6 shows the types of reference material inserted. A total of 2 standard and 2 blank samples were inserted into the rock sample stream, and 3 standard and 3 blank samples were inserted into the soil standard stream.

Table 7: Types of reference material utilized in 2019

QAQC Type	Identifier
Standard	CDN-CM-37
Blank	CDN-BL-10

Standard sample CDN-CM-37 utilized known "recommended values" and ranges for two "Standard Deviations" (2SD) for Au, Ag, Cu and Mo. Table 7 lists the 2SD ranges of applicable elements for CDN-CM-37. "Provisional values" are shown where the "relative standard deviation" ranges from 5% to 15%.

Table 8: Recommended values, Reference Material CDN-CM-37 (CDN Resource Laboratories Ltd.)

Element	Recommended Value	"Between lab" 2SD	RSD	Analytical technique
Gold	0.171 g/t	0.024 g/t	Provisional Value	30g FA/ICP or AA
Silver	1.17 g/t	0.12 g/t	Certified Value	Aqua Regia/ ICP or AA
Copper	0.214%	0.012%	Certified Value	Aqua Regia/ ICP or AA
Molybdenum	0.026%	0.003%	Provisional Value	Aqua Regia/ ICP or AA

Certified values for Au, Pt and Pd provided for "blank" samples were all less than 0.010 g/t (<10 ppb).

11.3.1 Rock Sampling Quality Control

Table 8 lists the actual values returned from analysis of reference material CDN-CM-37 within the rock sample stream for the elements having "recommended values".

Table 9: Values returned from analysis of Reference Sample CDN-CM-37

Sample ID	Au (g/t)	Ag (g/t)	Cu (%)	Mo (%)	Comments
R1893527	0.173	1.3	0.2184	0.0269	Ag value inconclusive due to rounding
R1893536	0.167	1.3	0.217	0.0263	Ag value inconclusive due to rounding

All values for Au, Cu and Mo fell within the 2SD range. Values for Ag are inconclusive due to rounding of the actual values received. Results from the 2019 rock sampling for Au, Cu and Mo can be considered to represent true values, and values for Ag can be considered as marginally representative.

The certificate for the "blank" reference material returned values of <0.01 g/t Au, <0.01 g/t Pt and <0.01 g/t Pd. Table 9 lists actual "blank" sample values for Au, Pt and Pd. All were at background to sub-detection levels, indicating a lack of contamination.

Table 10: Values returned from analysis of Reference Sample CDN-BL-10

Sample ID	Au (ppb)	Pt (ppb)	Pd (ppb)
R1893528	5	<3	<2
R1893537	3	<3	<2

11.3.2 Soil Sampling Quality Control

Table 10 lists the lists the actual values returned from analysis of reference material CDN-CM-37 inserted into the soil sample stream for analysis of Cu, Mo, Au and Ag.

Table 11: Values returned from analysis of Reference Sample CDN-CM-37

Sample ID	Au (g/t)	Ag (g/t)	Cu (%)	Mo (%)	Comments
R1893575	0.167	1.2	0.2194	0.0277	
R1893599	0.179	1.2	0.2055	0.0254	
R1893621	0.185	1.3	0.2157	0.0264	Ag value inconclusive due to rounding

All Cu, Au and Mo values fell within the 2SD range per element. One Ag value returned an inconclusive value, due to rounding.

Table 11 lists actual "blank" sample values for Au, Pt and Pd. All were at background to sub-detection levels, indicating a lack of contamination.

Table 12: Values returned from analysis of Reference Sample CDN-BL-10

Sample ID	Au (ppb)	Pt (ppb)	Pd (ppb)
1893576	3	<3	<2
1893600	4	<3	<2
1893622	3	<3	<2

11.4 Statement of Opinion

11.4.1 Statement on Quality Assurance (QA)

The rock sampling methodology is adequate for the conditions encountered, comprising grab and composite grab sampling mainly of rubblecrop and proximal float, with some outcrop sampling. Grab sampling tends to return the least representative results, and commonly shows a bias towards "high grading" of the mineralized portions. However, grab sampling is locally the only option for some proximal float samples at Louise Lake, due to lack of outcrop or rubblecrop. Composite grab sampling, typically providing more representative metal values, involved collection of several pieces of similar material where rubblecrop or felsenmeer was encountered. Where feasible, composite grab sampling was done, rather than grab sampling. Chip sampling, involving an even amount of sampling across a known width, is recommended where mineralization occurs in situ.

The routine and repetitive methodology of soil sampling in 2019 should eliminate any chance of bias. The methodology of obtaining C-horizon or B/C horizon soil leads to analytical results most likely to represent that of underlying bedrock. Outcrop or rubblecrop occurs near many of the 2019 roadside soil samples, indicating values obtained are likely representative of underlying bedrock. In some areas, no outcrop or rubblecrop were visible, indicating increased depth of overburden and potential for transported metal ions in soil. Variability in results of soil sampling may also be influenced by slope angle, vegetative cover, moisture content and horizon sampled, with more subdued results expected in flat areas with thick overburden. Soil anomalies may be transported, depending on slope and groundwater conditions; detailed records of slope, vegetation, soil conditions and surficial geology are utilized to determine probability of transportation.

11.4.2 Statement on Quality Control (QC)

Although the rock and soil geochemical programs were of limited extent, 79 Resources and Aurora employed a high degree of quality control during the 2019 program. The “standard” reference material, with certified or provisional Au, Cu, Mo and Ag values, was specifically chosen to represent low-grade porphyry-style Main Zone mineralization. Blank samples were also of certified reference material with known Au, Pt and Pd values of <10 ppb. The QC sample insertion rate into the rock sample stream was 12.5%, and the insertion rate into the soil sample stream was 7.8%, sufficient to ensure one of each was emplaced into each sample “batch”. No duplicate samples were taken during the program.

All Cu, Mo and Au values from “standard” reference material CDN-CM-37 fell within the 2SD ranges per element, indicating results returned from sampling are representative of true values. Several of the Ag values returned fell outside of the 2SD range; however, this may be attributable to rounding errors rather than inaccurate analytical results. Values for Ag indicated in the CDN Resource Labs certification documents were provided to two decimal points of precision, whereas those from Bureau Veritas were provided with only one decimal point of precision, rendering results somewhat inconclusive. No Ag values clearly outside of the 2SD range were returned.

“Blank” reference material analysis did not reveal the presence of contamination. Although actual contamination is unlikely, the low Au values returned from the actual samples could render results inconclusive, as no Au was available for contamination. However, Bureau Veritas also includes in-house QC verification through insertion of its own standard and blank reference material. Although the standard samples employed had “recommended values” of 0.519 g/t and 0.994 g/t Au respectively, both in-house blank samples with known Au values returned 0.003 g/t (3 ppm) Au, indicating the process was free of contamination.

12 DATA VERIFICATION

The comparison of 2019 surface sample results from the core deposit area with diamond drilling results from 2004 – 2008 involves two separate media from separate locations, and is thus an inexact study. However, Au, Cu, Mo and Ag values from 2019 sampling were sufficiently anomalous to confirm the presence of these elements, and to support results from previous operators.

Results of Cu, Mo, Au and Ag from 2019 rock sampling of the core area are shown in Table 12 below.

Table 13: Cu, Mo, Au and Ag values returned from 2019 surface rock sampling, core deposit area

Sample ID	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)
R1893501	0.1148	0.0089	0.187	0.5
R1893502	0.0566	0.00088	0.152	0.3
R1893503	0.0616	0.0183	0.298	0.6
R1893504	0.1613	0.0261	0.167	0.4
R1893505	0.0135	0.0888	0.101	<0.3
R1893507	0.0918	0.0239	512	1.1

The Mo results reflect a higher concentration in eastern areas, due to increased quartz-pyrite-molybdenite, also reflected in drilling and deposit modelling results.

Table 13 lists the mineral resource estimation for the Main Zone deposit as determined by SRK (Canada) Ltd. (Lee and Marek, 2006).

Table 14: 2006 SRK Classified Mineral Resource for the Louise Lake Deposit [t]

Mineral Resources*	Tonnes	CuEq** (%)	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)
Indicated	6,000,000	0.369	0.214	0.006	0.20	0.98
Inferred	141,000,000	0.426	0.234	0.009	0.23	0.94

* All resources quoted at 0.25% CuEq cut-off

** CuEq calculated using the following metal prices: Cu US$1.20/lb Mo US$8.00/lb, Au US$450/oz, Ag US$7.00/oz

[t] Taken from Table 14 of the 2006 Technical Report by SRK Consulting (Canada) Inc.

Data verification from sampling southeast of Louise Lake is difficult to ascertain. No significant Cu, Mo, Au or Ag results were returned from rock sampling during either of the 2006 and 2019 programs. The only correlation possible is that of 2019 Sample #R1893525, which returned slightly elevated values of 6 ppm Mo and 59 ppm Cu. This was taken close to a 2008 soil sample returning 28 ppb (0.028 g/t) Au and 2 ppm Mo, with slightly elevated Mo soil geochemical values nearby. This indicates a weakly mineralized zone may occur.

No limitations on, or failures to conduct, data verification within the scope of the 2019 program have occurred. It is this author's opinion that the data obtained in 2019, combined with that provided by Firestone Ventures in 2004 and by North American Gem from 2005 - 2008 are adequate for the purposes of this report.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

No mineral processing or metallurgical testing was done since acquisition of the property by 79 Resources. Mineral processing and metallurgical testing done in 2006 is described in Section 6.2.

14 MINERAL RESOURCE ESTIMATES

No mineral resource estimates have been done by 79 Resources Ltd. The 2006 resource estimate is described in Section 6.3 of "History".

15 MINERAL RESERVE ESTIMATES

There are no reserve estimates for the Louise Lake deposit.

16 MINING METHODS

No study on proposed mining methods has been undertaken on the Louise Lake deposit.

17 RECOVERY METHODS

Other than the 2006 metallurgical study by G & T Metallurgical Services Ltd., "79" has not completed any assessment of the recovery methods to optimize mineral processing on the Main Zone deposit.

18 PROJECT INFRASTRUCTURE

At present, infrastructure is limited to a local system of drill roads across the deposit area. Access from 2004 – 2008 was provided by a branch logging road extending from the present unmaintained but still driveable 4x4 logging road along the south side of Coal Creek. By 2015 the branch road had become barricaded and is no longer accessible. No other forms of surface access exist.

The area of gentle relief near the Louise Lake deposit is large enough to contain open pit mining, milling, accommodations, other ancillary infrastructure, and tailings facilities. Several ponds and small lakes would have to be drained, although the Louise Lake waterbody and Coal Creek are likely to remain unaffected. Any dams required for tailings impoundment would likely be of limited height. The existing road infrastructure could be upgraded to accommodate highway-legal concentrate trucks and other large service vehicles.

The Town of Smithers (town pop. 5,351, local rural pop. 5,256, 2016 census, Wikipedia) is located along the main Canadian National Railway line extending west to tidewater at Prince Rupert, British Columbia. Electric power could be supplied by a spur from the existing major power line which lies 28 km south of the deposit area. No pipelines would be necessary for a project of this size.

19 MARKET STUDIES AND CONTRACTS

"79" has not completed any market studies for potential sale of ore from the Louise Lake deposit.

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

No permit applications, environmental studies, or discussions on mine closure plans, have been done to date. All drilling programs from 2004 through 2008 were permitted under the Ministry of Energy, Mines and Petroleum Resources, Government of British Columbia.

The Louise Lake property occurs within an overlap area of the Gitxsan and Kitselas First Nations bands. No discussions on potential social or community-related requirements, have been submitted or conducted by 79 Resources Ltd., due to the very preliminary level of the 2019 exploration program.

21 CAPITAL AND OPERATING COSTS

No estimate on capital and operating costs have been done by 79 Resources Ltd. on the property.

22 ECONOMIC ANALYSIS

No economic analysis has been done by 79 Resources Ltd.

23 ADJACENT PROPERTIES

The Louise Lake property optioned by 79 Resources surrounds one 2-unit claim, Claim #1064060, held by. B. Kreft, of Whitehorse, Yukon (Figure 2). This claim covers part of the northern, down-dip extension of the deposit, including a portion of the 2006 resource estimation calculated in compliance with regulations under NI 43-101. The amount of the resource base is undetermined; however, it is a significant portion.

No other claims are located directly adjacent to the deposit.

24 OTHER RELEVANT DATA AND INFORMATION

To the best of this author’s knowledge, there are no other data or information to support the filing of this Technical Report.

25 INTERPRETATION AND CONCLUSIONS

25.1 INTERPRETATIONS

25.1.1 *Louise Lake Deposit area*

By the end of the 2006 diamond drilling program, North American Gem Inc. (NAG) had completed sufficient drilling on the Main Zone of the Louise Lake deposit to determine a maiden resource estimate. The 2006 estimate, prepared by SRK Consulting (Canada) Inc. (SRK) comprised an Indicated Resource of 6 M tonnes with a CuEq grade of 0.369%, and an Inferred Resource of 141 M tonnes grading 0.426% CuEq.

SRK determined that the Main Zone occurs as a roughly wedge-shaped deposit, with a shallow westerly plunge, a plan view of about 1,000 m by 500 m and extending to a depth of about 300m. Although lateral dimensions remained undetermined, the base of the deposit was found to be sharply constrained by the basal “Terminator” thrust fault.

A follow-up 2006 metallurgical study on the Main Zone was completed by G & T Metallurgical Services. A 164-kg bulk sample of “quartered” drill core from three 2006 holes representing a variety of lithologies and metal grades was submitted, and found to have a “head grade” of 0.28% Cu, 0.3 g/t Au and 0.007% Mo. The resulting concentrate had a grade of 28.9% Cu at a recovery rate of 85%. The final concentrate included 18.7 g/t Au, 364 g/t Ag and 0.650% Mo. Au recoveries stand at 57%, Ag at 44% and Mo at 80%. The final concentrate has a “mass percent” of 0.8% of the original flotation feed. However, the concentrate also contained 11.7% As, originating from enargite, a copper-arsenic sulphide. The enargite is a major mineralogical constituent, which will incur significant smelter penalties and require specialized extraction techniques to ensure environmental integrity. Several alternative extraction techniques were identified in 2006, although no further investigation of these was completed. Concentrations of Sb, Bi, Cd, Hg and Se, which also occur in the concentrate, were considered to be minor.

By 2007, the dimensions of the Main Zone of the Louise Lake deposit had been largely delineated. That year, low-grade mineralization was intersected below the Terminator in the western deposit area, suggesting the “fixed” underlying portion of the deposit occurs to the west.

As of Oct 11, 2019, metal prices were US$2.61 for Cu, US$27.27 for Mo, US$1,486 for Au and US$17.50 for Ag, at an exchange rate of CAD$: US$ of 1.3185:1 or CAD$1.00 = US$0.758. These indicate a significant improvement in project economics compared with 2008, although inflation needs to be factored in. Long-term price forecasts, rather than daily spot prices, are required to update project economics.

The 2008 diamond drilling program attempted to find the basal “fixed” portion of the deposit beneath the Terminator fault. Several holes targeting sub-Terminator mineralization west of the Main Zone deposit were successful in identifying the basal portion. Four holes returned mineralized intercepts commencing just below the Terminator fault. All mineralized zones were truncated by another basal flat-lying fault, referred to as the “Sub-Terminator”. The “Sub-Terminator” fault has the same fabric as the Terminator, and thus is of the same tectonic event. The most western drill hole intersected low grade mineralization below the Sub-Terminator, indicating a third underlying “slab”, or horizontal fault-bounded mineralized unit.

The “original” deposit has been sliced into a series of horizontal slabs that have been progressively displaced to the east-southeast with elevation. The lowest, or “fixed” portion, occurs some distance to the north-northwest of the Main Zone; each overlying slab represents an increased displacement to the east-southeast. Displacement distances are unknown, but likely in the 400 m to 600 m range. The original deposit was considerably larger than the Main Zone, the latter hosted by the easternmost block that extends to surface. However, the sub-Terminator mineralization is at considerable depth, requiring removal of large amounts of overburden prior to extraction.

The 2019 program included a due-diligence visit to the Main Zone deposit. Rock sampling returned somewhat lower Cu, Mo, Ag and Au values than the historical deposit average. However, these were sufficiently anomalous to confirm sampling results by previous workers and the presence of the Main Zone.

25.1.2 *Interpretations, other property areas*

A sizable surface exploration program was conducted in the summer of 2008, to explore for other core areas of porphyry-style mineralization, and outlying Pb-Zn-Ag veining, auriferous "Bonanza veining" and epithermal veining. Sampling across several soil geochemical grids was completed, returning sporadic high Au values but revealing no significant aerially extensive auriferous zones. Reconnaissance-style soil sampling, stream silt and rock sampling, and geological mapping were completed across the property. Although no major discoveries were made, the program identified an area of silica and carbonate stockworking within mafic volcanics east of Bud Lake, and an area of argillic alteration at "Argillic Hill" northwest of Sandstone Lake.

In July 2019, 79 Resources Ltd. ("79") entered into an option agreement to acquire the Louise Lake property. In early August 2019, "79" added the "Louise Extension" claim covering 1,527.2 Ha and increasing the property size more than five-fold. The August 2019 field program comprised geological mapping and rock sampling southeast of Louise Lake, and systematic soil sampling along disused logging roads in the south-central area. The area of stockwork emplacement east of Bud Lake was visited, although Argillic Hill was not.

Geological mapping determined the area to be underlain by a broad package of mafic flow and pyroclastic volcanic rocks, intercalated with smaller units of porphyritic rhyolite to dacite, and of conglomerate near the terminus of the driveable 4x4 road. Prospecting and mapping also identified an aerially extensive area of moderate to strong pyrite emplacement associated with weak silicification and strong limonitization. Rock and soil sampling failed to identify elevated Au values, or significant zones of Cu, Mo or Ag mineralization. Sampling of conglomerate near the "terminus" of the driveable logging road returned elevated Mo values and anomalous As values, indicating a weakly mineralized zone may extend to the south-southeast. This pyritic zone likely represents weak mineralization outbound from the deposit, and lacks economic viability. The weakly mineralized conglomerate horizons may have a somewhat more reactive original geochemistry, allowing for transport and emplacement of fluids from the core deposit area.

To date, no significant mineralized zones or geochemically important anomalous values have been identified outside of the core Main Zone area and its west-northwest extension.

25.1.3 Interpretations, Magnetometer Survey

Processing of data from the November, 2019, magnetometer survey revealed a dominant NE-SW trend of magnetic features in the eastern surveyed area, likely representing stratigraphic orientation. A narrow linear magnetic "low" feature is apparent, marked by a shallow topographic lineament. This may represent a fault zone within a broad assemblage of magnetite-enriched mafic volcanics. The western survey area shows an arcuate magnetic low flanked by magnetic high features to the northeast. This may represent folded stratigraphy, with a NE-trending fold axis.

In the central area, a broad NE-SW trending magnetic low feature may represent a significant structural lineament, whereby "ground preparation" resulted in preferential erosion resulting in a topographic depression marked by abundant wetlands. This feature may separate the lithologic package underlying the eastern half, which is concordant with property-scale stratigraphy, from accreted, folded stratigraphy underlying the western area.

An ovoid circular magnetic “high” feature in the “Argillic Hill” area, directly west of the interpreted central lineament, is roughly coincident with an area of argillic alteration and pyritization observed during the summer 2008 field program. A reconnaissance style soil geochemical traverse returned elevated Au values and weakly elevated Ag values overlying the magnetic feature, although background values were returned of Cu, Mo, Pb and Zn. These features and geochemical values indicate that the “Argillic Hill” area may represent a pyrite halo overlying a second porphyry centre.

A magnetic high signature typically represents elevated levels of magnetite and/or pyrrhotite. Although pyrrhotite concentrations are typically negligible in porphyry systems, magnetite enrichment may occur in the inner halos of alteration systems surrounding mineralized cores (Rockstone Research, 2011). Sun et al (2012) state that hematite -magnetite intergrowths commonly occur in porphyry copper deposits, suggesting high and fluctuating oxygen fugacity (fO_2) (Sun et al, 2012). A moderate magnetite content would be sufficient to produce an ovoid magnetic “high” signature. The location of this feature adjacent to the interpreted NE-SW lineament indicates emplacement may have occurred along a significant fault zone.

25.2 Conclusions

- The Main Zone of the Louise Lake deposit is a tabular body striking at 260° and dipping from 30° to 40° to the north. The zone comprises disseminated and vein-associated grains of chalcopyrite and enargite with lesser late molybdenite-bearing quartz veining, occurring within a series of tabular units of feldspar porphyritic monzonite. These are separated by conglomerate and lesser finer-grained sedimentary units in central areas, and andesite fragmental units in northern and western areas. The deposit model is of an upper-level portion of a Cu-Mo-Au-Ag porphyry deposit.

- By 2006, the Main Zone was known to have dimensions in plan view of about 1000 m by 500 mm, extending to the horizontal “Terminator” fault at a depth of almost 300 m. The 2006 Technical Report by SRK Consulting indicated the zone remained open to the west, north and south below a depth of about 150 metres. However, drilling in 2007 determined western and eastern limits of the deposit and firmed up northern and southern boundaries, effectively constraining the deposit above the flat-lying “Terminator” fault.

- Mineralization does not appear to show any lithological preference, with fairly similar grades reported from feldspar porphyritic monzonite, heterolithic conglomerate and more finely grained clastic sediments, and andesitic to dacitic tuffs. However, improved correlation of geological data is recommended.

- The following table states resources identified through the 2006 SRK resource estimate:

Table 15: SRK Classified Mineral Resources for the Main Zone Deposit [t] (Lee and Nowak, SRK, 2006)

Mineral Resource*	Tonnes	CuEq**(%)	Cu (%)	Mo (%)	Au (g/t)	Ag (g/t)
Indicated	6,000,000	0.369	0.214	0.006	0.20	0.98
Inferred	141,000,000	0.426	0.234	0.009	0.23	0.94

* All resources quoted at 0.25% CuEq cut-off

** CuEq calculated using the following metal prices: Cu US$1.20/lb Mo US$*/lb, Au US$450/oz, Ag US$7/oz

[t] Taken from Table 14 of the Technical Report by SRK Consulting

- No reserves were included in this resource estimate.

- The metallurgical study by G & T Metallurgical Services Ltd. indicates that the concentrate, with a "mass percent" of 0.8, contains 28.9% Cu at a recovery rate of 85. The concentrate also includes 18.7 g/t Au, at a 55% recovery rate, and 364 g/t Ag, at a 44% recovery rate. Grades of Mo in concentrate stood at 0.650%, at an 80% recovery rate, potentially recoverable as a separate salable product using a "reverse flotation" procedure.
- Arsenic values were high at 11.4%, limiting potential for treatment by conventional extraction techniques. A number of alternative extraction processes were investigated in 2006, although no further progress on this issue has occurred since then. Concentrations of other deleterious elements were considered to be minor.

- Prices for Cu, Mo, Au and Ag as of January 2020 have improved significantly since 2008, buoyed by a favourable CDN$: US$ exchange rate, even when factoring inflation. Even so, long-term price forecasts are required when re-evaluating project economics.

- The 2008 drilling successfully identified the underlying "fixed" portion of the deposit to the west-northwest. Another flat-lying fault, called the "Sub-Terminator", of the same structural event as the Terminator fault, forms the basal unit of a block or "slab"; at least one other slab occurs beneath this. Thus, the original deposit has been segmented into a series of blocks, of which each overlying block has been successively displaced farther to the east-southeast. The Main Zone is hosted by the easternmost single block which extends to surface. Potential for further underlying mineralization occurs farther to the west-northwest. However economic viability is compromised by the depths encountered, thinness of the slabs and lack of improved metal grades.

- Results of the summer, 2008 surface exploration program revealed an area of quartz and carbonate stockwork veining east of Bud Lake, with elevated Au values from nearby stream silt sampling. A second prospective target is the "Arsenic Hill" area northwest of Sandstone Lake. The "Louise Extension" claim, acquired in August, 2019, covers these targets. Elsewhere, sporadic anomalous Au values were returned from grid and reconnaissance soil sampling, although no substantive anomalous zones were identified.

- Due diligence rock sampling, in 2019, across the surface expression of the Main Zone confirmed the presence of Cu-Mo-Au-Ag mineralization, although 2019 values are somewhat lower than the deposit average.

- Geological mapping in the Bud Lake area did not identify mineralization indicative of porphyry mineralization. Mapping indicated the area southeast of the Louise Lake waterbody is underlain by mafic volcanic rocks intercalated with porphyritic rhyolite units and units of conglomerate.

- Rock and soil sampling in 2019 did not return significant metal values. Several rock samples of conglomerate returned elevated Mo and As values and slightly elevated Cu values, indicating the conglomerate horizons may have had a more reactive geochemistry, allowing for increased metal-bearing fluid movement. However, this is not considered a significant exploration target. The "Argillic Hill" occurrence was not visited in 2019.

- The Phase 2 magnetic surveying program revealed a NE-SW trending magnetic low feature which may represent a significant structural lineament separating NE-SW trending stratigraphy to the east from accreted broadly folded stratigraphy to the west. Magnetic low features are commonly marked by small lakes, ponds and wetlands along topographic depressions, and may mark areas of recessive differential weathering resulting from structural preparation of the bedrock.

- The Phase 2 magnetic survey also identified an ovoid magnetic "high" feature directly west of the main NE-SW magnetic low feature. The ovoid feature is coincident with an area identified in 2008, comprising argillic alteration, pyritization, and several elevated gold-in-soil geochemical values. This may represent the overlying halo of pyritization and alteration above the core of a second porphyry system.

26 RECOMMENDATIONS

26.1 RECOMMENDATIONS

It is strongly recommended that 79 Resources acquires Claim #1064060, held by Mr. B. Kreft, through an option or purchase agreement. This claim covers part of the Main Zone deposit, and is required if the entire deposit is to be contained within a single property.

Phase 1 is recommended to comprise a surface program of grid soil geochemical surveying, detailed geological mapping, rock sampling and prospecting across the Argillic Hill target. Soil sampling would comprise an inner grid of intensive sampling, with a 50-metre line spacing and 25-metre of station spacing, surrounded by a more extensive grid with a 100-metre line spacing and 50-metre station spacing. The intensive grid would be centered on the magnetic high anomaly identified from the 2019 ground magnetic survey. Rock sampling would be done where warranted.

The program would involve a 4-person crew, camping at small lakes near the target, with helicopter support based from Smithers. The program would take place over a total of 12 days, including travel and mobilization, and would comprise six field days, excluding camp set-up and tear-down. Total field program expenditures, including 10% contingency, are estimated at about CDN$103,200.

The 2004 - 2008 programs have constrained the dimensions of the Main Zone, but have indicated the sub-Terminator mineralization extends to the west-northwest. However, this is a deep target, and is not recommended for a small follow-up program. A Phase 2 program, comprising a single 350-metre due-diligence-style NTW-sized hole essentially twinning known central Main Zone area mineralization, is recommended instead. The hole must avoid Claim #1064060 on surface and at depth, unless the claim has been acquired. Duration of the project is proposed at 7 days of actual diamond drilling, and an additional 4 days of program set-up and post-drilling work. An additional 3 day's travel time is also budgeted into the program.

The drilling program would be done by a single drill with two shifts per 24 hours. The crews would be comprised of four drillers and three geological and geotechnical staff. Core logging and sampling are planned to be done on site, but the crews would commute from Smithers on a daily basis. Drilling could be done in late winter, allowing for travel across frozen wetlands, if necessary, or in summer, if wetlands can be avoided. None of the proposed drilling or support logistics would take place on Claim #1064060. Phase 2 expenditures, including 5% contingency, are estimated at about CDN$180,500.

An alternate Phase 2 target would be the Argillic Hill area, if Phase 1 results are favourable. This would also be a 300 to 350-metre diamond drilling program, potentially in multiple holes. It would require Smithers-based helicopter support for mobilization and de-mobe of the drill, and for daily shift changes. Logging and sampling are recommended to be based at facilities in Smithers, to eliminate camp mobilization and construction costs and reduce the environmental footprint. At this time, a cost estimate has not been proposed.

26.1.1 *Recommended Budgets*

The following is a recommended budget for the 2020 Phase 1 surface exploration program.

Type of Expense		Proposed cost
Personnel, including preparation and wrap-up costs	$	36,850.00
Helicopter support	$	5,204.00
Expediting	$	1,020.00
Assaying, including shipping and "reference material"	$	24,536.00
Accommodations, including meals	$	2,566.00
Truck rental and fuel	$	7,540.00
Groceries in camp	$	1,350.00
Camp and Generator Rental	$	1,400.00
Computer Rental	$	700.00
Other rentals	$	1,650.00
Field office supplies	$	900.00
Field total:	**$**	**83,716.00**
Field report	$	3,000.00
Assessment report, incl. data compilation, drafting	$	7,100.00
Sub-total	**$**	**93,816.00**
10% contingency	$	9,381.60
Estimated total	**$**	**103,197.60**

The following is a recommended budget for the 2020 Phase 2 diamond drilling program.

Type of Expense	Proposed cost	
Personnel, including preparation and wrap-up costs	$	34,675.00
Drilling, including mobe and ancillary charges	$	65,600.00
Core boxes	$	1,320.00
Heavy equipment, including transport	$	12,800.00
Diesel fuel for drill, equipment; gas for generator	$	7,650.00
Down-hole tool rental	$	2,350.00
Sampling, including shipping and "reference material"	$	12,405.00
Accommodations	$	9,000.00
Truck rental and fuel	$	4,900.00
Rock saw and generator rental	$	1,125.00
Other rentals	$	1,875.00
Field office supplies	$	500.00
Permitting	$	4,500.00
Field total:	**$**	**158,700.00**
Field report	$	3,000.00
Assessment report, incl. data compilation, drafting	$	10,200.00
Sub-total	**$**	**171,900.00**
5% contingency	$	8,595.00
Estimated total	**$**	**180,495.00**

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Effective Date: January 29, 2020

Respectfully submitted,
Aurora Geosciences Ltd.

Carl Schulze

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Carl Schulze, BSc, P.Geo
Project Manager, Aurora Geosciences Ltd.

Reviewed by

Gary Vivian

____

Gary Vivian, P.Geo

Dated January 29, 2020

Appendix I

CERTIFICATE OF QUALIFICATIONS, CONSENT, DATE AND SIGNATURES

I, Carl Schulze, with a business address at 34A Laberge Rd, Whitehorse, Yukon Y1A 5Y9, hereby certify that:

a) I am a Project Manager employed by:

Aurora Geosciences Ltd.
34A Laberge Rd, Whitehorse, Yukon Y1A 5Y9

b) This certificate applies to the technical report titled: "NI 43-101 Technical Report, Louise Lake Property, Smithers Area, Northern British Columbia, Canada" dated effective January 29, 2020 (the "Technical Report").

c) I am a graduate of Lakehead University, Bachelor of Science Degree in Geology, 1984. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia (EGBC), Lic No. 25393. I have worked as a geologist for a total of 35 years since my graduation from Lakehead University. I have worked extensively in Yukon, British Columbia, northern Ontario and Alaska, as well as the Northwest Territories, Saskatchewan and Manitoba. I served as President of the Yukon Chamber of Mines, where I was also a Director from 2003 to 2015. I have acted in various capacities with numerous private and publicly-traded mining and exploration companies, and also served as the Resident Geologist for the Government of Nunavut from 2000 - 2002.

d) I was present for nine days from August 22-30, 2019 on the Louise Lake property that is the subject of this Technical Report;

e) I am responsible for all sections of the Technical Report.

f) I have had no involvement with 79 Resources Ltd., its predecessors or subsidiaries. Although I was the Qualified Person for the Louise Lake Project from 2004 through 2008, I received no compensation other than fee for service. I am independent of the issuer applying the test in section 1.5 of National Instrument 43-101;

g) I have not received nor expect to receive any interest, direct or indirect, in 79 Resources Ltd., its subsidiaries, affiliates and associates;

h) I have read "Standards of Disclosure for Mineral Projects", National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with this Instrument and that Form;

i) As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading, and;

j) This certificate applies to the NI 43-101 compliant technical report titled "NI 43-101 Technical Report, Louise Lake Property, Smithers Area, Northern British Columbia, Canada" dated January 29, 2020.

k) I consent to the public filing of this technical report with any stock exchange and any regulatory authority and consent to the publication for regulatory purposes, including electronic publication in the public company files of their websites accessible to the public, of extracts from the Technical Report by 79 Resources Ltd.

Dated at Whitehorse this 29th day of January, 2020.

Carl Schulze

AURORA GEOSCIENCES

CONSENT OF QUALIFIED PERSON

To: British Columbia Securities Commission
Alberta Securities Commission
Canadian Securities Exchange

Re: Technical Report for 79 Resources Ltd. **("79")**.

I, Carl Michael Schulze, do hereby consent to the public filing of the technical report entitled "NI 43-101 Technical Report, Louise Lake Property, Smithers Area, Northern British Columbia, Canada" dated effective January 29, 2020 (the "Technical Report"), by "79" with the securities regulatory authorities referred to above. I do further hereby consent to the use of extracts from, or a summary of, the Technical Report, in the preliminary prospectus of "79" dated May 5, 2020 (the "Preliminary Prospectus") and to being named in the Preliminary Prospectus.

I confirm that I have read the Preliminary Prospectus and that the disclosure in the Preliminary Prospectus fairly and accurately represents the information in the Technical Report that supports the disclosure in the Preliminary Prospectus.

I have no reason to believe that there are any misrepresentations in the information contained in the Preliminary Prospectus that is derived from the Technical Report or that are within my knowledge as a result of the services performed by me in connection with the Technical Report.

Dated at Whitehorse, Yukon this 5th Day of May, 2020.

"Carl Schulze"

Carl Schulze, BSc, P. Geo.
Association of Professional Engineers and Geoscientists of British Columbia
Address: Aurora Geosciences Ltd.
34A Laberge Rd.
Whitehorse, Yukon Y1A 5T6
Carl.Schulze@aurorageosciences.com

Appendix II

PRELIMINARY ASSESSMENT OF LOUISE LAKE METALLURGY, G & T METALLURGICAL SERVICES LTD., 2006

PRELIMINARY ASSESSMENT OF
LOUISE LAKE METALLURGY

NORTH AMERICAN GEM INC.

KM1882

November 1, 2006

G&T METALLURGICAL SERVICES LTD.

2957 Bowers Place, Kamloops, B.C. Canada V1S 1W5

E-mail: info@gtmet.com , Website: www.gtmet.com

ISO 9001:2000
Certificate No. FS 63170

G & T METALLURGICAL SERVICES LTD
2957 Bowers Place, Kamloops, B.C., Canada V1S 1W5
Fax (250) 828-6159 Tel. (250) 828-6157
e-mail: info@gtmet.com

ISO9001:2000
FS 63170

November 1, 2006

Mr. Charles Desjardins
President and Director
North American Gem Inc.
1788-650 West Georgia Street
Vancouver, BC
V6B 4N8

Dear Mr. Desjardins,

Re: Preliminary Assessment of Louise Lake Metallurgy – KM1882

We have now completed the preliminary assessment of metallurgical response that was authorized on a composite sample of Louise Lake mineralization. The composite was prepared from a bulk shipment of drill core that was received at G & T Metallurgical on July 25, 2006.

As discussed, the principal objectives of this program were to determine the mineralogy and locking characteristics of the composite sample and to perform a series of preliminary flotation tests to assess metallurgical performance. In addition, an estimate of ore grindability or hardness was determined for the composite using a comparative testing procedure.

The data generated in this program are organized in five appendices arranged in the following order: Appendix I – Sample Origin and Composition, Appendix II – Flotation Test Data, Appendix III – Particle Sizing Data, Appendix IV – Special Assay Data and Appendix V – Modal Data.

The following comments briefly encapsulate the results of the program, which are summarized as a series of figures. Individual test data are presented in detail in the attached appendices.

1.0 Ore Hardness

The hardness of the Louise Lake composite sample was estimated using a comparative testing procedure. The results of this analysis revealed that the ore was moderately friable having a comparative Bond work index estimated at 13 kWh/tonne ± 1.5 kWh/tonne. This estimate requires confirmation using a standard FC Bond ball mill test procedure.

2.0 Sample Composition

The composition of the Louise Lake composite was determined using chemical assaying and mineralogy techniques. The results of these analyses are summarized in Table 1.

TABLE 1
COMPOSITION OF THE MINERALIZED SAMPLE

Element or Mineral	Units	Symbol	Value
Element			
Copper	%	Cu	0.28
Gold	g/t	Au	0.30
Silver	g/t	Ag	8
Arsenic	%	As	0.11
Molybdenum	%	Mo	0.007
Mineral			
Chalcopyrite	%	Cp	0.3
Energite	%	En	0.3
Pyrite	%	Py	10.7
Gangue	%	Ga	88.7

Notes: a) See Appendix I, IV and V for additional composition data.
b) The category energite includes other arsenic bearing copper sulphides like tennantite.

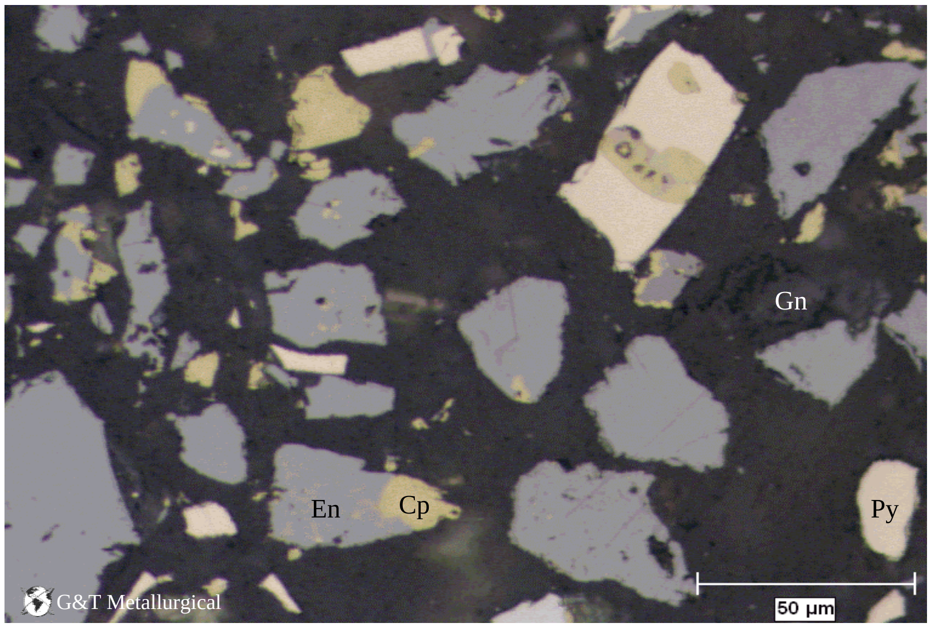
The composite contained about 0.3 percent copper distributed almost evenly between chalcopyrite and energite/tennantite group minerals. The presence of these high arsenic bearing sulphide minerals, which contained about 20 percent by weight arsenic, will undoubtedly affect the quality of the final copper concentrate*.

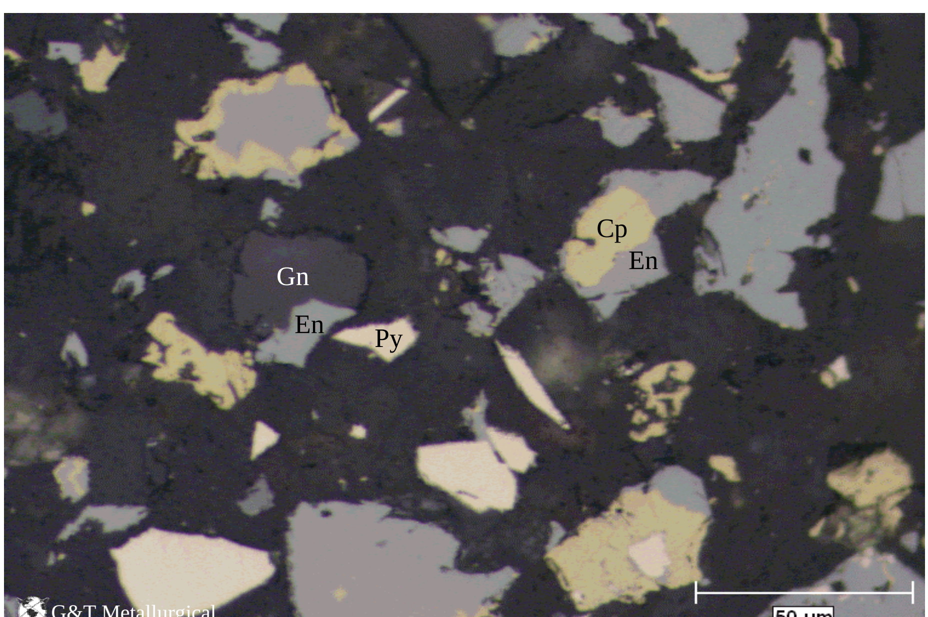
* In the flotation system, energite and tennantite will be recovered along with chalcopyrite into the rougher and cleaner concentrates. Also, pyrite content in the composite is significant and may impede the production of a high grade copper concentrate.

PHOTO IMAGE 1

LOUISE LAKE – COPPER CONCENTRATE

Test KM1882-9





*Cp-Chalcopyrite, En-Enargite, Py-Pyrite, Gn-Gangue

3.0 Mineral Fragmentation

Following grinding of the composite to a sizing of 162μm K_{80}, almost 40 percent of the copper sulphides were liberated from the other mineral species*. Most of the remaining copper sulphides were present as sulphide rich binary interlocks with non-sulphide gangue**. The results of the modal assessment are summarized in Table 2.

TABLE 2
DISTRIBUTION OF MINERALS BY CLASS OF ASSOCIATION
Louise Lake Composite Ground to 163μm K_{80}

Mineral Status	Distribution – percent			
	Cp	En	Py	Gn
Liberated Grains	**42**	**34**	80	**96**
Binary with Cs	-	-	2	1
Binary with Py	2	7	-	3
Binary with Gn	55	55	16	-
Multiphase Particles	1	4	2	<1

Notes: a) See Appendix V, Table 1A for additional distribution data.
b) En – Indicates all arsenic bearing copper sulphide minerals.

The result of this assessment has indicated that acceptable rougher circuit performance can be achieved at a nominal 160μm K_{80} primary grind size. The rougher concentrate will require regrinding to ensure cleaner circuit performance can be achieved. The effects of flotation feed sizing upon mineral liberation and mineralogical limits to rougher circuit performance are summarized in Figures 1A and 1B.

The mineralogy of the deposit should be further delineated to determine spatial variations in the mineralogy and in the fragmentation characteristics. Critically, this work could also assess whether the energite/tennantite group minerals are isolated to a specific area of the deposit or are pervasive throughout the deposit.

* Most porphyry skarn deposits are processed at rougher flotation feed sizings of 150 to 250μm K_{80}.
** On average, the copper sulphide-gangue binary particles contain about 28 percent by weight copper sulphides.

FIGURE 1A

EFFECT OF PRIMARY GRIND SIZE ON MINERAL LIBERATION

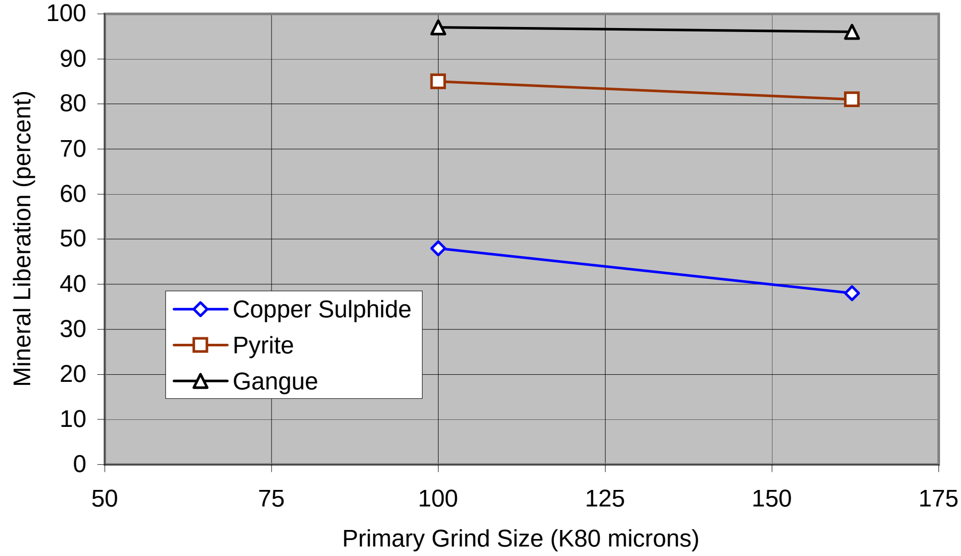
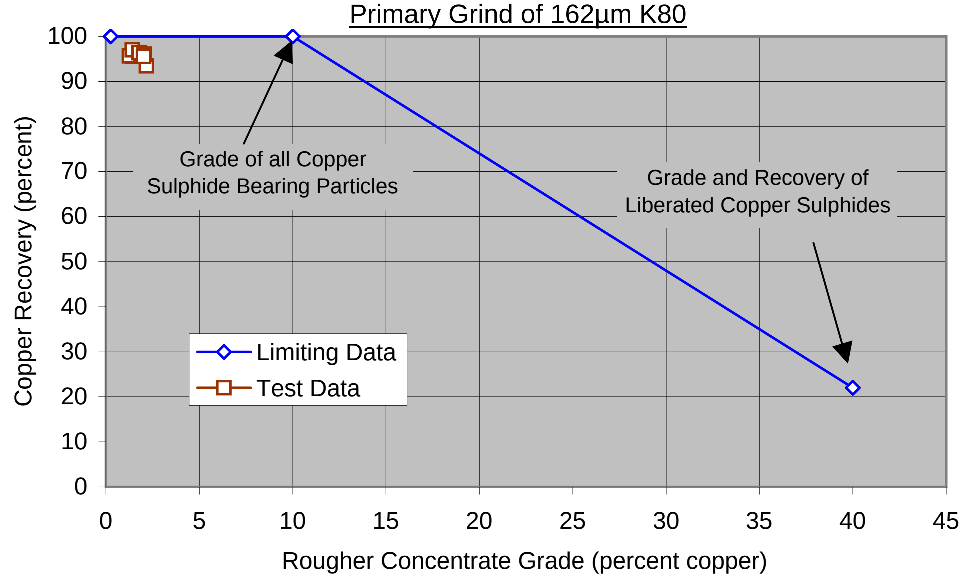


FIGURE 1B

MINERALOGICALLY LIMITING GRADE RECOVERY CHART

Primary Grind of 162µm K80



4.0 Rougher Circuit Performance

A series of rougher flotation tests were performed on the composite sample to investigate the effect of flotation feed sizing and flotation circuit test conditions on rougher circuit performance. The results of these preliminary tests are displayed in Figure 2, together with a schematic of the flowsheet used in the laboratory. The results of the rougher tests can be summarized as follows:

- Three tests were performed to investigate the effect of primary grind size, in the range 77 to 162μm K_{80}, on rougher circuit performance. The results indicate that, at 20 percent mass recovery, copper recoveries are similar across the range of flotation feed sizing evaluated. At the finest grind sizing, mass recovery into the rougher concentrate was significantly lower at about 15 percent.

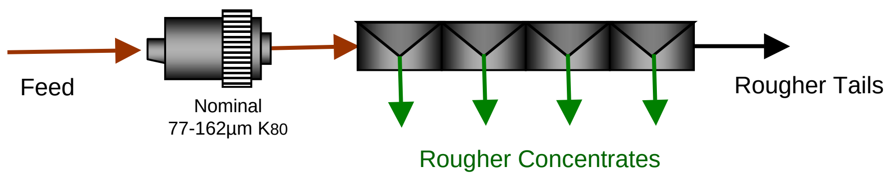
- The results from a series of rougher flotation tests, comparing collector type and pH levels indicate that at a mass recovery of 14 percent, copper recoveries were 95 percent regardless of conditions tested.

- Additional test work is required and is recommended to optimize flotation feed sizing, reagent regime type and reagent addition rates on rougher circuit performance.

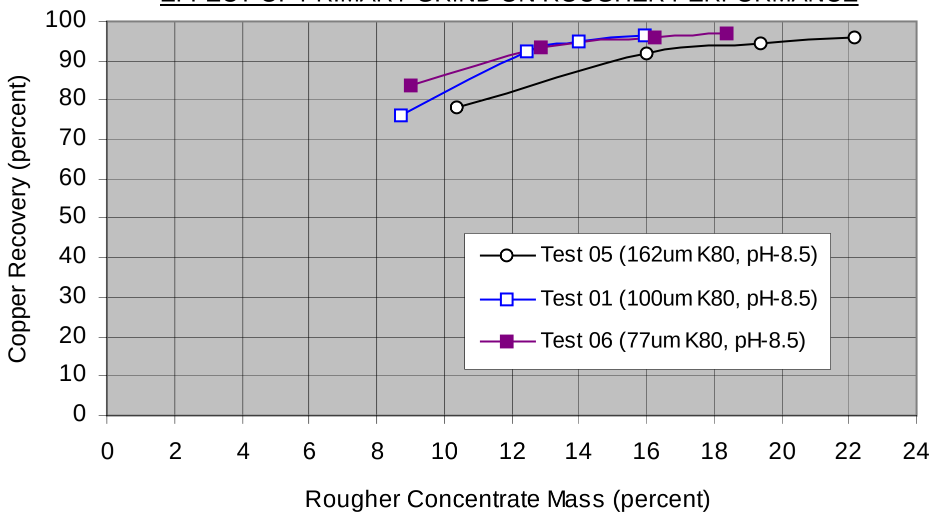
- Based upon the results of the batch rougher tests, it was decided to perform the batch cleaner and the locked cycle tests at a nominal 100μm K_{80} flotation feed sizing. Potassium amyl xanthate (PAX) was chosen as the primary collector with lime being used to modify pulp pH to control pyrite flotation.

FIGURE 2

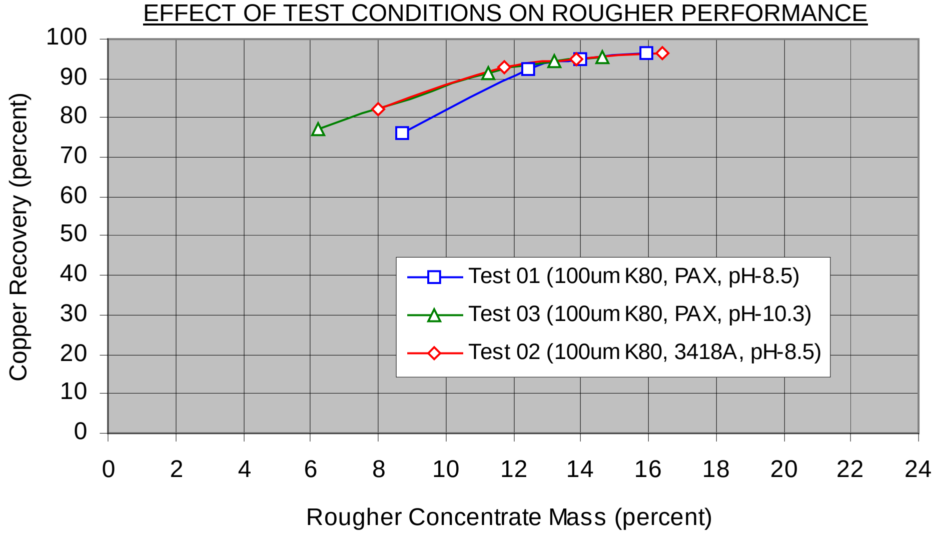
ROUGHER TEST FLOWSHEET AND PERFORMANCE DATA



EFFECT OF PRIMARY GRIND ON ROUGHER PERFORMANCE



EFFECT OF TEST CONDITIONS ON ROUGHER PERFORMANCE



5.0 Cleaner and Locked Cycle Test Results

Prior to performing a locked cycle test on the Louise Lake composite, three open circuit batch cleaner tests were performed. These cleaner tests investigated the effects of various regrind discharge sizings on cleaner circuit performance. The results of these cleaner tests are displayed graphically in Figure 3 along with the results of the cycle tests. The following comments are considered upon review of the data:

- The preliminary batch test results revealed that the concentrate would require regrinding in the range 25 to 30μm K_{80} to produce a relatively high-grade copper concentrate*. However, this test work is far from optimized. It is recommended that the effect of regrinding on metallurgical performance be evaluated with significantly more test work.

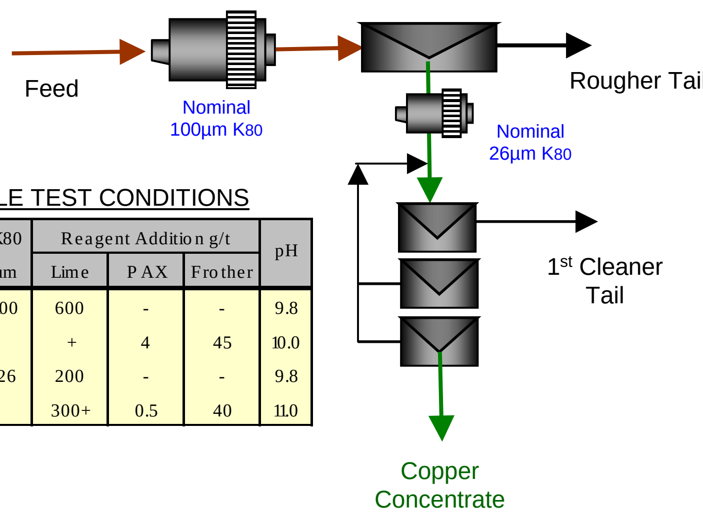
- A single locked cycle test was performed at a 100μm K_{80} flotation feed sizing: The rougher concentrate was subsequently reground to 26μm K_{80} ahead of dilution cleaning. This cycle test revealed that approximately 85 percent of the copper in the feed could be recovered into final copper concentrate that contained about 29 percent by weight copper. The result of this cycle test requires confirmation.

- Following further definition of the deposit, selected composites, based on lithology or upon the mining plan, should be metallurgically evaluated. This campaign of test work should include modal assessments of flotation response using batch rougher and cleaner test procedures. The program should culminate in replicate locked cycle tests to provide accurate estimates of metallurgical performance.

* It is suspected that the reduced recovery observed at a regrind discharge sizing of 26μm K_{80} may be due to conditions employed in this test. Additional test work is required and is recommended to probe this aspect of ore response.

FIGURE 3

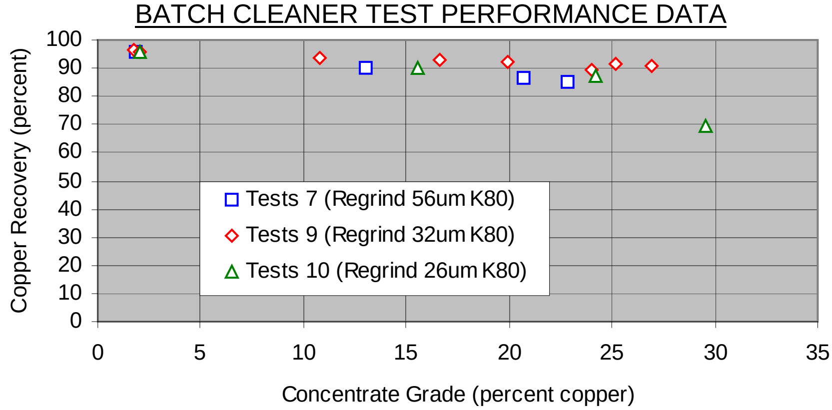
LOCKED CYCLE TEST FLOWSHEET AND PERFORMANCE DATA



CYCLE TEST CONDITIONS

Stage	K80 µm	Reagent Addition g/t Lime	PAX	Frother	pH
Grind	100	600	-	-	9.8
Rougher		+	4	45	10.0
Regrind	26	200	-	-	9.8
Cleaners		300+	0.5	40	11.0

BATCH CLEANER TEST PERFORMANCE DATA



CYCLE TEST METALLURGICAL PERFORMANCE DATA

Product	Mass percent	Assays - percent Cu	Au	Ag	Mo	Distribution - percent Cu	Au	Ag	Mo
Flotation Feed	100.0	0.28	0.25	7	0.007	100	100	100	100
Rougher Concentrate	14.4	1.83	1.65	26	0.040	95	93	56	87
Final Concentrate	0.8	**28.9**	**17.9**	**364**	0.650	**85**	**57**	**44**	80
1st Cleaner Tail	13.6	0.21	0.68	6	0.004	10	36	12	7
Rougher Tail	85.6	0.015	0.02	3	0.001	5	7	44	13

See Appendix II test 11 for additional test details.

6.0 Quality of the Concentrate

The concentrates produced from the locked cycle test in cycles I to V were composited together, and the minor elements of interest to this study were determined. These data are presented in Table 3.

TABLE 3
MINOR ELEMENT CONCENTRATIONS
Copper Concentrate KM1882-11 Cycles I-V

Element	Symbol	Units	Value
Gold	Au	g/t	18.7
Silver	Ag	g/t	364
Molybdenum	Mo	%	0.65
Antimony	Sb	%	0.26
Arsenic	As	%	11.4
Bismuth	Bi	g/t	70
Cadmium	Cd	g/t	38
Mercury	Hg	g/t	2.2
Selenium	Se	g/t	57

Note: a) See Appendix IV for additional composition data.

The copper concentrate contained payable levels of gold and silver at 18.7 and 364 g/tonne respectively. Molybdenite in the concentrate assayed 0.65 percent, which may be worth recovering into a separate and saleable product: This would be achieved by utilizing an industry established reverse flotation procedure in which the copper sulphides are depressed and the molybdenite floated.

Predictably, the arsenic level in the copper concentrate was high at 11.3 percent. The concentrations of other deleterious elements in the concentrate were relatively minor. Marketability studies for the concentrate are required to determine the saleability of this relatively high arsenic content concentrate.

7.0 Conclusions and Recommendations

The Louise Lake composite tested in this program contains about 0.3 percent by weight copper, which is distributed almost evenly between chalcopyrite and energite/tennantite group minerals. The presence of these high arsenic-copper sulphide minerals will affect the quality of the final copper concentrate.

It is recommended that the geology of the deposit be further defined to determine if the high arsenic values are confined to one area of the deposit. A flotation test program consisting of batch rougher, cleaner and locked cycle tests is required and recommended to evaluate the metallurgy of the deposit based upon ore lithology and mining sequence.

To provide a preliminary metallurgical estimate, a single locked cycle test was performed at a primary grind size of 100μm K_{80} and regrind discharge size of 26μm K_{80}. The results of this test indicated that about 85 percent of the copper could be recovered into a concentrate assaying about 29 percent by weight copper.

Preliminary batch rougher and cleaner tests suggest that similar metallurgical response could be achieved at a flotation feed sizing of 162μm K_{80}. Additional test work to optimize the primary grinding and regrinding requirements is required and is recommended.

The copper concentrate also contained payable levels of gold and silver and sufficient molybdenum to warrant evaluating the potential to produce a separate and saleable molybdenum concentrate. Unfortunately, the concentrate contained very high levels of arsenic, comprising 11 percent of the concentrate mass.

Consider the evaluation of a hydrometallurgical process to recover valuable metals from the concentrate.

Thank you for providing us with this opportunity to participate in your metallurgical programs. If you have any questions regarding our comments or the test results, please do not hesitate to contact us.

Yours truly,

Tom Lafreniere President	Tom Shouldice, P.Eng. VP – Technical Services

John Folinsbee, P.Eng.
VP - Operations

November 1, 2006

Report Distribution:
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APPENDIX I – KM1882

SAMPLE ORIGIN

1.0 Sample Origin

On July 25, 2006, a shipment of drill core samples was received at G & T Metallurgical Services Ltd. The samples were shipped via Greyhound from Smithers, BC. In total, 9 bags of samples were received at a total weight of 164 kilograms.

The individual bags had no labels, so the combined samples were given a name of Composite 1. The Composite 1 samples were stage crushed to 10 mesh (2 mm), homogenized and rotary split into 2 kilogram charges. The charges were sealed under a nitrogen purge and stored in the freezer at –10^{o}C to minimize the effects of oxidation. Representative replicate sub-samples were removed and analyzed for the elements of interest. A summary of these chemical analyses is shown in Table I-1.

TABLE I-1
CHEMICAL COMPOSITION

Sample	Assays – percent or g/tonne				
	Cu	Fe	S	Au	C
Composite 1 Head 1	0.27	5.34	3.62	0.28	0.64
Composite 1 Head 2	0.28	5.57	3.61	0.31	0.64
Average	0.28	5.46	3.62	0.30	0.64

APPENDIX II – KM1882

FLOTATION TEST DATA

INDEX

PROJECT NO: KM1882-01

PURPOSE: Preliminary Rougher Rate Test Using PAX Collector on Copper and Sulphur Metallurgy.

PROCEDURE: Perform a one product rougher rate test at natural pH.

FEED: 2 kg of Louise Lake Composite 1 ore ground to a nominal 100μm K_{80}.

FLOWSHEET: 1

Stage	Reagents Added g/tonne			Time (minutes)			pH
	PAX	F549	MIBC	Grind	Cond.	Float	
Primary Grind				16			8.0
Rougher 1	5		56		1	2	8.2
Rougher 2	0	26			1	2	8.5
Rougher 3	10		0		1	2	8.5
Rougher 4	30				1	2	8.5

Flotation Data	Rougher	
Flotation Machine:	D2B	
Cell Size in liters:	4.4	
Air Aspiration:	Supercharged	
Impeller Speed in rpm:	1200	

Grinding Data	Primary Grind
Mill:	M5-Mild
Charge/Material:	20 kg-Mild
Water:	1000 ml

Note: This ore over collects with low PAX addition.

KM1882-01 Louise Lake Composite 1

Overall Metallurgical Balance

Product	Weight		Assay				Distribution			
	grams	%	Cu	Fe	S	C	Cu	Fe	S	C
Bulk Rougher 1	174.6	8.7	2.38	31.7	36.7	0.22	76.1	47.0	85.1	3.1
Bulk Rougher 2	74.0	3.7	1.20	10.2	9.25	0.63	16.3	6.4	9.1	3.7
Bulk Rougher 3	31.8	1.6	0.45	6.10	4.08	0.47	2.6	1.6	1.7	1.2
Bulk Rougher 4	39.1	2.0	0.18	4.49	2.12	0.51	1.3	1.5	1.1	1.6
Bulk Rougher Tail	1681.8	84.0	0.01	3.04	0.14	0.68	3.7	43.4	3.0	90.5
Feed	2001.3	100	0.27	5.88	3.76	0.63	100	100	100	100

KM1882-01 Louise Lake Composite 1

Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay				Distribution			
	grams	%	Cu	Fe	S	C	Cu	Fe	S	C
Product 1	174.6	8.7	2.38	31.7	36.7	0.2	76.1	47.0	85.1	3.1
Product 1 to 2	248.6	12.4	2.03	25.3	28.5	0.3	92.4	53.4	94.2	6.8
Product 1 to 3	280.4	14.0	1.85	23.1	25.8	0.4	95.0	55.1	95.9	8.0
Product 1 to 4	319.5	16.0	1.65	20.8	22.9	0.4	96.3	56.6	97.0	9.5
Product 6	1681.8	84.0	0.01	3.04	0.14	0.68	3.7	43.4	3.0	90.5
Feed	2001.3	100	0.27	5.88	3.76	0.63	100	100	100	100

PROJECT NO: KM1882-02

PURPOSE: Investigate the Effect of Using 3418A Collector on Copper and Sulphur Metallurgy.

PROCEDURE: Perform a one product rougher rate test at natural pH.

FEED: 2 kg of Louise Lake Composite 1 ore ground to a nominal 100µm K_{80}.

FLOWSHEET: 1

Stage	Reagents Added g/tonne			Time (minutes)			pH
	3418A	F549	MIBC	Grind	Cond.	Float	
Primary Grind				16			8.2
Rougher 1	1	13	16		1	2	8.3
Rougher 2	12		0		1	2	8.5
Rougher 3	50		0		1	2	8.5
Rougher 4	100		0		1	2	8.4

Flotation Data	Rougher	
Flotation Machine:	D2B	
Cell Size in liters:	4.4	
Air Aspiration:	Supercharged	
Impeller Speed in rpm:	1200	

Grinding Data	Primary Grind
Mill:	M5-Mild
Charge/Material:	20 kg-Mild
Water:	1000 ml

KM1882-02 Louise Lake Composite 1

Overall Metallurgical Balance

Product	Weight		Assay				Distribution			
	grams	%	Cu	Fe	S	C	Cu	Fe	S	C
Bulk Rougher 1	159.3	8.0	2.90	29.4	34.3	0.37	82.3	41.6	76.6	4.7
Bulk Rougher 2	75.3	3.8	0.77	15.4	16.7	0.50	10.3	10.3	17.6	2.9
Bulk Rougher 3	42.5	2.1	0.30	5.34	3.0	0.55	2.3	2.0	1.8	1.8
Bulk Rougher 4	50.0	2.5	0.17	3.93	1.22	0.63	1.5	1.7	0.9	2.5
Bulk Rougher Tail	1667.5	83.6	0.01	3.00	0.13	0.67	3.6	44.4	3.1	88.1
Feed	1994.6	100	0.28	5.65	3.58	0.64	100	100	100	100

KM1882-02 Louise Lake Composite 1

Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay				Distribution			
	grams	%	Cu	Fe	S	C	Cu	Fe	S	C
Product 1	159.3	8.0	2.90	29.4	34.3	0.37	82.3	41.6	76.6	4.7
Product 1 to 2	234.6	11.8	2.22	24.9	28.7	0.41	92.6	51.9	94.2	7.6
Product 1 to 3	277.1	13.9	1.92	21.9	24.7	0.43	94.9	53.9	96.0	9.4
Product 1 to 4	327.1	16.4	1.65	19.2	21.1	0.5	96.4	55.6	96.9	11.9
Product 6	1667.5	83.6	0.01	3.0	0.13	0.67	3.6	44.4	3.1	88.1
Feed	1994.6	100	0.28	5.6	3.58	0.64	100	100	100	100

PROJECT NO: KM1882-03

PURPOSE: Investigate the Effect of Higher pH on Metallurgical Performance.

PROCEDURE: Perform a one product rougher rate test.

FEED: 2 kg of Louise Lake Composite 1 ore ground to a nominal 100μm K_{80}.

FLOWSHEET: 1

Stage	Reagents Added g/tonne				Time (minutes)			pH
	Lime	PAX	F549	MIBC	Grind	Cond.	Float	
Primary Grind					16			7.9
Rougher 1	625	2	13	16		1	2	10.3
Rougher 2	-	2	-	-		1	2	10.3
Rougher 3	-	10	-	8		1	2	10.2
Rougher 4		50	-	-		1	2	10.1

Flotation Data	Rougher	
Flotation Machine:	D2B	
Cell Size in liters:	4.4	
Air Aspiration:	Supercharged	
Impeller Speed in rpm:	1000	

Grinding Data	Primary Grind
Mill:	M5-Mild
Charge/Material:	20 kg-Mild
Water:	1000 ml

KM1882-03 Louise Lake Composite 1

Overall Metallurgical Balance

Product	Weight		Assay				Distribution			
	grams	%	Cu	Fe	S	C	Cu	Fe	S	C
Bulk Rougher 1	122.7	6.2	3.40	26.5	31.3	0.33	77.1	29.5	54.5	3.2
Bulk Rougher 2	100.2	5.1	0.77	23.4	25.9	0.38	14.3	21.3	36.9	3.0
Bulk Rougher 3	38.9	2.0	0.39	8.80	7.89	0.51	2.8	3.1	4.4	1.6
Bulk Rougher 4	28.2	1.4	0.27	5.50	3.56	0.55	1.4	1.4	1.4	1.2
Bulk Rougher Tail	1690.3	85.4	0.01	2.92	0.12	0.68	4.4	44.8	2.8	91.0
Feed	1980.3	100	0.27	5.57	3.56	0.64	100	100	100	100

KM1882-03 Louise Lake Composite 1

Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay				Distribution			
	grams	%	Cu	Fe	S	C	Cu	Fe	S	C
Product 1	122.7	6.2	3.40	26.5	31.3	0.33	77.1	29.5	54.5	3.2
Product 1 to 2	222.9	11.3	2.22	25.1	28.9	0.35	91.4	50.7	91.4	6.2
Product 1 to 3	261.8	13.2	1.95	22.7	25.8	0.38	94.2	53.8	95.8	7.8
Product 1 to 4	290.0	14.6	1.78	21.0	23.6	0.39	95.6	55.2	97.2	9.0
Product 6	1690.3	85.4	0.01	2.92	0.12	0.68	4.4	44.8	2.8	91.0
Feed	1980.3	100	0.27	5.57	3.56	0.64	100	100	100	100

PROJECT NO: KM1882-04

PURPOSE: Preliminary Cleaner Test.

PROCEDURE: Perform a one product cleaner test.

FEED: 2 kg of Louise Lake Composite 1 ore ground to a nominal 100µm K_{80}.

FLOWSHEET: 2

Stage	Reagents Added g/tonne				Time (minutes)			pH
	Lime	PAX	F549	MIBC	Grind	Cond.	Float	
Primary Grind	500				16			10.3
Rougher 1		2	13	16		1	2	10.1
Rougher 2		1	-	8		1	2	10.1
Rougher 3		1	-	8		1	2	10.0
Regrind					5			10.5
Cleaner 1	√	1		8		1	5	10.8
Cleaner 2	√	-		8		1	4	11.0
Cleaner 3	√	-		8		1	2	11.5

Flotation Data	Rougher	Cleaner
Flotation Machine:	D2A	D12
Cell Size in liters:	4.4	2.2
Air Aspiration:	Supercharged	
Impeller Speed in rpm:	1000	1200

Grinding Data	Primary Grind	Regrind
Mill:	M5-Mild	RM2-Mild
Charge/Material:	20 kg-Mild	6 kg-Mild
Water:	1000 ml	estimated

KM1882-04 Louise Lake Composite 1

Overall Metallurgical Balance

Product	Weight		Assay			Distribution		
	grams	%	Cu	Fe	S	Cu	Fe	S
Cu Concentrate	20.1	1.0	19.7	20.5	30.5	72.9	3.6	8.8
Cu 3rd Cleaner Tl	14.8	0.7	2.99	36.7	39.7	8.1	4.7	8.5
Cu 2nd Cleaner Tl	40.4	2.0	1.01	34.7	37.2	7.5	12.2	21.7
Cu 1st Cleaner Tl	158.3	8.0	0.17	22.5	22.5	5.0	31.1	51.4
Cu Rougher Tl	1756.9	88.3	0.02	3.16	0.38	6.5	48.4	9.6
Feed	1990.5	100	0.27	5.76	3.48	100	100	100

KM1882-04 Louise Lake Composite 1

Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay			Distribution		
	grams	%	Cu	Fe	S	Cu	Fe	S
Product 1	20.1	1.0	19.7	20.5	30.5	72.9	3.6	8.8
Product 1 to 2	34.9	1.8	12.6	27.4	34.4	81.1	8.3	17.3
Product 1 to 3	75.3	3.8	6.39	31.3	35.9	88.6	20.5	39.0
Product 1 to 4	233.6	11.7	2.17	25.3	26.8	93.5	51.6	90.4
Product 5	1756.9	88.3	0.02	3.16	0.38	6.5	48.4	9.6
Feed	1990.5	100	0.27	5.76	3.48	100	100	100

PROJECT NO: KM1882-05

PURPOSE: Preliminary Rougher Test at 162μm K_{80} Using PAX.

PROCEDURE: Perform a one product rougher rate test at natural pH.

FEED: 2 kg of Louise Lake Composite 1 ore ground to a nominal 162μm K_{80}.

FLOWSHEET: 1

Stage	Reagents Added g/tonne				Time (minutes)			pH
	Lime	PAX	F549	MIBC	Grind	Cond.	Float	
Primary Grind					10			8.4
Rougher 1		2		32		1	2	8.6
Rougher 2		5		24		1	2	8.3
Rougher 3		10		16		1	2	8.3
Rougher 4		30		8		1	2	8.3

Flotation Data	Rougher	
Flotation Machine:	D2B	
Cell Size in liters:	4.4	
Air Aspiration:	Supercharged	
Impeller Speed in rpm:	1100	

Grinding Data	Primary Grind
Mill:	M5-Mild
Charge/Material:	20 kg-Mild
Water:	1000 ml

KM1882-05 Louise Lake Composite 1

Overall Metallurgical Balance

Product	Weight		Assay				Distribution			
	grams	%	Cu	Fe	S	C	Cu	Fe	S	C
Bulk Rougher 1	206.2	10.3	2.22	27.2	29.4	0.3	78.4	48.6	83.3	5.3
Bulk Rougher 2	113.1	5.7	0.70	7.50	4.97	0.6	13.6	7.3	7.7	5.1
Bulk Rougher 3	66.8	3.4	0.22	3.77	1.72	0.6	2.5	2.2	1.6	2.9
Bulk Rougher 4	55.4	2.8	0.14	3.33	1.18	0.6	1.3	1.6	0.9	2.4
Bulk Rougher Tail	1552.0	77.9	0.02	3.00	0.31	0.70	4.3	40.3	6.5	84.3
Feed	1993.5	100	0.29	5.79	3.65	0.65	100	100	100	100

KM1882-05 Louise Lake Composite 1

Cumulative Metallurgical Balance

Cumulative	Cum. Weight		Assay				Distribution			
Product	grams	%	Cu	Fe	S	C	Cu	Fe	S	C
Product 1	206.2	10.3	2.22	27.2	29.4	0.3	78.4	48.6	83.3	5.3
Product 1 to 2	319.3	16.0	1.68	20.2	20.7	0.4	91.9	55.9	91.0	10.4
Product 1 to 3	386.1	19.4	1.43	17.4	17.5	0.4	94.4	58.1	92.6	13.2
Product 1 to 4	441.5	22.1	1.27	15.6	15.4	0.5	95.7	59.7	93.5	15.7
Product 6	1552.0	77.9	0.02	3.00	0.31	0.70	4.3	40.3	6.5	84.3
Feed	1993.5	100	0.29	5.79	3.65	0.65	100	100	100	100

PROJECT NO: KM1882-06

PURPOSE: Preliminary Rougher Test at 75μm K_{80} Using PAX.

PROCEDURE: Perform a one product rougher rate test at natural pH.

FEED: 2 kg of Louise Lake Composite 1 ore ground to a nominal 77μm K_{80}.

FLOWSHEET: 1

Stage	Reagents Added g/tonne				Time (minutes)			pH
	Lime	PAX	F549	MIBC	Grind	Cond.	Float	
Primary Grind					19			8.2
Rougher 1		2		40		1	2	8.3
Rougher 2		5	13	32		1	2	8.6
Rougher 3		15	-	-		1	2	8.7
Rougher 4		30	-	-		1	2	8.7

Flotation Data	Rougher	
Flotation Machine:	D2B	
Cell Size in liters:	4.4	
Air Aspiration:	Supercharged	
Impeller Speed in rpm:	1100	

Grinding Data	Primary Grind
Mill:	M5-Mild
Charge/Material:	20 kg-Mild
Water:	1000 ml

KM1882-06 Louise Lake Composite 1

Overall Metallurgical Balance

Product	Weight		Assay				Distribution			
	grams	%	Cu	Fe	S	C	Cu	Fe	S	C
Bulk Rougher 1	180.1	9.0	2.50	29.2	30.8	0.33	83.7	44.7	78.5	4.5
Bulk Rougher 2	78.2	3.9	0.67	10.9	9.77	0.54	9.7	7.2	10.8	3.2
Bulk Rougher 3	67.6	3.4	0.20	4.60	2.56	0.64	2.5	2.6	2.4	3.3
Bulk Rougher 4	42.3	2.1	0.12	3.93	1.66	0.51	0.9	1.4	1.0	1.6
Bulk Rougher Tail	1637.2	81.6	0.01	3.16	0.31	0.70	3.0	44.0	7.2	87.3
Feed	2005.4	100	0.27	5.87	3.52	0.65	100	100	100	100

KM1882-06 Louise Lake Composite 1

Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay				Distribution			
	grams	%	Cu	Fe	S	C	Cu	Fe	S	C
Product 1	180.1	9.0	2.50	29.2	30.8	0.33	83.7	44.7	78.5	4.5
Product 1 to 2	258.3	12.9	1.95	23.7	24.4	0.39	93.5	52.0	89.3	7.8
Product 1 to 3	325.9	16.3	1.58	19.7	19.9	0.45	96.0	54.6	91.8	11.1
Product 1 to 4	368.2	18.4	1.42	17.9	17.8	0.45	97.0	56.0	92.8	12.7
Product 6	1637.2	81.6	0.01	3.16	0.31	0.70	3.0	44.0	7.2	87.3
Feed	2005.4	100	0.27	5.87	3.52	0.65	100	100	100	100

PROJECT NO: KM1882-07

PURPOSE: Repeat Test 4, But With NaCN in the Regrind.

PROCEDURE: Perform a one product batch cleaner test with regrind and three stages of dilution cleaning.

FEED: 2 kg of Louise Lake Composite 1 ore ground to a nominal 100 μm K_{80}.

FLOWSHEET: 2

Stage	Reagents Added g/tonne					Time (minutes)			pH
	Lime	NaCN	PAX	F549	MIBC	Grind	Cond.	Float	
Primary Grind	500					16			9.5
Rougher 1	√		2	15	16		1	2	10.0
Rougher 2	√		2		-		1	4	10.0
Regrind	200	10				5			10.8
Cleaner 1	0		1		16		1	5	10.8
Cleaner 2	√				16		1	4	11.0
Cleaner 3	√				8		1	2	11.5

Flotation Data	Rougher	Cleaner
Flotation Machine:	D2B	D12
Cell Size in liters:	4.4	2.2
Air Aspiration:	Supercharged	
Impeller Speed in rpm:	1100	1200

Grinding Data	Primary Grind	Regrind
Mill:	M5-Mild	RM2-Mild
Charge/Material:	20 kg-Mild	6 kg-Mild
Water:	1000 ml	estimated

KM1882-07 Louise Lake Composite 1

Overall Metallurgical Balance

Product	Weight		Assay			Distribution		
	grams	%	Cu	Fe	S	Cu	Fe	S
Cu Concentrate	19.5	1.0	22.8	17.5	27.3	85.0	2.9	7.6
Cu 3rd Cleaner Tl	2.4	0.1	3.92	26.3	27.5	1.8	0.5	0.9
Cu 2nd Cleaner Tl	14.2	0.7	1.27	19.6	19.5	3.4	2.4	4.0
Cu 1st Cleaner Tl	233.6	11.8	0.13	24.5	24.6	5.8	48.5	82.6
Cu Rougher Tl	1708.6	86.4	0.01	3.16	0.20	3.9	45.7	4.9
Feed	1978.3	100	0.26	5.97	3.52	100	100	100

KM1882-07 Louise Lake Composite 1

Cumulative Metallurgical Balance

Cumulative	Cum. Weight		Assay			Distribution		
Product	grams	%	Cu	Fe	S	Cu	Fe	S
Product 1	19.5	1.0	22.8	17.5	27.3	85.0	2.9	7.6
Product 1 to 2	21.9	1.1	20.7	18.5	27.3	86.8	3.4	8.6
Product 1 to 3	36.1	1.8	13.1	18.9	24.2	90.3	5.8	12.6
Product 1 to 4	269.7	13.6	1.86	23.8	24.6	96.1	54.3	95.1
Product 5	1708.6	86.4	0.01	3.16	0.20	3.9	45.7	4.9
Feed	1978.3	100	0.26	5.97	3.52	100	100	100

PROJECT NO: KM1882-08

PURPOSE: Investigate the Effect of Finer Grind.

PROCEDURE: Perform a one product batch cleaner test.

FEED: 2 kg of Louise Lake Composite 1 ore ground to a nominal 100μm K_{80}.

FLOWSHEET: 2

Stage	Reagents Added g/tonne				Time (minutes)			pH
	Lime	PAX	F549	MIBC	Grind	Cond.	Float	
Primary Grind	500				16			9.3
Rougher 1	√	2	13	16		1	2	10.2
Rougher 2		2		-		1	4	10.0
Regrind	200				10			10.3
Cleaner 1	55	1		16		1	5	10.8
Cleaner 2	√	0		16		1	4	11.0
Cleaner 3	√	0		8		1	2	11.5

Flotation Data	Rougher	Cleaner
Flotation Machine:	D2B	D1B
Cell Size in liters:	4.4	2.2
Air Aspiration:	Supercharged	
Impeller Speed in rpm:	1100	1200

Grinding Data	Primary Grind	Regrind
Mill:	M5-Mild	RM2-Mild
Charge/Material:	20 kg-Mild	6 kg-Mild
Water:	1000 ml	estimated

KM1882-08 Louise Lake Composite 1

Overall Metallurgical Balance

Product	Weight		Assay			Distribution		
	grams	%	Cu	Fe	S	Cu	Fe	S
Cu Concentrate	20.8	1.0	24.0	18.6	29.6	89.4	3.3	8.4
Cu 3rd Cleaner Tl	5.0	0.3	2.86	28.0	30.7	2.6	1.2	2.1
Cu 2nd Cleaner Tl	22.4	1.1	0.32	18.3	18.8	1.3	3.5	5.8
Cu 1st Cleaner Tl	251.8	12.6	0.07	22.3	22.8	3.1	47.4	78.7
Cu Rougher Tl	1696.5	85.0	0.01	3.12	0.21	3.6	44.7	5.0
Feed	1996.5	100	0.28	5.93	3.65	100	100	100

KM1882-08 Louise Lake Composite 1

Cumulative Metallurgical Balance

Cumulative	Cum. Weight		Assay			Distribution		
Product	grams	%	Cu	Fe	S	Cu	Fe	S
Product 1	20.8	1.0	24.0	18.6	29.6	89.4	3.3	8.4
Product 1 to 2	25.8	1.3	19.9	20.4	29.8	92.0	4.4	10.5
Product 1 to 3	48.2	2.4	10.8	19.4	24.7	93.3	7.9	16.3
Product 1 to 4	300.0	15.0	1.79	21.8	23.1	96.4	55.3	95.0
Product 5	1696.5	85.0	0.01	3.12	0.21	3.6	44.7	5.0
Feed	1996.5	100	0.28	5.93	3.65	100	100	100

PROJECT NO: KM1882-09

PURPOSE: Investigate the Effect of Finer Regrind With NaCN.

PROCEDURE: Perform a one product batch cleaner test.

FEED: 2 kg of Louise Lake Composite 1 ore ground to a nominal 100 μm K_{80}.

FLOWSHEET: 2

Stage	Reagents Added g/tonne					Time (minutes)			pH
	Lime	NaCN	PAX	F549	MIBC	Grind	Cond.	Float	
Primary Grind	500					16			9.4
Rougher 1	√		2	13	16		1	2	10.0
Rougher 2			2	-	-		1	2	10.0
Regrind	200	10				10			10.9
Cleaner 1	0		1		16		1	5	10.8
Cleaner 2	√		0		16		1	4	11.0
Cleaner 3	√		0		8		1	2	11.5

Flotation Data	Rougher	Cleaner
Flotation Machine:	D2B	D12
Cell Size in liters:	4.4	2.2
Air Aspiration:	Supercharged	
Impeller Speed in rpm:	1100	1200

Grinding Data	Primary Grind	Regrind
Mill:	M5-Mild	RM2-Mild
Charge/Material:	20 kg-Mild	6 kg-Mild
Water:	1000 ml	estimated

KM1882-09 Louise Lake Composite 1

Overall Metallurgical Balance

Product	Weight		Assay			Distribution		
	grams	%	Cu	Fe	S	Cu	Fe	S
Cu Concentrate	18.9	0.9	26.9	16.1	27.2	90.6	2.5	6.9
Cu 3rd Cleaner Tl	1.5	0.1	3.27	27.6	29.7	0.9	0.3	0.6
Cu 2nd Cleaner Tl	10.8	0.5	0.62	19.3	18.8	1.2	1.7	2.7
Cu 1st Cleaner Tl	230.0	11.5	0.08	26.2	27.1	3.3	50.2	84.1
Cu Rougher Tl	1736.8	86.9	0.01	3.12	0.24	4.0	45.2	5.6
Feed	1998.0	100	0.28	6.01	3.71	100	100	100

KM1882-09 Louise Lake Composite 1

Cumulative Metallurgical Balance

Cumulative	Cum. Weight		Assay			Distribution		
Product	grams	%	Cu	Fe	S	Cu	Fe	S
Product 1	18.9	0.9	26.9	16.1	27.2	90.6	2.5	6.9
Product 1 to 2	20.4	1.0	25.2	16.9	27.4	91.5	2.9	7.5
Product 1 to 3	31.2	1.6	16.7	17.8	24.4	92.7	4.6	10.3
Product 1 to 4	261.2	13.1	2.06	25.2	26.8	96.0	54.8	94.4
Product 5	1736.8	86.9	0.01	3.12	0.24	4.0	45.2	5.6
Feed	1998.0	100	0.28	6.01	3.71	100	100	100

PROJECT NO: KM1882-10

PURPOSE: Investigate the Effect of Finer Regrind Sizing.

PROCEDURE: Perform a one product batch cleaner test with regrind and three stages of dilution cleaning at pH 11.8, 11.0 and 11.5.

FEED: 2 kg of Louise Lake Composite 1 ore ground to a nominal 100μm K_{80}.

FLOWSHEET: 2

Stage	Reagents Added g/tonne				Time (minutes)			pH
	Lime	PAX	F549	MIBC	Grind	Cond.	Float	
Primary Grind	600				16			9.9
Rougher 1	√	2	13	16		1	2	10.0
Rougher 2		2		8		1	2	10.0
Regrind	200				15			10.1
Cleaner 1	185	0.5		16		1	5	11.0
Cleaner 2	√	0		16		1	4	11.0
Cleaner 3	√	0		8		1	2	11.5

Flotation Data	Rougher	Cleaner
Flotation Machine:	D2B	D1B
Cell Size in liters:	4.4	2.2
Air Aspiration:	Supercharged	
Impeller Speed in rpm:	1100	1200

Grinding Data	Primary Grind	Regrind
Mill:	M5-Mild	RM2-Mild
Charge/Material:	20 kg-Mild	6 kg-Mild
Water:	1000 ml	estimated

KM1882-10 Louise Lake Composite 1

Overall Metallurgical Balance

Product	Weight		Assay			Distribution		
	grams	%	Cu	Fe	S	Cu	Fe	S
Cu Concentrate	13.5	0.7	29.6	15.4	26.5	69.8	1.8	4.9
Cu 3rd Cleaner Tl	7.2	0.4	14.0	22.7	27.3	17.6	1.4	2.7
Cu 2nd Cleaner Tl	12.5	0.6	1.24	21.8	21.3	2.7	2.3	3.7
Cu 1st Cleaner Tl	235.7	11.8	0.13	25.1	25.0	5.4	50.0	80.9
Cu Rougher Tl	1736.1	86.6	0.02	3.04	0.33	4.5	44.6	7.8
Feed	2005.0	100	0.29	5.90	3.63	100	100	100

KM1882-10 Louise Lake Composite 1

Cumulative Metallurgical Balance

Cumulative Product	Cum. Weight		Assay			Distribution		
	grams	%	Cu	Fe	S	Cu	Fe	S
Product 1	13.5	0.7	29.6	15.4	26.5	69.8	1.8	4.9
Product 1 to 2	20.7	1.0	24.2	17.9	26.8	87.4	3.1	7.6
Product 1 to 3	33.2	1.7	15.5	19.4	24.7	90.1	5.4	11.3
Product 1 to 4	268.9	13.4	2.03	24.4	25.0	95.5	55.4	92.2
Product 5	1736.1	86.6	0.02	3.04	0.33	4.5	44.6	7.8
Feed	2005.0	100	0.29	5.90	3.63	100	100	100

PROJECT NO: KM1882-11

PURPOSE: Preliminary Locked Cycle Test.

PROCEDURE: Perform a one product locked cycle test with regrind and three stages of dilution cleaning at pH 11.0, 11.0 and 11.5.

FEED: 2 kg of Louise Lake Composite 1 ore ground to a nominal 100μm K_{80}.

FLOWSHEET: 3

Stage	Reagents Added g/tonne				Time (minutes)			pH
	Lime	PAX	F549	MIBC	Grind	Cond.	Float	
Primary Grind	600				16			9.8
Rougher 1	√	2	13	16		1	2	10.0
Rougher 2		2		16		1	2	10.0
Regrind	200				15			9.8
Cleaner 1	305	0.5		16		1	5	11.0
Cleaner 2	√	0		16		1	4	11.0
Cleaner 3	√	0		8		1	2	11.5

Flotation Data	Rougher	Cleaner
Flotation Machine:	D2B	D1B
Cell Size in liters:	4.4	2.2
Air Aspiration:	Supercharged	
Impeller Speed in rpm:	1100	1200

Grinding Data	Primary Grind	Regrind
Mill:	M5-Mild	RM2-Mild
Charge/Material:	20 kg-Mild	6 kg-Mild
Water:	1000 ml	estimated

KM1882-11
Estimated Dry Weight Table

Product	Cycles - Weight (gms)				
	I	II	III	IV	V
COPPER CIRCUIT					
Rougher Concentrate	270	300	300	305	290
Cleaner Tail 1	240	300	300	310	300
Cleaner Tail 2	17	30	28	28	39
Cleaner Tail 3	10	11	11	11	11
Copper Concentrate	16	18	20	20	19
Primary Discharge pH	9.8	9.9	9.6	9.6	9.6

KM1882-11 Louise Lake Composite 1

OVERALL CYCLE TEST MASS AND METAL BALANCE

Product	Weight	Weight	Assay			Distribution		
	g	%	Cu	Fe	S	Cu	Fe	S
Copper Concentrate I	12.8	0.1	31.1	14.7	26.9	14.2	0.3	1.0
Copper Concentrate II	16.2	0.2	29.3	15.2	26.0	17.0	0.4	1.2
Copper Concentrate III	16.2	0.2	29.6	15.3	26.4	17.2	0.4	1.2
Copper Concentrate IV	16.4	0.2	29.3	15.5	26.3	17.2	0.5	1.2
Copper Concentrate V	15.9	0.2	28.5	15.8	26.3	16.2	0.4	1.2
Copper 3rd Cleaner Tail	7.6	0.1	13.2	20.7	25.1	3.6	0.3	0.5
Copper 2nd Cleaner Tail	28.4	0.3	1.42	15.3	14.3	1.4	0.8	1.2
Copper 1st Cleaner Tail I	221.4	2.2	0.18	26.1	26.4	1.4	10.3	16.6
Copper 1st Cleaner Tail II	265.5	2.7	0.18	22.0	21.6	1.7	10.4	16.2
Copper 1st Cleaner Tail III	268.7	2.7	0.21	23.0	23.3	2.0	11.0	17.7
Copper 1st Cleaner Tail IV	278.9	2.8	0.22	22.6	22.7	2.2	11.2	17.9
Copper 1st Cleaner Tail V	260.7	2.6	0.19	18.0	17.3	1.8	8.3	12.8
Copper Rougher Tail I	1749.2	17.5	0.01	3.0	0.57	0.8	9.4	2.8
Copper Rougher Tail II	1706.5	17.1	0.01	2.9	0.30	0.8	8.9	1.4
Copper Rougher Tail III	1716.9	17.2	0.01	3.0	0.66	0.7	9.1	3.2
Copper Rougher Tail IV	1685.3	16.9	0.01	3.1	0.51	0.8	9.3	2.4
Copper Rougher Tail V	1716.2	17.2	0.02	2.9	0.28	0.9	8.9	1.4
FEED	9983	100.0	0.28	5.6	3.54	100.0	100.0	100.0

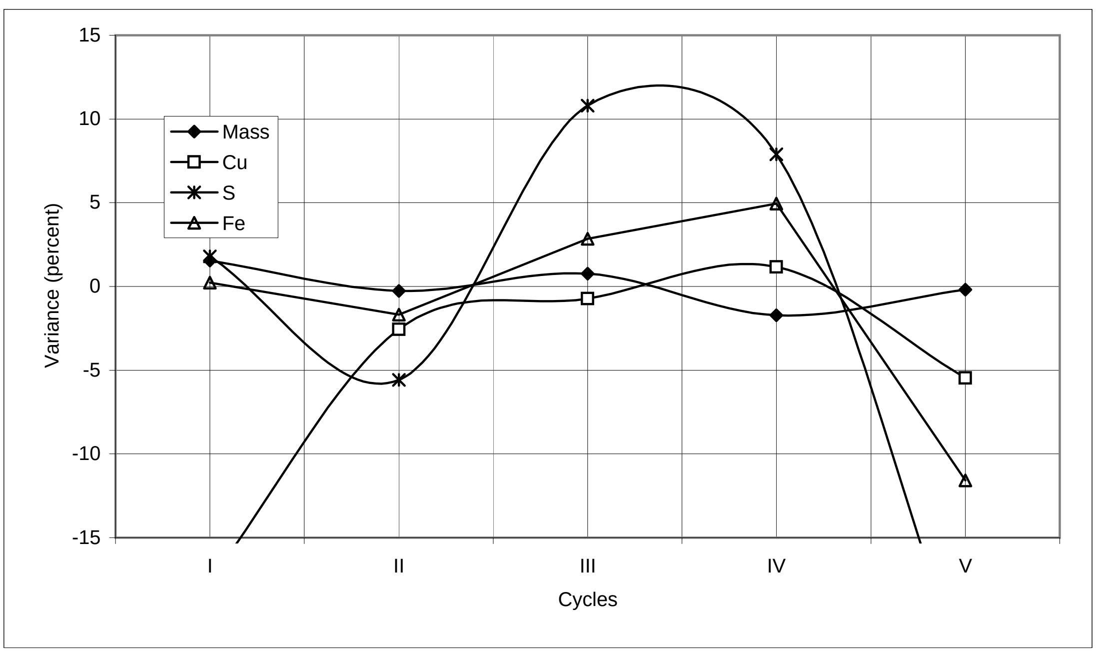
KM1882-11 Louise Lake Composite 1

METALLURGICAL BALANCES BY TEST CYCLES

Product	Weight g	Weight %	Cu	Fe	S	Cu	Fe	S
CYCLE IV								
Flotation Feed	1980.6	100.0	0.29	6.0	3.84	100.0	100.0	100.0
Copper Concentrate	16.4	0.8	29.3	15.5	26.3	85.0	2.2	5.7
Copper 1st Cleaner Tail	278.9	14.1	0.22	22.6	22.70	10.9	53.3	83.1
Copper Rougher Tail	1685.3	85.1	0.01	3.1	0.51	4.2	44.5	11.2
CYCLE V								
Flotation Feed	1992.8	100.0	0.27	5.0	2.72	100.0	100.0	100.0
Copper Concentrate	15.9	0.8	28.5	15.8	26.3	85.8	2.5	7.7
Copper 1st Cleaner Tail	260.7	13.1	0.19	18.0	17.30	9.4	47.1	83.4
Copper Rougher Tail	1716.2	86.1	0.02	2.9	0.28	4.9	50.3	8.9
CYCLES IV and V								
Flotation Feed	3973.4	100.0	0.28	5.5	3.28	100.0	100.0	100.0
Copper Concentrate	32.3	0.8	28.9	15.6	26.3	85.4	2.3	6.5
Copper 1st Cleaner Tail	539.6	13.6	0.21	20.4	20.10	10.1	50.5	83.2
Copper Rougher Tail	3401.5	85.6	0.01	3.0	0.39	4.5	47.2	10.3

Cycle Test Stability Data

	Mass		Calculated Head			Metal Unit Variances (%)		
Cycles	g/cycle	%Var.	Cu	Fe	S	Cu	Fe	S
I	2027.5	1.55	0.23	5.6	3.54	-18	0	2
II	1991.4	-0.26	0.27	5.6	3.35	-3	-2	-6
III	2012.0	0.77	0.28	5.8	3.89	-1	3	11
IV	1962.4	-1.71	0.29	6.0	3.88	1	5	8
V	1992.8	-0.19	0.27	5.0	2.72	-5	-12	-23
Total	1996.56	-	0.28	5.6	3.54	-	-	-



KM1882-11 Louise Lake Composite 1

CYCLES (IV+V) MASS BALANCE FLOWSHEET AND METALLURGICAL BALANCE DATA

Flotation Stream		Weight	Assay (percent or g/t)			Distribution (percent)		
No.	Product	%	Cu	Fe	S	Cu	Fe	S
1	Cu Rougher Feed	100.0	0.28	5.5	3.28	100.0	100.0	100.0
2	Cu Rougher Tail	85.6	0.01	3.0	0.39	4.5	47.2	10.3
3	Cu Rougher Concentrate	14.4	1.83	20.1	20.45	95.5	52.8	89.7
4	Cu 1st Cleaner Feed	16.2	2.06	19.7	20.02	121.1	58.3	98.9
5	Cu 1st Cleaner Tail	13.6	0.21	20.4	20.10	10.1	50.5	83.2
6	Cu 1st Clnr Concentrate	2.6	11.7	16.2	19.60	111.0	7.7	15.7
7	Cu 2nd Cleaner Tail	1.4	1.42	15.3	14.30	7.4	4.0	6.2
8	Cu 2nd Cleaner Concentrate	1.2	23.9	17.3	25.9	103.6	3.8	9.4
9	Cu 3rd Cleaner Tail	0.4	13.2	20.7	25.10	18.3	1.4	2.9
10	Cu 3rd cleaner Concentrare	0.8	28.9	15.6	26.3	85.4	2.3	6.5
11	Total Tail	99.2	0.04	5.4	3.09	14.6	97.7	93.5

APPENDIX III – KM1882

PARTICLE SIZING DATA

INDEX

TABLE III-1
SCREEN ANALYSIS
KM1882 Louise Lake Composite 1 - 10 Minute Grind Calibration

Product	Particle Size µm	Weight % Retained	Cumulative % Passing
35 Mesh	425	0.00	100.0
48 Mesh	300	0.13	99.9
65 Mesh	212	6.75	93.1
100 Mesh	150	16.38	76.8
150 Mesh	106	14.25	62.5
200 Mesh	75	11.00	51.5
270 Mesh	53	8.75	42.8
400 Mesh	38	7.25	35.5
TOTAL		100.00	**

K80 =162µm

Note: 10 min. grind calibration using 2 kg. ore, 1000 ml water and 20 kg. of mild steel rods in mill: M5

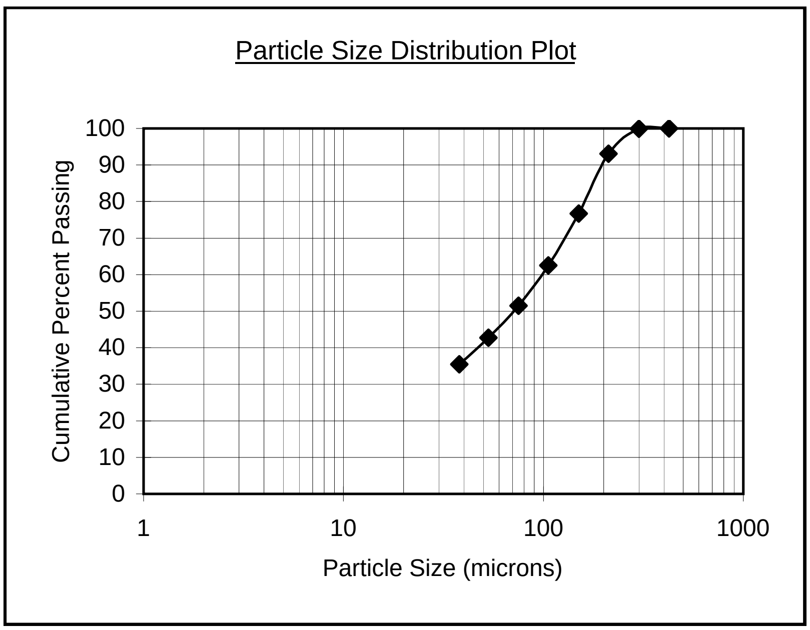


TABLE III-2
CYCLOSIZING ANALYSIS
KM1882 Louise Lake Composite 1 - 10 Minute Grind Calibration

Product	Size (µm)		Weight % Retained	Cumulative % Passing
	Limiting	Effective		
35 Mesh	425	425	0.00	100.0
48 Mesh	300	300	0.13	99.9
65 Mesh	212	212	6.75	93.1
100 Mesh	150	150	16.38	76.8
150 Mesh	106	106	14.25	62.5
200 Mesh	75	75	11.00	51.5
270 Mesh	53	53	8.75	42.8
Cyclone 1	45	42	2.88	39.9
Cyclone 2	31	29	4.88	35.0
Cyclone 3	22	20	5.50	29.5
Cyclone 4	15	14	4.25	25.3
Cyclone 5	12	11	2.63	22.6
Total			100.00	**

Operating Conditions	Measured	Factor
Temperature (°C)	18.00	1.019
Specific Gravity	2.87	0.947
Flow Rate (mm)	180	1.012
Elutriation Time (min)	20	0.955
Overall Factor		0.933
K80 Size (microns)		**162**

Note: 10 min. grind calibration using 2 kg. ore, 1000 ml water and
20 kg. of mild steel rods in mill: M5

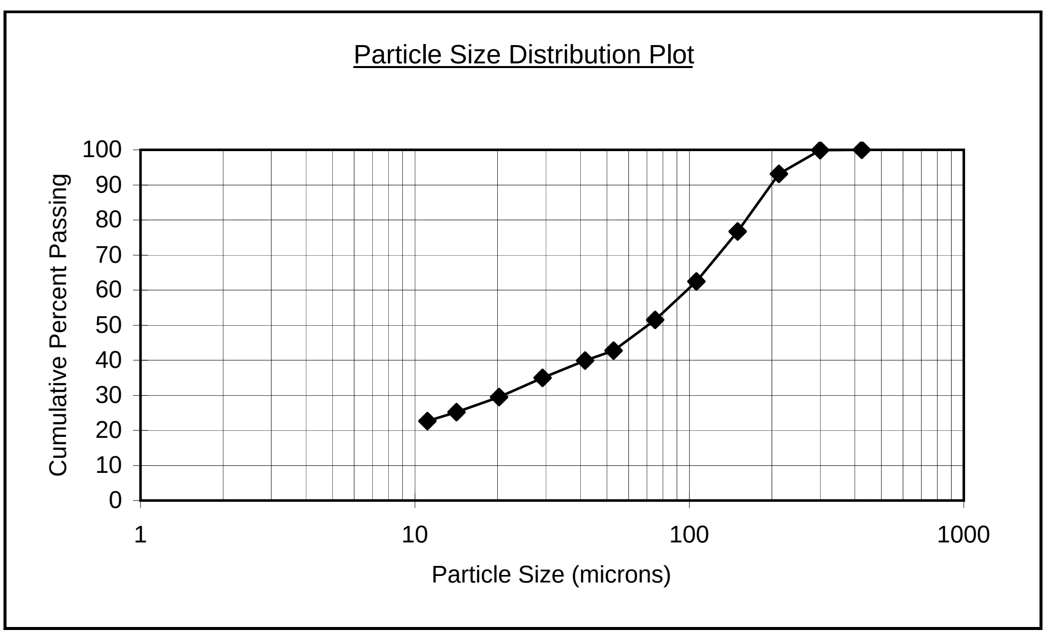


TABLE III-3
SCREEN ANALYSIS
KM1882-01 Bulk Rougher Tail

Product	Particle Size µm	Weight % Retained	Cumulative % Passing
65 Mesh	212	0.00	100.0
100 Mesh	150	1.13	98.9
150 Mesh	106	12.75	86.1
200 Mesh	75	17.00	69.1
270 Mesh	53	13.38	55.8
400 Mesh	38	9.88	45.9
TOTAL		100.00	**

K80 =94µm

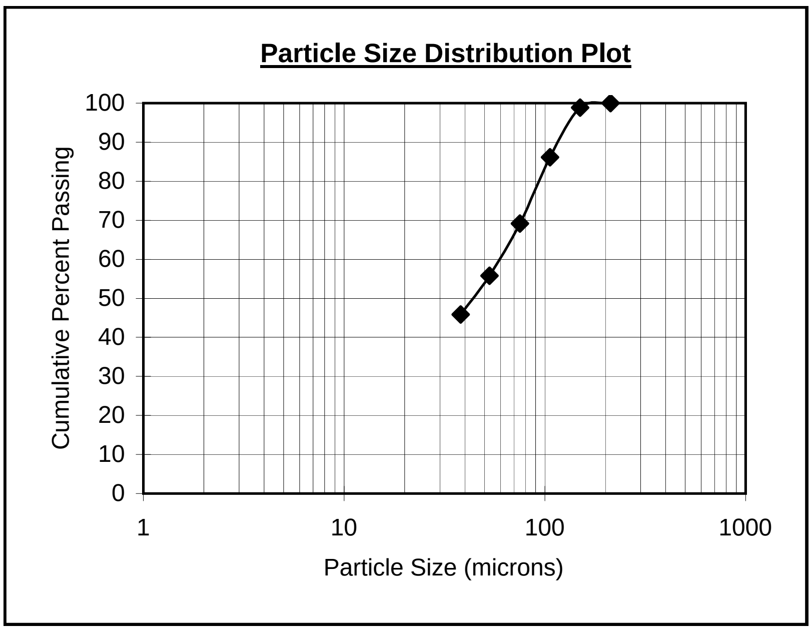


TABLE III-4
SCREEN ANALYSIS
KM1882-04 Copper Regrind Discharge

Product	Particle Size µm	Weight % Retained	Cumulative % Passing
100 Mesh	150	0.00	100.0
150 Mesh	106	0.29	99.7
200 Mesh	75	4.71	95.0
270 Mesh	53	17.21	77.8
400 Mesh	38	12.79	65.0
TOTAL		100.00	**

K80 =56µm

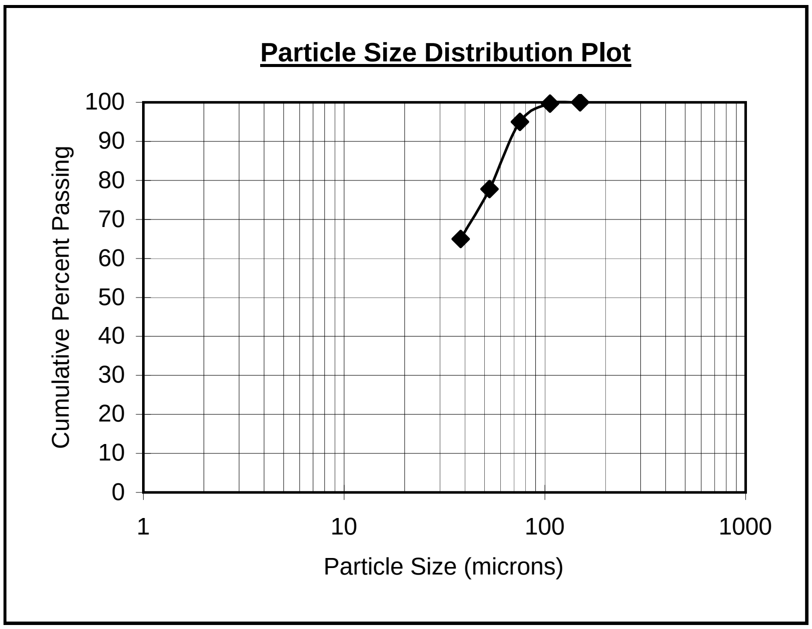
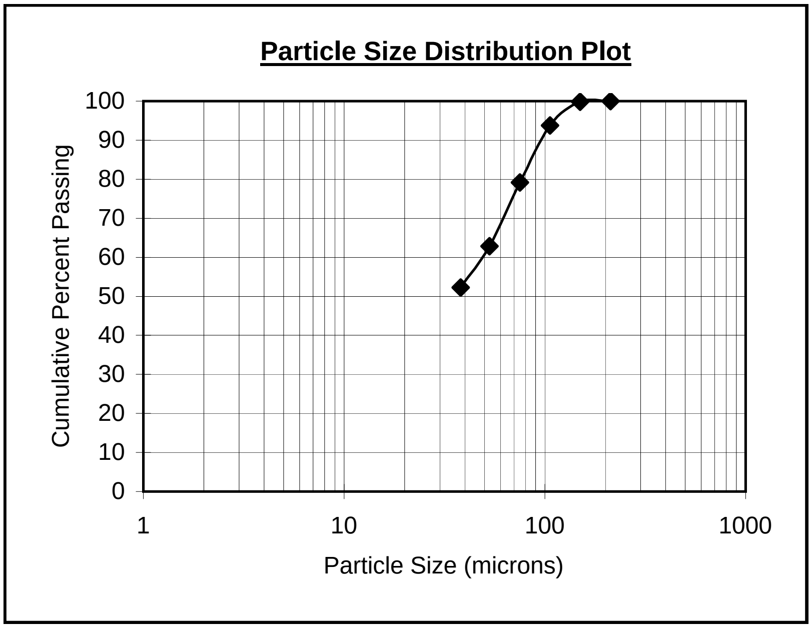


TABLE III-5
SCREEN ANALYSIS
KM1882-06 Flotation Feed

Product	Particle Size µm	Weight % Retained	Cumulative % Passing
65 Mesh	212	0.00	100.0
100 Mesh	150	0.13	99.9
150 Mesh	106	6.13	93.8
200 Mesh	75	14.63	79.1
270 Mesh	53	16.25	62.9
400 Mesh	38	10.63	52.3
TOTAL		100.00	**

K80 =77µm



MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Sample Name:
Copper Regrind Discharge - Average

SOP Name:

Measured:
Thursday, October 19, 2006 7:58:24 AM

Sample Source & type:
Factory = Louise Lake

Measured by:
Justin

Analysed:
Thursday, October 19, 2006 7:58:25 AM

Sample bulk lot ref:
1882-08

Result Source:
Averaged

Particle Name:
Silica 0.1

Accessory Name:
Hydro 2000MU (A)

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.544

Absorption:
0.1

Size range:
0.100 to 1000.000 um

Obscuration:
36.13 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.687 %

Result Emulation:
Off

Concentration:
0.0269 %Vol

Span :
5.160

Uniformity:
1.56

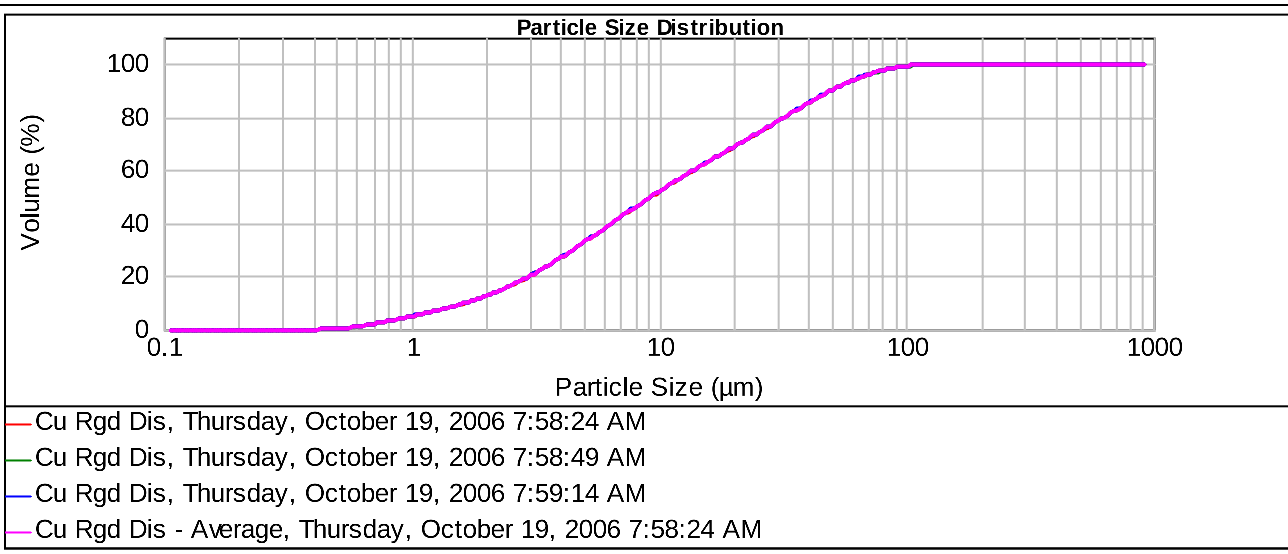
Result units:
Volume

Specific Surface Area:
1.41 m²/g

Surface Weighted Mean D[3,2]:
4.252 um

Vol. Weighted Mean D[4,3]:
18.524 um

d(0.1): 1.653 um **d(0.5): 9.290 um** **d(0.8): 32.208 um** **d(0.9): 49.587 um**



Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %
0.010	0.00	0.105	0.00	1.096	1.29	11.482	3.41	120.226	0.10	1258.925	0.00
0.011	0.00	0.120	0.00	1.259	1.39	13.183	3.31	138.038	0.00	1445.440	0.00
0.013	0.00	0.138	0.00	1.445	1.57	15.136	3.23	158.489	0.00	1659.587	0.00
0.015	0.00	0.158	0.00	1.660	1.83	17.378	3.21	181.970	0.00	1905.461	0.00
0.017	0.00	0.182	0.00	1.905	2.14	19.953	3.22	208.930	0.00	2187.762	0.00
0.020	0.00	0.209	0.00	2.188	2.46	22.909	3.27	239.883	0.00	2511.886	0.00
0.023	0.00	0.240	0.00	2.512	2.79	26.303	3.32	275.423	0.00	2884.032	0.00
0.026	0.00	0.275	0.00	2.884	3.09	30.200	3.34	316.228	0.00	3311.311	0.00
0.030	0.00	0.316	0.00	3.311	3.35	34.674	3.30	363.078	0.00	3801.894	0.00
0.035	0.00	0.363	0.00	3.802	3.57	39.811	3.16	416.869	0.00	4365.158	0.00
0.040	0.00	0.417	0.13	4.365	3.72	45.709	2.92	478.630	0.00	5011.872	0.00
0.046	0.00	0.479	0.44	5.012	3.82	52.481	2.57	549.541	0.00	5754.399	0.00
0.052	0.00	0.550	0.76	5.754	3.86	60.256	2.14	630.957	0.00	6606.934	0.00
0.060	0.00	0.631	0.96	6.607	3.84	69.183	1.66	724.436	0.00	7585.776	0.00
0.069	0.00	0.724	1.10	7.586	3.77	79.433	1.19	831.764	0.00	8709.636	0.00
0.079	0.00	0.832	1.18	8.710	3.66	91.201	0.76	954.993	0.00	10000.000	
0.091	0.00	0.955	1.23	10.000	3.54	104.713	0.43	1096.478	0.00		
0.105		1.096		11.482		120.226		1258.925			

Operator notes:

MASTERSIZER 2000

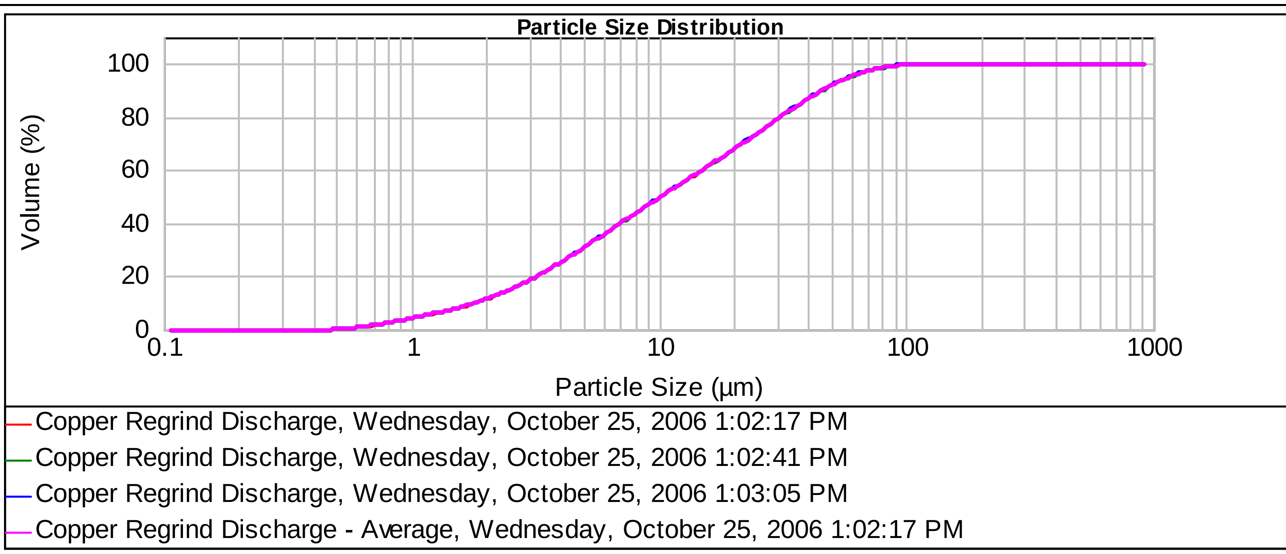
Result Analysis Report

Sample Name: Copper Regrind Discharge - Average	**SOP Name:**	**Measured:** Wednesday, October 25, 2006 1:02:17 PM
Sample Source & type:	**Measured by:** Justin	**Analysed:** Wednesday, October 25, 2006 1:02:18 PM
Sample bulk lot ref: **KM1882-10**	**Result Source:** Averaged	

Particle Name: Silica 0.1	**Accessory Name:** Hydro 2000MU (A)	**Analysis model:** General purpose	**Sensitivity:** Normal
Particle RI: 1.544	**Absorption:** 0.1	**Size range:** 0.100 to 1000.000 um	**Obscuration:** 24.52 %
Dispersant Name: Water	**Dispersant RI:** 1.330	**Weighted Residual:** 0.698 %	**Result Emulation:** Off

Concentration: 0.0178 %Vol	**Span :** 4.298	**Uniformity:** 1.33	**Result units:** Volume
Specific Surface Area: 1.31 m²/g	**Surface Weighted Mean D[3,2]:** 4.566 um	**Vol. Weighted Mean D[4,3]:** 17.934 um	

d(0.1): 1.801 um **d(0.5): 10.185 um** **d(0.8): 31.064 um** **d(0.9): 45.581 um**



Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %	Size (µm)	Volume In %
0.010	0.00	0.105	0.00	1.096	1.19	11.482	3.58	120.226	0.01	1258.925	0.00
0.011	0.00	0.120	0.00	1.259	1.29	13.183	3.58	138.038	0.00	1445.440	0.00
0.013	0.00	0.138	0.00	1.445	1.47	15.136	3.63	158.489	0.00	1659.587	0.00
0.015	0.00	0.158	0.00	1.660	1.73	17.378	3.71	181.970	0.00	1905.461	0.00
0.017	0.00	0.182	0.00	1.905	2.03	19.953	3.80	208.930	0.00	2187.762	0.00
0.020	0.00	0.209	0.00	2.188	2.35	22.909	3.88	239.883	0.00	2511.886	0.00
0.023	0.00	0.240	0.00	2.512	2.67	26.303	3.91	275.423	0.00	2884.032	0.00
0.026	0.00	0.275	0.00	2.884	2.97	30.200	3.85	316.228	0.00	3311.311	0.00
0.030	0.00	0.316	0.00	3.311	3.22	34.674	3.66	363.078	0.00	3801.894	0.00
0.035	0.00	0.363	0.00	3.802	3.43	39.811	3.35	416.869	0.00	4365.158	0.00
0.040	0.00	0.417	0.00	4.365	3.59	45.709	2.92	478.630	0.00	5011.872	0.00
0.046	0.00	0.479	0.33	5.012	3.69	52.481	2.41	549.541	0.00	5754.399	0.00
0.052	0.00	0.550	0.66	5.754	3.73	60.256	1.85	630.957	0.00	6606.934	0.00
0.060	0.00	0.631	0.85	6.607	3.74	69.183	1.32	724.436	0.00	7585.776	0.00
0.069	0.00	0.724	1.00	7.586	3.70	79.433	0.83	831.764	0.00	8709.636	0.00
0.079	0.00	0.832	1.08	8.710	3.66	91.201	0.47	954.993	0.00	10000.000	
0.091	0.00	0.955	1.13	10.000	3.61	104.713	0.12	1096.478	0.00		
0.105		1.096		11.482		120.226		1258.925			

Operator notes:

MALVERN INSTRUMENTS

MASTERSIZER 2000

Result Analysis Report

Sample Name:
Copper Regrind Discharge V - Average

SOP Name:

Measured:
Wednesday, October 25, 2006 1:07:41 PM

Sample Source & type:
KM1882-11

Measured by:
Justin

Analysed:
Wednesday, October 25, 2006 1:07:42 PM

Sample bulk lot ref:

Result Source:
Averaged

Particle Name:
Silica 0.1

Accessory Name:
Hydro 2000MU (A)

Analysis model:
General purpose

Sensitivity:
Normal

Particle RI:
1.544

Absorption:
0.1

Size range:
0.100 to 1000.000 um

Obscuration:
32.59 %

Dispersant Name:
Water

Dispersant RI:
1.330

Weighted Residual:
0.786 %

Result Emulation:
Off

Concentration:
0.0220 %Vol

Span :
4.730

Uniformity:
1.44

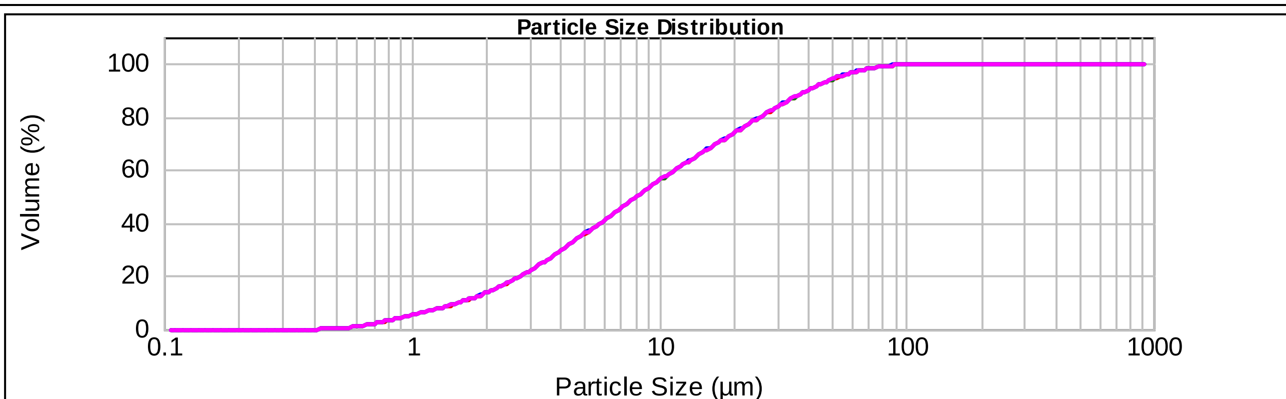
Result units:
Volume

Specific Surface Area:
1.51 m²/g

Surface Weighted Mean D[3,2]:
3.970 um

Vol. Weighted Mean D[4,3]:
15.296 um

d(0.1): 1.549 um **d(0.5): 8.107 um** **d(0.8): 25.756 um** **d(0.9): 39.900 um**



Copper Regrind Discharge V, Wednesday, October 25, 2006 1:07:41 PM
Copper Regrind Discharge V, Wednesday, October 25, 2006 1:08:05 PM
Copper Regrind Discharge V, Wednesday, October 25, 2006 1:08:30 PM
Copper Regrind Discharge V - Average, Wednesday, October 25, 2006 1:07:41 PM

Size (μm)	Volume In %	Size (μm)	Volume In %	Size (μm)	Volume In %	Size (μm)	Volume In %	Size (μm)	Volume In %	Size (μm)	Volume In %
0.010	0.00	0.105	0.00	1.096	1.41	11.482	3.62	120.226	0.00	1258.925	0.00
0.011	0.00	0.120	0.00	1.259	1.53	13.183	3.53	138.038	0.00	1445.440	0.00
0.013	0.00	0.138	0.00	1.445	1.74	15.136	3.48	158.489	0.00	1659.587	0.00
0.015	0.00	0.158	0.00	1.660	2.02	17.378	3.45	181.970	0.00	1905.461	0.00
0.017	0.00	0.182	0.00	1.905	2.36	19.953	3.42	208.930	0.00	2187.762	0.00
0.020	0.00	0.209	0.00	2.188	2.71	22.909	3.39	239.883	0.00	2511.886	0.00
0.023	0.00	0.240	0.00	2.512	3.06	26.303	3.32	275.423	0.00	2884.032	0.00
0.026	0.00	0.275	0.00	2.884	3.37	30.200	3.18	316.228	0.00	3311.311	0.00
0.030	0.00	0.316	0.00	3.311	3.64	34.674	2.95	363.078	0.00	3801.894	0.00
0.035	0.00	0.363	0.00	3.802	3.85	39.811	2.64	416.869	0.00	4365.158	0.00
0.040	0.00	0.417	0.09	4.365	3.99	45.709	2.25	478.630	0.00	5011.872	0.00
0.046	0.00	0.479	0.44	5.012	4.07	52.481	1.82	549.541	0.00	5754.399	0.00
0.052	0.00	0.550	0.80	5.754	4.08	60.256	1.37	630.957	0.00	6606.934	0.00
0.060	0.00	0.631	1.03	6.607	4.04	69.183	0.96	724.436	0.00	7585.776	0.00
0.069	0.00	0.724	1.20	7.586	3.96	79.433	0.59	831.764	0.00	8709.636	0.00
0.079	0.00	0.832	1.29	8.710	3.85	91.201	0.34	954.993	0.00	10000.000	
0.091	0.00	0.955	1.35	10.000	3.73	104.713	0.07	1096.478	0.00		
0.105		1.096		11.482		120.226		1258.925			

Operator notes:

APPENDIX IV – KM1882

SPECIAL ASSAYS AND
STATISTICAL INFORMATION

INDEX

TABLE IV-1
REPLICATE HEAD ASSAY DATA

Composite	Replicate	Assays - percent or g/tonne				
		Cu	Fe	S	Au	C
Composite 1	I	0.27	5.34	3.62	0	0.64
Composite 1	II	0.28	5.57	3.61	0	0.64
	Average	0.28	5.46	3.62	0.30	0.64
	Std Dev	0.01	0.16	0.01	0.02	0

Note: Silver is reported in g/tonne.

TABLE IV-2
STATISTICAL ANALYSIS OF HEAD ASSAYS

Test	Assays - percent			
	Cu	Fe	S	C
1	0.27	5.88	3.76	0.63
2	0.28	5.65	3.58	0.64
3	0.27	5.57	3.56	0.64
4	0.27	5.76	3.48	0.62
5	0.29	5.79	3.65	0.65
6	0.27	5.87	3.52	0.65
7	0.26	5.97	3.52	-
8	0.28	5.93	3.65	-
9	0.28	6.01	3.71	-
10	0.29	5.90	3.63	-
11	0.28	5.64	3.54	-
Average	0.28	5.82	3.60	0.64
Std Dev	0.01	0.15	0.07	0.01

TABLE IV-3
COMPARATIVE CONCENTRATE ASSAYS

Test	Product	Copper Assay	
		AAS	Titre
4	Concentrate	19.7	-
7	Concentrate	22.6	22.8
8	Concentrate	24.1	24.0
9	Concentrate	26.7	26.9
10	Concentrate	29.7	29.6
11	Concentrate I	31.6	31.1
11	Concentrate II	29.5	29.3
11	Concentrate III	29.8	29.6
11	Concentrate IV	29.5	29.3
11	Concentrate V	28.3	28.5

TABLE IV-4A
SPECIAL ASSAY DATA - COPPER CONCENTRATES
Gold Arsenic

Test	Product	Assays - percent or g/tonne		
		Au	As(1)	As(2)
9	Concentrate	16.4	-	-
10	Concentrate	17.8	12.0	11.3
11	Concentrate I	20.3	12.6	11.8
11	Concentrate II	17.3	11.8	11.0
11	Concentrate III	20.2	12.0	11.1
11	Concentrate IV	18.6	11.8	11.0
11	Concentrate V	17.2	11.1	9.5
11	Concentrate I-V	18.7	11.9	10.9

TABLE IV-4B
ADDITIONAL ELEMENTS IN THE COPPER CONCENTRATE
Test 11 Concentrate I-V Composite

Element	Symbol	Units	Value
Silver	Ag	g/t	3.64
Lead	Pb	%	0.10
Zinc	Zn	%	0.69
Molybdenum	Mo	%	0.65
Bismuth	Bi	g/t	70
Cadmium	Cd	g/t	38
Cobalt	Co	g/t	<10
Nickel	Ni	g/t	40
Antimony	Sb	%	0.26
Mercury	Hg	g/t	2.2
Calcium	Ca	%	0.33
Selenium	Se	g/t	57
Silicon	Si	%	4.22
Aluminum	Al	%	0.97
Fluorine	F	g/t	<10

APPENDIX V – KM1882

MODAL ANALYSIS DATA

INDEX

TABLE 1A
SUMMARY OF PERCENT LIBERATION BY SIZE AND CLASS
Composite 1, 162µm K80
KM1882

Size Range	>150µm					<150>75µm					<75µm>C1				
Mineral Status	Cp	Bn	En	Py	Gn	Cp	Bn	En	Py	Gn	Cp	Bn	En	Py	Gn
Liberated	0.0	0.0	0.0	12.6	21.7	0.0	0.0	0.0	22.6	23.0	2.5	0.0	2.2	20.1	9.9
Binary - Cp		0.0	0.0	0.2	0.0		0.0	0.5	0.5	0.4		0.0	5.7	0.0	0.0
Binary - Bn	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Binary - En	0.0	0.0		0.2	0.2	0.4	0.0		0.5	0.1	1.4	0.0		0.3	0.1
Binary - Py	0.5	0.0	0.3		1.7	0.4	0.0	1.5		1.0	0.0	0.0	2.6		0.2
Binary - Gn	10.7	0.0	14.7	6.5		19.5	0.0	22.7	7.2		11.5	0.0	11.4	1.5	
Multiphase	1.0	0.0	2.9	0.4	0.0	0.4	0.0	1.0	1.0	0.1	0.4	0.0	0.4	0.2	0.0
Total	12.1	0.0	18.0	19.9	23.7	20.7	0.0	25.7	31.8	24.5	15.8	0.0	22.3	22.1	10.3

Size Range	<C1>C3					<C3>C5					<C5				
Mineral Status	Cp	Bn	En	Py	Gn	Cp	Bn	En	Py	Gn	Cp	Bn	En	Py	Gn
Liberated	4.4	0.0	6.0	10.8	10.1	9.9	0.0	4.4	4.7	7.1	17.5	0.0	7.8	9.6	24.0
Binary - Cp		100	2.2	0.0	0.0		0.0	1.7	0.0	0.0		0.0	3.0	0.1	0.0
Binary - Bn	0.3		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Binary - En	0.5	0.0		0.2	0.1	1.7	0.0		0.0	0.0	3.0	0.0		0.0	0.1
Binary - Py	0.0	0.0	2.2		0.1	0.3	0.0	0.0		0.0	0.5	0.0	0.0		0.1
Binary - Gn	8.3	0.0	4.8	0.4		1.8	0.0	0.7	0.1		3.2	0.0	1.2	0.2	
Multiphase	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	13.5	100.0	15.2	11.4	10.2	13.6	0.0	6.8	4.8	7.1	24.2	0.0	12.0	9.9	24.2

Mineral Status	Mineral Liberation-2 Dimensions					Mineral Liberation-3 Dimensions				
	Cp	Bn	En	Py	Gn	Cp	Bn	En	Py	Gn
Liberated	34.3	0.0	20.4	80.5	95.7	17.9	0.0	0.5	75.6	94.6
Binary - Cp		100	13.1	0.8	0.5		100	16.4	1.0	0.6
Binary - Bn	0.3		0.0	0.0	0.0	0.3		0.0	0.0	0.0
Binary - En	7.0	0.0		1.2	0.6	8.8	0.0		1.5	0.7
Binary - Py	1.7	0.0	6.7		3.1	2.1	0.0	8.3		3.9
Binary - Gn	55.0	0.0	55.5	15.9		68.8	0.0	69.3	19.9	
Multiphase	1.7	0.0	4.4	1.6	0.2	2.2	0.0	5.5	2.0	0.2
Total	100	100	100	100	100	100	100	100	100	100

Notes 1) Cp-Chalcopyrite, Bn-Bornite, En-Enargite, Py-Pyrite,
Gn-Nonsulphide gangue includes Magnetite and Hematite.
2) 0.0 Indicates these minerals were not observed during the counting procedure.
3) The 150 and 75µm sizing fractions correspond to the Tyler 100 and 200 mesh sieves. C1 to C5 indicates cyclones 1 to 5 on the cyclosizer.
4) Because the <C5 fraction is not counted an overall estimate is made by assuming the >C5 and the <C5 liberation values are identical.
5) The Total line is the distribution of mineral in the size fraction. Original data is from the size by assay and distribution tables.
6) The calculated liberation of the unsized product as measured in two dimensions has been converted to three dimensions using correction factors developed by G & T Metallurgical Services.
7) The three dimension liberation is zero if the liberation in two dimensions is less than 20 percent.

TABLE 1B

SIZE BY ASSAY AND DISTRIBUTION BASED ON METAL CONTENT

Composite 1, 162µm K80

Size Fraction	Weight %	Assays				Distribution			
		Cu	Fe			Cu	Fe		
>150µm	23.3	0.17	4.7			15.3	19.2		
<150>75µm	25.3	0.24	6.7			23.5	29.6		
<75µm>C1	11.6	0.43	10.3			19.4	21.0		
<C1>C3	10.4	0.36	6.2			14.5	11.3		
<C3>C5	6.9	0.37	5.2			9.9	6.2		
<C5	22.6	0.20	3.2			17.5	12.7		
Total	100	0.26	5.7			100	100		

Notes 1) The assays shown in this table are utilized to determine the mineralogical distribution shown in Table C

TABLE 1C

SIZE BY ASSAY AND DISTRIBUTION BASED ON MINERAL CONTENT

Composite 1, 162µm K80

Size Fraction	Weight %	Assays					Distribution				
		Cp	Bn	En	Py	Gn	Cp	Bn	En	Py	Gn
>150µm	23.3	0.18	0.00	0.23	9.2	90.4	12.1	0.0	18.0	19.9	23.7
<150>75µm	25.3	0.28	0.00	0.30	13.5	85.9	20.7	0.0	25.7	31.8	24.5
<75µm>C1	11.6	0.46	0.00	0.56	20.4	78.6	15.8	0.0	22.3	22.1	10.3
<C1>C3	10.4	0.44	0.00	0.43	11.8	87.3	13.5	100	15.2	11.4	10.2
<C3>C5	6.9	0.67	0.00	0.29	7.5	91.5	13.6	0.0	6.8	4.8	7.1
<C5	22.6	0.36	0.00	0.15	4.7	94.8	24.2	0.0	12.0	9.9	24.2
Total	100.0	0.34	0.00	0.29	10.7	88.6	100	100	100	100	100

Notes 1) Cp-Chalcopyrite, Bn-Bornite, En-Enargite, Py-Pyrite,
Gn-Nonsulphide gangue includes Magnetite and Hematite.
2) Mineral assays are based on gravimetric factors to convert the metal to the pure minera
3) See appendix I for details of gravimetric factors.
4) An assay value of "0" indicates the assay value is less than the detection limit.

TABLE 1D
ESTIMATED RELATIVE PROPORTION AND COMPOSITION OF MINERAL GRAINS
Composite 1, 162µm K80

Binary Component	Proportion by Weight-2D					Proportion by Weight-3D					Composition of Grains				
	Cp	Bn	En	Py	Gn	Cp	Bn	En	Py	Gn	Cp	Bn	En	Py	Gn
Liberated	0.12	0.00	0.06	8.6	84.8	0.06	0.00	0.00	8.1	83.8	100	100	100	100	100
Binary - Cp		0.00	0.04	0.1	0.4		0.00	0.05	0.1	0.5		9	62	94	70
Binary - Bn	0.00		0.00	0.0	0.0	0.00		0.00	0.0	0.0	91		0	0	0
Binary - En	0.02	0.00		0.1	0.5	0.03	0.00		0.2	0.7	38	0		87	76
Binary - Py	0.01	0.00	0.02		2.7	0.01	0.00	0.02		3.4	6	0	13		62
Binary - Gn	0.19	0.00	0.16	1.7		0.23	0.00	0.20	2.1		30	0	24	38	
Multiphase	0.01	0.00	0.01	0.2	0.1	0.01	0.00	0.02	0.2	0.2	2	0	4	50	44
Average Composition	0.34	0.00	0.29	10.7	88.6	0.34	0.00	0.29	10.7	88.6	23	0	45	74	97

Notes 1) The two-dimensional proportion of minerals is a weighted estimate which is based on the liberation and the mineral content of the unsized sample.
2) The three-dimensional data is based on converting the two dimensional liberation data using G & T Metallurgical Services correction factors.
3) Composition values of "0" represents values <2% and "100" represents values >98%.

TABLE 1E
DISTRIBUTION BY SIZE RANGE OF COPPER SULPHIDES AND IRON MINERALS
Composite 1, 162µm K80

Size Fraction	Wt %	% Copper Bearing Minerals						% Copper of Total Copper						% Iron Minerals			
		Cp	Bn	Ch	Cv	En	NCu	Cp	Bn	Ch	Cv	En	NCu	Po	Py	Ma	He
>150µm	23.3	43.9	0.0	0.0	0.0	56.1	0.0	35.9	0.0	0.0	0.0	64.1	0.0	0.0	94.3	5.7	0.0
<150>75µm	25.3	48.3	0.0	0.0	0.0	51.7	0.0	40.2	0.0	0.0	0.0	59.8	0.0	0.0	96.8	3.2	0.0
<75µm>C1	11.6	45.2	0.0	0.0	0.0	54.8	0.0	37.1	0.0	0.0	0.0	62.9	0.0	0.0	95.5	3.0	1.5
<C1>C3	10.4	50.8	0.1	0.0	0.0	49.1	0.0	42.5	0.2	0.0	0.0	57.3	0.0	0.0	93.6	3.2	3.2
<C3>C5	6.9	70.0	0.0	0.0	0.0	30.0	0.0	62.6	0.0	0.0	0.0	37.4	0.0	0.0	78.5	14.4	7.1
<C5	22.6	70.0	0.0	0.0	0.0	30.0	0.0	62.6	0.0	0.0	0.0	37.4	0.0	0.0	78.5	14.4	7.1
Total	100.0	53.6	0.0	0.0	0.0	46.4	0.0	45.7	0.0	0.0	0.0	54.3	0.0	0.0	90.3	7.1	2.6

Notes 1) Cp-Chalcopyrite, Bn-Bornite, Ch-Chalcocite, Cv-Covelite, En-Enargite, NCu-Native Copper, Po-Pyrrhotite, Py-Pyrite, Ma-Magnetite, He-Hematite.

TABLE 1F
COMPARATIVE ASSAY TABLE
Composite 1, 162µm K80

Assay Procedure	Mineral Assay - percent				
	Cp	Bn	En	Py	Gn
Chemical	0.3	<0.1	0.3	12.5	86.9
Point Count	0.3	<0.1	0.3	13.7	85.8

Notes 1) This table compares the mineral composition of the samples determined by chemical analysis with the composition determined by point count analysis.
2) The point count data is based on the relative number of grains observed for each mineral and their estimated densities.
3) The chemical and point count assay procedures are weighted averages of all size fractions excluding the <C5 fraction.

PROJECT: KM1882

PRODUCT: Composite 1, 162µm K80

SIZE RANGE: >150µm

WEIGHT OF MINERALS

Chalcopyrite	0.1
Bornite	0.0
Enargite	0.1
Pyrite	15.2
Gangue	84.5

Locking for Chalcopyrite

Liberated	Locked in Binary With: Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
0.0		0.0	0.0	4.0	88.0	8.0

Locking for Bornite

Liberated	Locked in Binary With: Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
0.0	0.0		0.0	0.0	0.0	0.0

Locking for Enargite

Liberated	Locked in Binary With: Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
0.0	0.0	0.0		1.6	82.0	16.4

Locking for Pyrite

Liberated	Locked in Binary With: Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
63.5	1.0	0.0	1.0		32.7	1.9

Locking for Gangue

Liberated	Locked in Binary With: Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
91.3	0.2	0.0	0.9	7.3		0.2

PROJECT: KM1882

PRODUCT: Composite 1, 162µm K80

SIZE RANGE: <150>75µm

WEIGHT OF MINERALS

Chalcopyrite	0.3
Bornite	0.0
Enargite	0.3
Pyrite	10.5
Gangue	88.9

Locking for Chalcopyrite

Liberated	Locked in Binary With: Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
0.0		0.0	2.0	2.0	94.0	2.0

Locking for Bornite

Liberated	Locked in Binary With: Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
0.0	0.0		0.0	0.0	0.0	0.0

Locking for Enargite

Liberated	Locked in Binary With: Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
0.0	2.0	0.0		5.9	88.2	3.9

Locking for Pyrite

Liberated	Locked in Binary With: Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
71.0	1.6	0.0	1.6		22.6	3.2

Locking for Gangue

Liberated	Locked in Binary With: Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
93.8	1.4	0.0	0.4	3.9		0.4

PROJECT: KM1882

PRODUCT: Composite 1, 162µm K80

SIZE RANGE: <75µm>C1

WEIGHT OF MINERALS

Chalcopyrite	0.3
Bornite	0.0
Enargite	0.3
Pyrite	21.6
Gangue	77.8

Locking for Chalcopyrite

	Locked in Binary With:					
Liberated	Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
15.9		0.0	9.1	0.0	72.7	2.3

Locking for Bornite

	Locked in Binary With:					
Liberated	Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
0.0	0.0		0.0	0.0	0.0	0.0

Locking for Enargite

	Locked in Binary With:					
Liberated	Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
9.8	25.5	0.0		11.8	51.0	2.0

Locking for Pyrite

	Locked in Binary With:					
Liberated	Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
90.9	0.0	0.0	1.5		6.8	0.8

Locking for Gangue

	Locked in Binary With:					
Liberated	Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
95.9	0.5	0.0	1.4	2.1		0.2

PROJECT: KM1882

PRODUCT: Composite 1, 162µm K80

SIZE RANGE: <C1>C3

WEIGHT OF MINERALS

Chalcopyrite	0.3
Bornite	0.0
Enargite	0.3
Pyrite	10.5
Gangue	88.9

Locking for Chalcopyrite

	Locked in Binary With:					
Liberated	Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
32.7		1.9	3.8	0.0	61.5	0.0

Locking for Bornite

	Locked in Binary With:					
Liberated	Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
0.0	100.0		0.0	0.0	0.0	0.0

Locking for Enargite

	Locked in Binary With:					
Liberated	Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
39.6	14.6	0.0		14.6	31.3	0.0

Locking for Pyrite

	Locked in Binary With:					
Liberated	Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
95.0	0.0	0.0	1.7		3.3	0.0

Locking for Gangue

	Locked in Binary With:					
Liberated	Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
98.5	0.1	0.0	0.5	0.9		0.0

PROJECT: KM1882

PRODUCT: Composite 1, 162µm K80

SIZE RANGE: <C3>C5

WEIGHT OF MINERALS

Chalcopyrite	0.8
Bornite	0.0
Enargite	0.3
Pyrite	11.6
Gangue	87.2

Locking for Chalcopyrite

	Locked in Binary With:					
Liberated	Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
72.4		0.0	12.2	2.0	13.3	0.0

Locking for Bornite

	Locked in Binary With:					
Liberated	Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
0.0	0.0		0.0	0.0	0.0	0.0

Locking for Enargite

	Locked in Binary With:					
Liberated	Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
65.0	25.0	0.0		0.0	10.0	0.0

Locking for Pyrite

	Locked in Binary With:					
Liberated	Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
97.1	0.9	0.0	0.0		2.1	0.0

Locking for Gangue

	Locked in Binary With:					
Liberated	Chalcopyrite	Bornite	Enargite	Pyrite	Gangue	Multiphase
99.4	0.1	0.0	0.2	0.3		0.0