



## ASSESSMENT REPORT TITLE PAGE AND SUMMARY

**TITLE OF REPORT:** 2014 GEOLOGICAL AND GEOCHEMICAL REPORT ON THE NEWMONT LAKE AREA

**TOTAL COST:** \$212038.94

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**YEAR OF WORK:** 2014

**PROPERTY NAME:** Newmont Lake Project

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

222489, 222490, 222491, 222492, 393653, 393654, 393656, 393657, 393658, 393659, 414379, 414380, 414381, 414382, 509239, 509240, 509243, 510300, 510301, 510302, 514295, 567889, 585826, 662924, 662947, 662953, 662957, 662960, 662961, 662966, 662969, 662970, 662972, 662974, 662978, 662981, 663003, 663024, 835462, 835463, 844939, 1012648, 1012650, 1020043, 1020044, 1020526, 1020797

**COMMODITIES SOUGHT:** Copper, Gold, Silver

**MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:**

**MINING DIVISION:** Liard

**NTS / BCGS:** 104G 04E

**LATITUDE:** \_\_\_\_\_ 57 \_\_\_\_\_ ° \_\_\_\_\_ 03 \_\_\_\_\_ ' \_\_\_\_\_ "

**LONGITUDE:** \_\_\_\_\_ 131 \_\_\_\_\_ ° \_\_\_\_\_ 40 \_\_\_\_\_ ' \_\_\_\_\_ " (at centre of work)

**UTM Zone:** 9 N      **EASTING:** 339300      **NORTHING:** 6328400

**OWNER(S):** Romios Gold Resources Inc.

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**OPERATOR(S) [who paid for the work]:** Romios Gold Resources Inc.

**MAILING ADDRESS:** Same

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**REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:**

Chadwick, P. (2010): 2010 Geological And Geochemical Report On The NE Block; Report submitted for assessment credit to the British Columbia Ministry of Energy, Mines and Petroleum Resources (#32048).

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Montgomery, A. T., Todoruk, S.L., and Ikona, C.K., 1991. The 1990 Summary Report on the GAB 9 Mineral Claim for Jazzman Resources Inc., prepared for Jazzman Resources Inc., submitted BC Geological Branch Assessment Report 21,152.

Nielsen, A. and Close, S. Romios Gold Resources Inc. 2012 Geological and Geochemical Report on the NE Block. British Columbia Ministry of Energy, Mines and Petroleum Resources (#33451).

Weekes, S., 2000, Geological, Geochemical and Prospecting Report on the McLymont 1-4 Mineral Claims, as report for Gulf International Minerals Ltd. filed as an assessment report to BC Geological Survey Brand Assessment Report 26,384.

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED
GEOLOGICAL (scale, area) Ground, mapping	25000m <sup>2</sup>	510302	\$2000.00
GEOPHYSICAL (line-kilometres) Ground			
Magnetic			
Induced Polarization			
Borehole			
AMT			
Airborne	372 line-km	510300 510301 510302 514295 414380 414379 414381 414382 585826 1020797 567889 222489 222490 222491 222492 393654 393656 393658 393659 662961 662969 662974 662978 663024 662924 662947 662957 662960 662966 662970 662972 663003 662953 835462 835463 1012648 1012650 1020526 1020043 1020044 393466 393464 393469 393463 393462 393465 393467 393468	\$9798.46

GEOCHEMICAL (number of samples analysed for <b>41 ICP, REE, and Gold</b> )			
Soil	26 Silt Samples	662981 1012650 393496 393467 393466 222490 222491 1020044 393654 393462 393658 393659 393657 509239	\$951.05
Rock	314 Rock Samples	509239 509240 509243 393657 393658 393656 393654 393653 510302 393468 393467 1020526 1012650 835462 663003 662981 844939	16198.19\$
Other			
AVIATION			\$63342.20
RELATED TECHNICAL			
Sampling / Assaying		510302 509239	\$14300
Petrographic			
Mineralographic			
PROSPECTING (scale/area)	100 m scale prospecting		\$24500.00
PREPATORY / PHYSICAL			
Line/grid (km)			
Topo/Photogrammetric (scale, area)			
Legal Surveys (scale, area)			
Road, local access (km)/trail			
Trench (number/metres)			
Underground development (metres)			
Other (Camp, logistics, travel; see budget in report)			82949.04
		<b>TOTAL COST</b>	<b>212038.94</b>

**ROMIOS GOLD RESOURCES INC.**

**GEOLOGICAL, PROSPECTING AND GEOCHEMICAL  
SAMPLING REPORT NEWMONT LAKE-TREK PROJECT  
JULY 21<sup>st</sup> - AUGUST 10<sup>th</sup>, 2014**

**Liard Mining Division  
NTS 104B/15W, 14E  
BCGS 104B 085, 086, 096  
56° 56' North Latitude  
131° 10' West Longitude**

**Prepared For:  
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**September 30, 2014**

## SUMMARY#

During the summer of 2014, Romios Gold Resources Inc. conducted a prospecting and sampling program that included the evaluation of various showings and mineralized occurrences at the Newmont Lake and Trek Properties. The three-week assessment and reconnaissance exploration program included a four-man team of geologists that were experienced within this northwestern portion of the Stikine Terrane. A total of 314 rock chip samples and reconnaissance rock samples were taken and 26 stream silt samples were also collected. Of these 314 rock samples, 17 were part of a standard QA/QC program that utilized the implementation of standards, blanks and duplicates during the sampling program.

The Stikine Island Arc Terrane is comprised of units from Paleozoic to Mesozoic ages. The property lies between the Eskay Creek deposit (approximately 30 km southeast of the Newmont Lake Project) and the Galore Creek project (15 km northwest of the Trek Project). The rocks are sedimentary, volcanic and intrusive in nature. Regionally, these units have been compressed, deformed and faulted along dominant northeast to northerly axes with minor extension to the east-west to southeast directions. Numerous types of mineralized bodies are found throughout the project area including massive-sulphide bodies, skarn and hydrothermal vein/breccia/stockwork occurrences, and possibly genetically related porphyry-type targets.

The focus of the 2014 program was to review the results from the 2013 exploration programs. This included the investigation of numerous air-borne electromagnetic and aeromagnetic airborne geophysical anomalies and to investigate the results from the prospecting and sampling program. Areas of priority included: Burgundy Ridge, Trek and the numerous geologically unexplained ZTEM and magnetic geophysical anomalies.

A four-man team of geologists completed an intensive mapping, prospecting and rock chip-line sampling program at Burgundy Ridge as part of an exploration program throughout the various claim blocks totaling over 67,000 hectares which comprises the Trek-Newmont Lake project. Spectacular copper and gold grades were obtained from new showings recently exposed by receding snowpack within Burgundy Ridge; values as high as 51.2 g/t Au with 9.11% Cu were obtained over 1.50 metre chip sample widths. Contiguous rock-chip samples averaged up to 12.14 g/t Au, 48.77 g/t Ag and 2.27% Cu over a six metre width. It's possible that a high-grade mineralized core exists within the broad low-grade disseminated copper-gold envelope of the Burgundy Zone.

Mineralization at Burgundy Ridge is associated with a garnet-epidote skarn system related to the intrusion of a series of dykes throughout a package of limestones and dolomitic limestones. The high-grade core of the system is centered in a low-grade envelope of disseminated copper-gold mineralization hosted in-part by dolomitic

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limestones, mega-phenocrystic K-spar syenite porphyry, syenite porphyry and diorite porphyry. The system was traced along a strike length of 350 metres where the system presumably continues under a snowfield to the north and a glacier to the south. The low-grade system was sampled over widths of 60-75 metres but mineralization continues in the westerly direction and is much wider than what was sampled. Further sampling is required to fully delineate the full width and extent of the mineralization. A total of 173 chip samples (predominantly at 1.50 metre wide contiguous chip samples) were taken along several chip lines but only 172 chip samples were used in the low-grade calculation which averaged 0.3491% Cu, 0.187 g/t Au, 3.81 g/t Ag, and 0.2685% Zn. The high-grade sample of 51.2 g/t Au, 171g/t Ag, and 9.11% Cu was removed from the low-grade average calculation. Adding this sample back to the data set would yield an average of 0.400% Cu, 0.481 g/t Au, 4.78 g/t Ag, and 0.2671% Zn for all 173 rock chip samples taken at the Burgundy Ridge Zone.

Diamond drill targets are recommended after completing a follow-up visit to further sample and potentially extend the mineralization to the south, west, north, and to depth as the snow-pack continues to recede.

Crews also prospected and sampled areas to the west and the northeast of Burgundy Ridge and made significant discoveries of similar style porphyry related copper-gold skarn mineralization. Mega-phenocrystic porphyritic syenite dykes and other potassic porphyritic dykes were sampled at the Telenia prospect located 850 metres northeast of the Burgundy Zone, a 10.5 metre rock-chip line averaged 0.384 g/t Au with 1.167% Cu. To the west approximately 1,800 metres of Burgundy Ridge, grab samples from the newly discovered Baxter Zone yielded up to 4.07% Cu while chip samples over 1.5 metres and 0.3 metres respectively yielded 0.27 g/t Au with 1.475% Cu and 2.96 g/t Au with 4.17% Cu. Further work is warranted to follow-up of this trend of porphyritic intrusives related to Cu-Au skarn mineralization. The total cost of the July-August exploration program was \$212,038.94 CDN.

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## INTRODUCTION

The Newmont Lake Property held by Romios Gold Resources is situated within the Golden Triangle mineralized district, located in northwestern British Columbia. The project area is located within the favorable geological belt of the Stikine Terrane and the project area lies 15 kilometres southeast of Galore Creek / Copper Canyon Projects 30 kilometres northwest Eskay Creek Deposit.

This report contains geo-chemical rock and stream sediment data, geological descriptions, observations and results from the July and August 2014 exploration program conducted by Romios Gold Resources at the Newmont Lake-Trek Project. Conclusions and recommendations were based on the data presented in this report and is considered to be of high quality. A certified laboratory was utilized and a quality assurance/quality control procedure was implemented for the rock chip sampling program.

## PROPERTY DESCRIPTION AND LOCATION

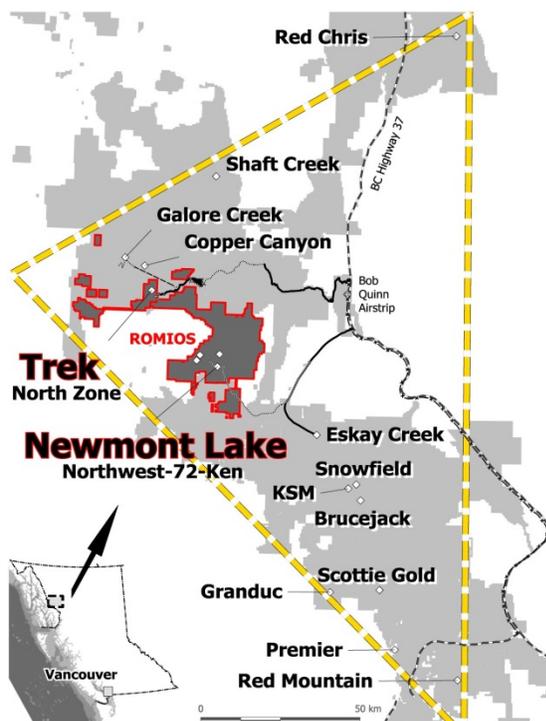


Figure 1: Location map of the Golden Triangle mineralized district in Northwest B.C.

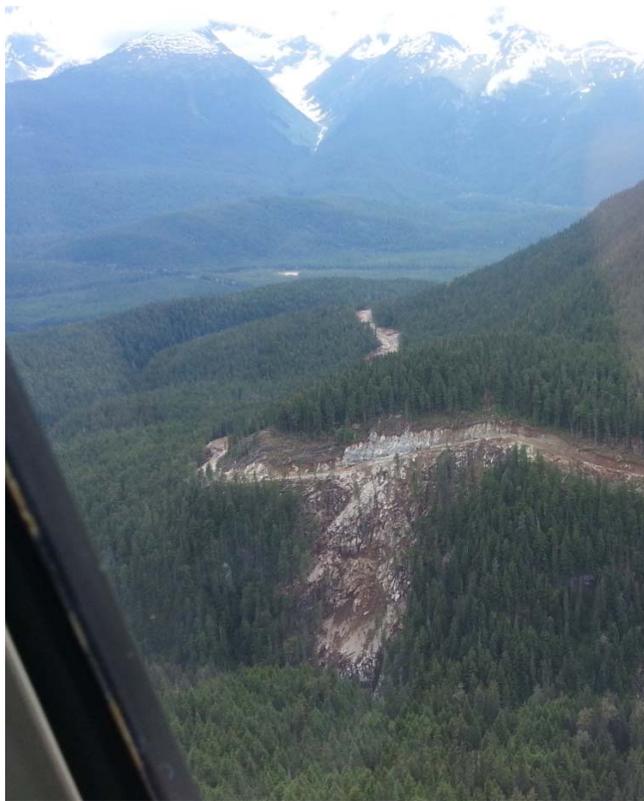
The Newmont Lake Project is situated within the Coast Range Mountains in northwestern British Columbia, approximately 150 kilometres northwest of Stewart and 100 kilometres south-southeast of Telegraph Creek. These claims lie within the Liard Mining Division, near north latitude  $57^{\circ} 5' 31''$  and west longitude  $131^{\circ} 18' 38''$ , between the Galore Creek and Copper Canyon deposits to the north; and, the KSM, Brucejack and Snowfield deposits, and the former Eskay Creek Mine to the south (figure 1).

A total of 70310.69 hectares of mineral tenures form the contiguous Newmont Lake and Trek Projects (Appendix I), owned by McLymont Mines (a 100% wholly-owned Romios subsidiary). Approximately 4,000 ha are under option with Roca Mines, of which Romios is the majority owner. A detailed tenure map is located in Appendix III.

## **ACCESSIBILITY, CLIMATE, PHYSIOGRAPHY AND INFRASTRUCTURE**

The Newmont Lake Project is located in the heart of the Golden Triangle in northwestern British Columbia just over 300 air-kilometres from either Terrace or Smithers. A small gravel airstrip can be accessed by small charter aircraft to land at the Bob Quinn Airstrip during the summer months. One can also drive five hours from either Terrace or Smithers by car along the Yellowhead Highway and north along Highway 37 to Bob Quinn Airstrip at Km 294. These paved highways are in excellent condition, from Bob Quinn Airstrip, helicopters are used to access the project. The McLymont Creek camp is 44 kilometres west-southwest of Bob Quinn airstrip (**Error! Reference source not found.**). Crews accessed the property by helicopter from the Bob Quinn Airstrip and Km 52 of the Eskay Creek Volcano Creek road where all supplies, food and fuel were staged from. This staging site was used to stay clear of blasting and construction activity at the Alta Gas hydroelectric project. The Volcano Creek staging site was 32 kilometres southeast of McLymont camp, however since that time, the entire road between Highway 37 and the McLymont Hydropower Project has since been completed. That road now leads to within five kilometres of the project area (figure 2). Full operation of the hydropower project is expected in 2015.

The topography around the Newmont Lake area is subdued in comparison to the steeper surrounding topography typical for the Coast Mountain Range, yet the area is considered to be rugged in nature. Elevations on the claims range from 100m near the Iskut River to



2140m for the highest peaks. The upper areas are commonly covered with snowfields or by small glaciers. Lower elevations are forest covered with stunted spruce, fir and cedar, typical of sub-alpine environments. Vegetation in the upper areas is sparse, with lichens and low-lying heather present on many slopes. Rocky outcrops, talus cover, and permanent snow and ice cover the majority of the landscape. At lower elevations, close to the Iskut River, patches of alder and devil's club are common on the steep mixed with mature forests of hemlock and spruce with underbrush of devil's club and huckleberry. The southernmost area contains large gravel bars and braided channels from the Iskut River as well as marsh and swampland. Portions of this wetland area are covered by marsh grasses and alder brush, whereas drier areas are covered by thick spruce forest.

Figure 2: View looking southwest over the new Alta Gas road construction to the McLymont Hydropower Project on McLymont Creek several kilometres south of the Newmont Lake property boundary.

Crews stayed at the McLymont Camp, a 20-man exploration camp constructed by Gulf International Minerals Ltd. in 1988. An office, kitchen, one bunkhouse and one smaller cabin are still in good condition as is the storage A-frame constructed in 2012. Minor repairs were needed to reconstruct the collapsed roof of the generator shed where two Yanmar gensets in good condition are housed. A Bell 206 Long-Ranger III was contracted from Yellowhead helicopters was utilized for daily set-outs.

Romios Gold Resources Claims in the Golden Triangle, B.C.

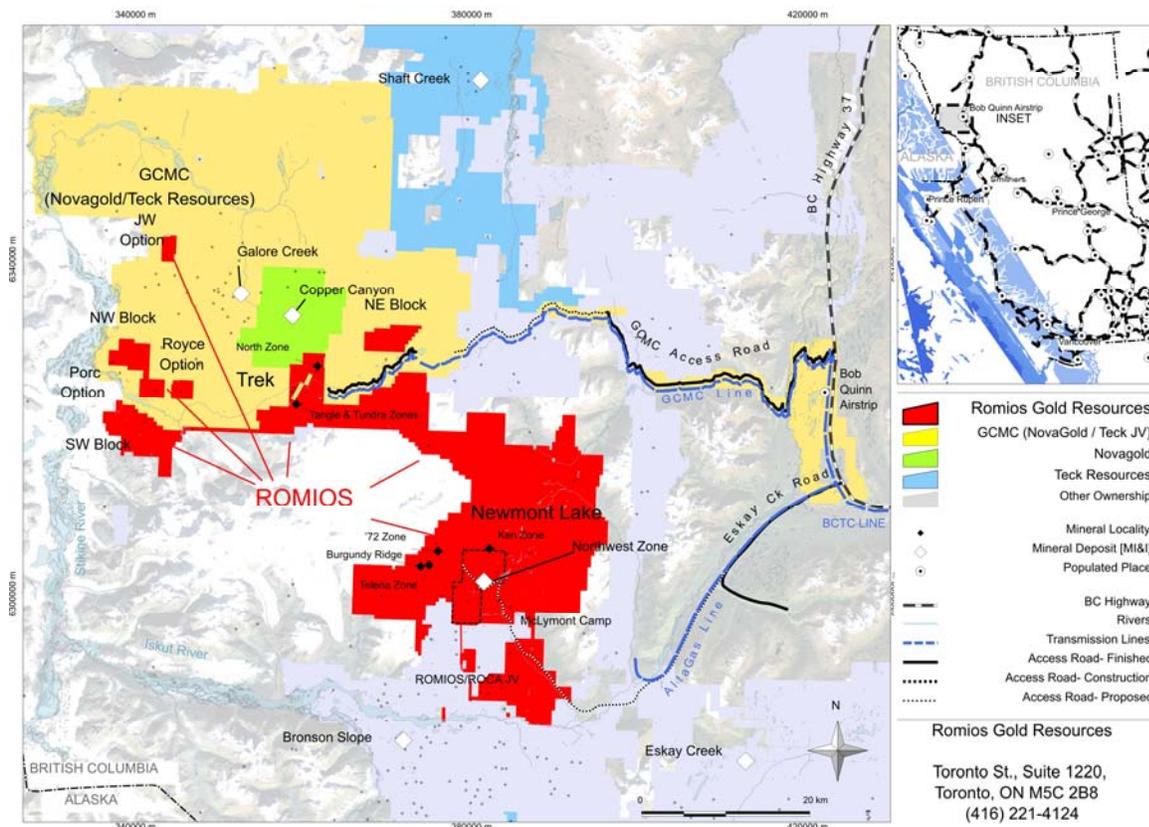


Figure 3: Claim map showing the distribution of Romios' claims and prominent mineralized zones. The newly discovered Burgundy Zone is on-trend southwest to the '72 and Teleno Zones.

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## HISTORICAL WORK

Numerous companies have performed drilling, ground geophysics, mapping and sampling programs on several copper, gold and silver mineralized zones within the greater Newmont Lake Project. After the discovery in the late 1960's and early 1970's, Newmont Lake Mining Company-Canada Division held a substantial tenure position in the area. During this time they indicated that the 72 Zone (formerly known as the "Dirk showing") was a prospective opportunity.

Subsequently changing ownership, the Northwest Zone was targeted and extensively drilled in 1988-1990 by Gulf International Ltd., who drilled and sampled several other showings on the property including the Camp and Black Bear Zones. Pezgold Resources drilled and explored for mineralization at the Ken Zone; Jazzman Resources Ltd drilled and investigated the Jazzman Zone (northeastern extension of the Northwest Zone); and, Pamicon Developments and other companies contributed to the exploration and drilling activity on other surface showings in the district during the time period of 1985-1992 and in the early 2000's.

In 2004, Romios acquired and amalgamated a substantial portion of the mineral tenures into the Newmont Lake Project, and has been actively exploring for mineralization and acquiring additional mineral tenures since 2005. Drilling in 2007-2012 led to the discovery of additional mineral showings and drill targets, including the Rope, Telena, and Ridge Zones. At present, the Newmont Lake Project hosts 28 distinct mineralized zones, 11 of which have been drilled.

In 2007, Romios announced a National Instrument 43-101 Inferred Resource on the Northwest Zone of 1.406 M tonnes grading approximately 4.43 g/t Au, 0.22% Cu, and 6.4 g/t Ag, or a gold equivalent grade (AuEq) of 5.16 g/t. Using a base case gold equivalent cut-off grade of 2.0 g/t AuEq, this equated to an in-situ metal content of 200,000 ounces of gold, 6,790,000 pounds of copper and 291,000 ounces of silver at the time the calculations were carried out.

In 2010 and 2011 the British Columbia Ministry of Mines sponsored a mapping project in the Hoodoo mountain area- overlapping the Newmont Lake Project on the west, and confirmed Romios' confidence in the economic potential of the greater 72 Zone and Andrei area (Mihalynuk et al., 2011).

The following is a summary of all exploration activities to date that have been performed on the Newmont Lake Project:

Northwest Zone: (NI 43-101) 146 Drill Holes Totaling 23,599 m  
'72 Zone: 10 Drill Holes Totaling 1427 m  
Ken Zone: 13 Drill Holes Totaling 1411 m  
Telena Zone: 1 Drill Hole Totaling 102m  
24 Additional Showings: 35+ Drill Holes, 7000+ m drilled and over 2,000 Surface Samples collected and analyzed  
Airborne Geophysics (1,938 Line-km Mag & Electromag Resistivity), Ground Geophysics (19.7 km Mag, 40.2 km IP, CSAMT)

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## **GEOLOGICAL SETTING**

### **REGIONAL GEOLOGY**

The regional setting of the Romios claim group is provided by Bulletin 104 (Logan et al., 2000), which describes mostly Stikine Terrane rocks (Stikinia) at the boundary between the Intermontane Belt and the Coast Belt. Stikinia is the largest and westernmost allochthonous terrane of the Intermontane Superterrane. It has unique pre-Jurassic geological history, paleontological and paleomagnetic signatures. Near the Romios claims, the Stikine Terrane consists of well-stratified middle Paleozoic to Mesozoic sedimentary rocks, volcanic and co-magmatic plutonic rocks likely formed in an island arc setting. The Stikine Terrane is divided into the Paleozoic Stikine assemblage, the Late Triassic Stuhini Group and the Early Jurassic Hazelton Group. These lithostratigraphic units are overlain by Middle Jurassic to early Tertiary successor-basin sediments (Bowser Lake and Sustut Groups), late Cretaceous to Tertiary continental volcanic rocks (Sloko Group) and Late Tertiary to Recent bimodal shield volcanism (Edziza and Spectrum ranges) (Gabrielse and Yorath, 1991).

The predominately calcalkaline, Jurassic to Paleogene-aged, Coast Plutonic Complex intrudes the western boundary of the Stikine Terrane. Cooling ages and uplift history are complex varying from mid-Cretaceous and older on the west side of the belt and mainly Late Cretaceous and Tertiary on the east side. The Romios claim group is on the east of the complex where voluminous postorogenic Tertiary bodies (Eocene Sloko Group continental volcanic rocks) obscure the western margin of Stikinia. These rocks are known to have erupted from centres north and northwest of the Romios claim group (Logan et al 2000).

Late Triassic to Early Jurassic intrusive rocks of the Copper Mountain Plutonic Suite (Woodsworth et al., 1991) characteristically comprises small alkaline bodies, varying from monzodiorite to monzonite to syenite. The intrusions are lithologically complex with multiple intrusive phases. They are metallogenically important, being related to both copper and gold mineralization in both Stikinia and Quesnellia.

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### **PROPERTY GEOLOGY**

The Newmont Lake Project is centered upon the Newmont Lake basin, a three-kilometre wide, 20 kilometre-long, northeast-trending, Post Late Triassic structure (Logan et al 2000). A detailed geologic map is provided in Appendix VII. This basin extends for 20 kilometres northeast from McLymont Creek, is bounded by two major fault systems that break the project area into three principle geologic domains: the East, Central (in the Newmont Lake Graben), and West.

The Eastern domain comprises diorite and monzonites of the Late Devonian McLymont Plutonic Suite. The Central geologic domain, coincident with the Newmont Lake basin, hosts Carboniferous to Permian and Triassic limestone, marble, and calcareous sedimentary rocks. The Western domain hosts Devonian to Permian age carbonate and clastic rocks with Devonian to Permian age clastic and volcanic rocks in the Southwestern and Northwestern subdomains. Rocks of the Western domain trend at high

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angles toward, and are caught up along the major northeast trending fault systems forming the contacts between each of the three domains.

Preliminary interpretations of 2010 geological mapping by the British Columbia Geological Survey suggests that Stikine VMS belt rocks form a fault-bounded wedge exposed at surface for over 40 kilometres, forming an unconformity between the Late Paleozoic Stikine assemblage, and overlying Stuhini Group strata (Brown et al., 1991). The Stikine VMS belt trends southeast toward the Central domain and the Newmont Lake basin, visible for approximately 20 kilometres on the Newmont Lake Project, before trending southwest and disappearing within a major fault system. Subsequent high angle faults and more recent Mesozoic to Eocene intrusions cut the sequence (Mihalynuk et al., 2011). Sills and plugs of plagioclase-hornblende porphyritic monzonite to monzodiorite occur within the Newmont Lake Project area. These intrusions resemble coarser-grained equivalents of the Newmont Lake basin facies andesitic volcanic rocks in hand specimen, but a detailed lithogeochemical analysis supporting this has not been performed.

The intrusions' proximal distribution along the trace of the McLymont Fault may reflect a structural link to their emplacement. Generally, the intrusions are characterized by a groundmass that is commonly grey to purple. The phenocrysts are pink, subhedral to euhedral plagioclase crystals (up to 50 per cent), and lesser amounts of hornblende. Numerous round, recessively weathered mafic melt inclusions within the intrusions average 5-10 centimetres in diameter. Centimetre scale flow laminae are common in some areas. The presence of numerous serrated crystals and porphyritic textures suggest a subvolcanic environment of intrusion (Logan et al 2000). A grab sample of a monzonite from near the Ken Zone, in the northwest geologic subdomain, produced a cooling age  $190.63 \pm 0.15$  Ma on a weighted average of  $^{206}\text{Pb}/^{238}\text{U}$  from four good quality zircons. Richard Friedman of the University of British Columbia performed this analysis in 2012. Additional intrusion styles include dykes and plugs of orthoclase- and lesser pseudoleucite bearing syenites containing sparse to crowded, medium to coarse-grained porphyritic textures with abundant hematite staining associated with dark red discoloration. A large grab sample selected from a megaporphyritic orthoclase syenite in the southwest geologic subdomain yielded a cooling age of  $214 \pm 1.2$  Ma using a weighted average of  $^{206}\text{Pb}/^{238}\text{U}$  from titanite grains. Richard Friedman of the University of British Columbia performed this analysis in 2011.

The Burgundy Ridge trend, including the '72 Zone, Telena, and Burgundy Ridge, is underlain by metamorphosed Permian limestone (marble); green, silicified fine-grained rocks; a variety of orthoclase porphyries and megaporphyries; and late orthoclase dykes, often exhibiting retrograde epidote and chlorite alteration. Also present are skarn breccia bodies that seem to have formed between blocks of limestone country rock and some orthoclase porphyries.

Exoskarn zones are developed on the margins of the limestone where some igneous bodies have silicified them. The exoskarn assemblage consists of epidote, garnet and actinolite and gets progressively weaker grading into dolomite away from the limestone-pluton contact. This alteration is mirrored within plutons, where an endoskarn assemblage of epidote, diopside, and garnet. Mineralization is concentrated within skarn breccia bodies and some porphyry bodies. Within breccia bodies, copper minerals

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include chalcopyrite, bornite, malachite/azurite, and chalcocite. Within the porphyries and the silicified sediments, chalcopyrite is the dominant copper mineral.

## Structure

Within the project area, the most dominant structural features are the two northeast-trending fault systems that bound the Newmont Lake basin, defining the Western, Central, and Eastern geologic domains. The "Newmont Lake Fault", on the east, is a 100 m-wide topographic trough forming the intersection of numerous northeast and north-trending faults at the contact between the Central and Eastern domains. The dip and character of the Newmont Lake Fault remain unclear.

The "McLymont Fault", on the west of the basin, forms the contact of the Central and Western domains. This fault was intersected in 2012 drilling at the Northwest Zone (JZ12-14, see below) and subsequently recognized in historic drilling, wherein the data indicate a cataclastic to mylonitic zone up to 35 metres thick trending 040 degrees and dipping eastward at approximately 70 degrees. The McLymont fault truncates northerly trending folds in older rocks in the Western geologic domain from Permian and Late Triassic strata within the basin to the east.

Permian and Late Triassic rocks within the basin of the Central domain are folded about northeast trending axes, parallel to the trend of the basin and bounding faults. A north-trending fault splay appears to truncate the basin to the north. Intrusions of Devonian to Jurassic age truncate the basin on the south.

A large ice field and several major glaciers obscure the majority of the landscape within the Western domain. In the southwest subdomain, post-Mississippian unconformities and late northeast trending, large offset faults dominate many structures. Some outcrops of Mississippian limestone have preserved tight, complex folds with northwest trending fold axes. Mesozoic rocks in the area form large amplitude, northwest trending open folds. Some of the sedimentary units display drag folding along fault planes.

In the northwest subdomain, rhyolites, ignimbrites, basalts, and conglomerates also strike northeast. The 2010 BCGS mapping identified slickensides indicating "subhorizontal-dextral as well as south-side-down-normal motion. But, the slickensides are minor features that may have formed at any time, even in response to glacial rebound." (Mihalynuk et al., 2011).

## Mineralization

The Stikine VMS Belt, predominately occurring within the Northwestern subdomain, hosts abundant occurrences of volcanogenic or structurally-related semi-massive sulphide Cu-Au-Ag+/-Zn mineralization. Included within this belt are the Ken, Rope, Glacier, Jazzman and Matterhorn Zones, and the Andrei Showing further to the northwest.

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The Northwest Zone NI 43-101 Inferred Resource contains 1.406 M tonnes grading 4.43 g/t Au, 0.22% Cu, and 6.4 g/t Ag, or a gold equivalent grade (AuEq) of 5.16 g/t, in the south of the Stikine VMS Belt located immediately west of the McLymont Fault. Pyrite, chalcopyrite, sphalerite, and rarely bornite form the sulphide constituents at these zones, often related to end-member alteration products such as quartz and ferroan carbonate (Northwest and Jazzman Zones), magnetite (Ken, Rope and Glacier Zones), or within a rhyolite/basalt sequence (Andrei).

Mineralization in the west along the Burgundy Ridge trend (Telena, 72, Ridge Zones) contains concentrated veinlets, clotty masses, and disseminated chalcopyrite, bornite, and tenorite sulphides near the contacts of marble and various orthoclase-porphyritic syenite intrusions. Northeast trending swarms of orthoclase-porphyritic syenites cut or control mineralization in the area, often exhibiting megacrystic, trachytic, and/or crowded textures. Biotite syenite dykes and plugs are also present in the 72 Zone area and at Burgundy Ridge. Figure 4 shows the averaged values and widths of chip-line sampling completed in 2014 at Burgundy Ridge and Telena Zones.

In the south of the Newmont Basin at the Valentine, Gorge, Black Bear, and Camp Zones, pyrite and rare visible gold occur within narrow quartz veins or quartz-carbonate-gangue fractures that cut Late Devonian monzonites of the McLymont Plutonic suite. Along the eastern margin, several Devonian-age carbonate blocks occur along the Newmont Lake fault system. Here, the North and South Cuba Zones and several untested targets display significant enrichment of Zn and Ag with the alteration products of barite, calcite, and minor malachite

## **Alteration**

Within the monzonite and syenite intrusions, and the andesitic tuffs across the Newmont Lake area, plagioclase and anorthoclase phenocrysts are typically moderately altered to sericite, containing dusty cores and clear rims. Hornblende grains are partially altered to opaque oxides or chlorite. Secondary potassium feldspar, where present, occurs interstitial to crystals of- or the retrograde pseudomorphs of- plagioclase and hornblende. Quartz is a moderate phase and apatite is an accessory mineral. Staining for potassium within samples from the aureoles near syenite indicates that more than 80 per cent of feldspars present in the porphyry halos are potassium feldspar (Logan et al 2000).

Within the Burgundy Ridge trend, numerous additional alteration products are wildly variable and often discrete. Silicification of carbonate country rock and carbonate alteration of the intrusions (skarnitization) is locally well developed. Hematitic and potassic alteration are well-developed within early intrusions. The limestones are recrystallized and intensely altered along the contacts with plutonic bodies. Often, black, white, or green-colored garnet occur with epidote, dolomite and wollastonite within these contact margins, along with centimetre-scale pods of magnetite. Potassic alteration was difficult to recognize in the Burgundy Ridge trend due to the occurrence of potassium feldspar as one of the most common primary and secondary minerals in the intrusive bodies; additionally, subsequent alteration accompanied significant calcite mobilization and brecciation of the host rocks. Some large phenocrysts of white-grey

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alkali feldspar are rimmed by pink material, or are completely pink, indicating a second potassic-rich event. The dark red and purple colours of some orthoclase megacrystic intrusive dykes and the surrounding host rock is likely the product of hematization.

A map of the regional geology is available in Appendix III attached to this report.

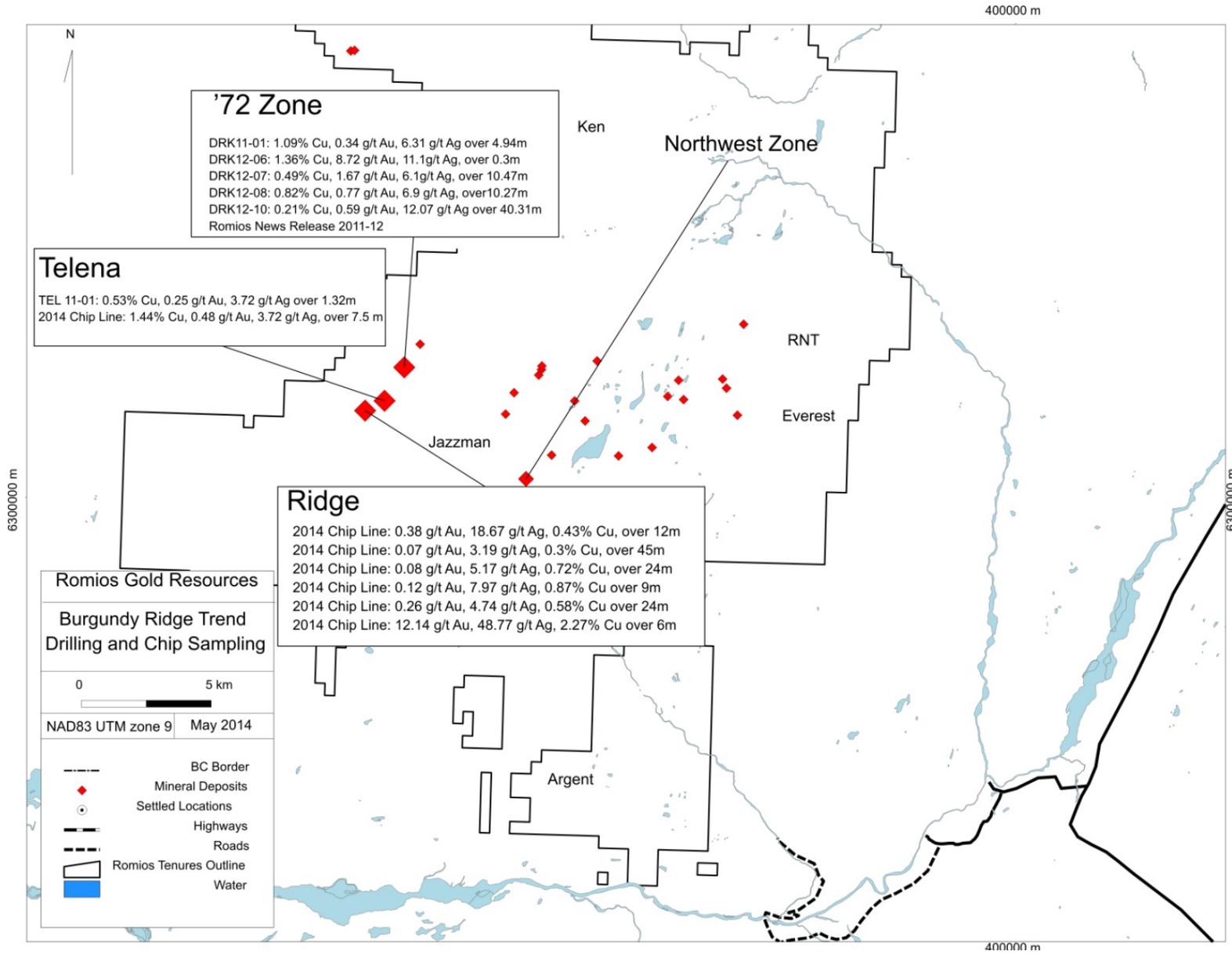


Figure 4: Mineral showings and general geography of the Newmont Lake Project area

## **2014 WORK PROGRAM**

Work commenced on July 21st when a geological crew mobilized to the Newmont base-camp located at the headwaters of McLymont Creek, approximately 44 kilometres west-southwest of Bob Quinn Airstrip. Geologists included A. Oscar Nielsen, Alexandra Galvina, Joel Ashburner and Ken Konkin. Mr. Nielsen and Ms. Galvina arrived from Smithers with Yellowhead Helicopters' 206 Long Ranger while Mr. Ashburner and Mr. Konkin drove to a staging site near kilometre 52 on the Eskay Creek road to meet the expeditor's truck from Granmac Services. Much closer sites exist to stage from but the Forest Kerr Hydroelectric project did not permit the un-authorized landing of helicopters as heavy construction, road work that included blasting was ongoing. Nevertheless, our staging site was only a 20 minute flight southeast of camp and Granmac Services has a bear-proof twenty-foot container at Km 52. This was instrumental in dropping off samples and picking up groceries, supplies and fuel.

Including the pilot, Monica Stotzer there were five people in camp. The Bell 206 Long Ranger was utilized for daily air-support. Two 2-man teams conducted daily set-outs which included mapping, rock-chip sampling, prospecting, reconnaissance rock-geochem sampling and stream sediment sampling programs. The scope of work included the following priorities:

- Burgundy Ridge (discovered in 2013 by Romios crews): map and sample the zone in order to confirm the nature, magnitude and extent of the Cu-Au-Ag mineralization within the area and along trend. Chip-lines will be taken across the anomalous zone in order to gain a better understanding as to the nature and distribution of mineralization. Crews during the 2013 program collected grab samples that yielded spectacular copper values associated with significant gold-silver mineralization. Values up to 21.9 % Cu, 7.38 g/t Au, 51.1 g/t Ag and 26.6% Cu, 1.48 g/t Au, 128 g/t Ag were obtained from the best two grab samples from that program. These two sites need to be quantified by chip or channel sampling as does numerous other anomalous Cu-Au-Ag values obtained throughout the 225x350 metre gossanous zone. The on-strike mineralized occurrences of the Telena and 72 Zone were also examined as part of the Burgundy Ridge economic assessment. Attention was to be given to structural and lithological conduits, controls and traps as well as sequencing of the various geological events.
  - Trek, Ken and Northwest Zones: significant intercepts of the diamond drill core was examined to gain information of the nature and intensity of mineralization. The potential extension to these zones was also examined with particular attention given to the host rock type and alteration as well as structural configuration of the existing mineralized traps. The zones were prospected along their strike lengths in order to identify other targets.
  - Helicopter-borne ZTEM and Magnetic Anomalies: According to Geotech Ltd., who conducted the study, at least seventeen discrete magnetic anomalies have been defined of which nine anomalies appear to be unexplained geologically. The ZTEM surveys have also defined both conductive and resistive signatures that relate to bedrock geology on the property. More than eleven prominent resistivity highs
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have been defined that partially coincide with the seventeen magnetic anomalies. These represent potential targets for porphyry-type magnetite-enriched potassic alteration, or pyrrhotite-magnetite mineralized, silica-altered skarn mineralization or these just possibly may be barren magnetic rich intrusive phases. The areas containing the shallower anomalies will be prospected and possibly sampled. In cases where there's significant ice or snow cover, silt samples that drain the immediate area will be taken. Furthermore, glacial lateral and recessive moraine fields will be prospected and possibly sampled if significant mineralization, oxidation or alteration of the material from the glacial debris is encountered.

## **ROCK CHIP SAMPLING RESULTS**

### **Burgundy Ridge**

At Burgundy Ridge for the 2014 field program, 173 chip samples were taken across eleven chip lines covering zones of mineralization where outcrop and terrain permitted. The chip length was typically 1.5 metres, though some samples were taken up to three-metre widths where appropriate. The results demonstrate that there is significant low-grade continuous copper-gold-silver mineralization at Burgundy Ridge as well as localized high-grade mineralized core within the low-grade Cu-Au-Ag mineralized envelope. Although the sampling was extensive on this first pass, it was obvious that the system continues to the south, north and west. As the snow recedes, more mineralization is being exposed.

**Table 1: Burgundy Ridge chip line average metal values**

	<i>Length</i>	<i>Azimuth</i>	<i>Cu % Avg.</i>	<i>Au g/t Avg.</i>	<i>Ag g/t Avg.</i>
<b>Chip Line 1</b>	6	110	0.07	0.06	1.19
<b>Chip Line 2</b>	4.5	110	0.31	0.13	4.20
<b>Chip Line 3</b>	7.5	110	0.21	0.08	3.51
<b>Chip Line 4</b>	19.5	110	0.23	0.14	2.66
<b>Chip Line 5</b>	13.5	290	0.35	0.31	15.14
<b>Chip Line 6</b>	7.3	130	0.56	0.36	4.40
<b>Chip Line 7</b>	59.6	115	0.31	0.07	3.19
<i>including</i>	6		0.64	0.09	6.45
<b>Chip Line 8</b>	59	115	0.35	0.12	2.66
<i>including</i>	22.5		0.66	0.07	4.71
<b>Chip Line 9</b>	9	125	0.87	0.12	7.97
<b>Chip Line 10</b>	28.5	125	0.36	0.09	1.91
<i>including</i>	4.5		1.52	0.38	5.23
<b>Chip Line 12</b>	16.5	110	0.60	0.35	4.96
<i>including</i>	4.5		1.15	0.77	7.77
<b>Chip Line 13</b>	9	90	0.46	0.07	3.63
<b>Chip Line 14</b>	15	288	1.15	6.11	19.75
<i>including</i>	3		5.12	28.49	89.65
<b>Chip Line 15</b>	12	280	0.26	0.02	3.14

A detailed geological map of Burgundy Ridge (Figure 5) was also produced during the 2014 season, which highlights the relationship of mineralization with the boundaries of igneous dykes where they cut carbonate rocks, in particular the dolomitic-epidote-garnet skarn bodies. Full geochemical results can be seen in Appendix IV.

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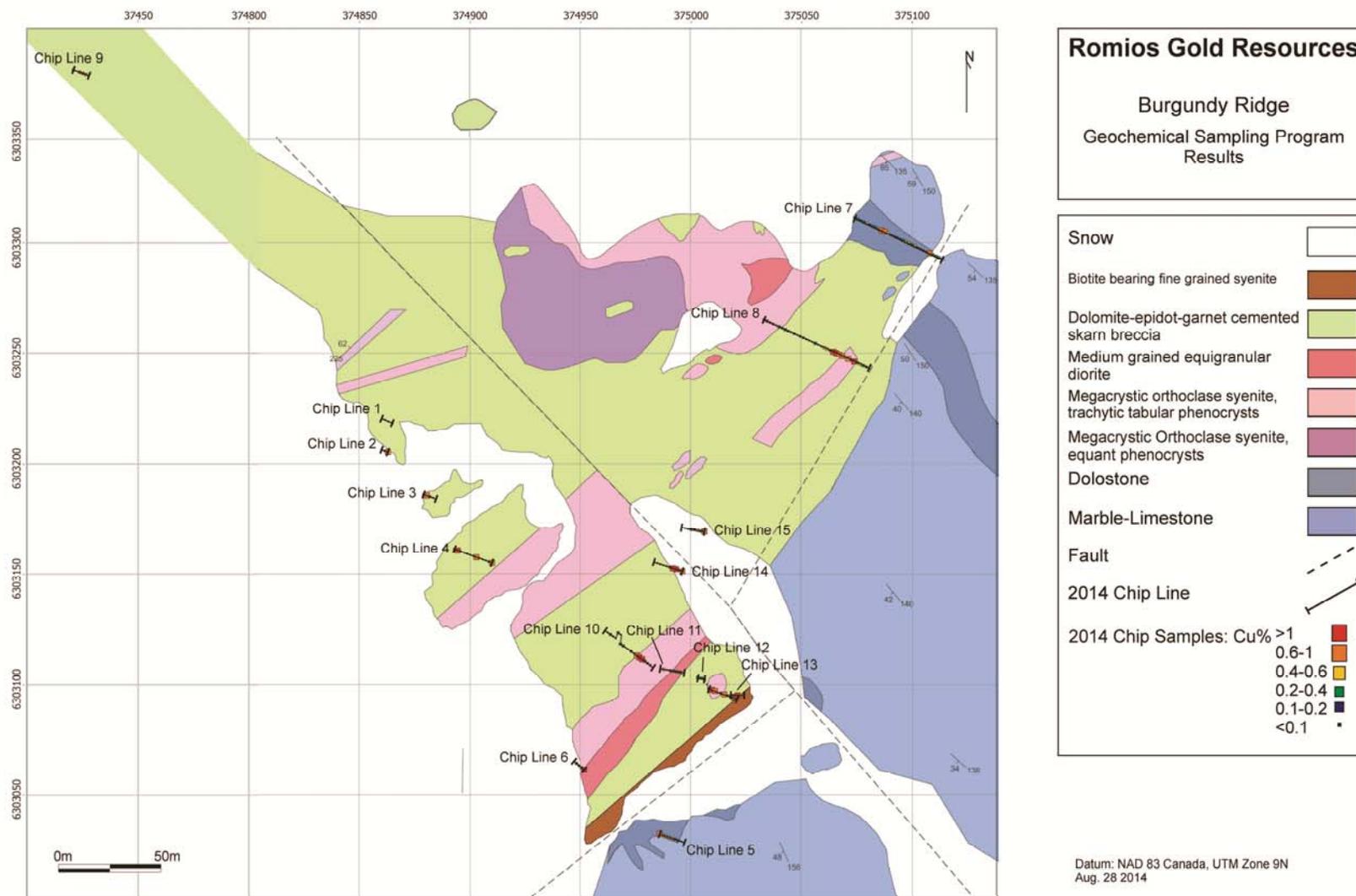


Figure 5: Geological map of the Burgundy Ridge area, showing the location of chip sampling

## Telena

At the Telena Zone, one chip line was taken across a zone of known mineralization that lies to the northeast of the of the drill pad for TZ11-01. While the original drill hole at the Telena Zone was not successful in intersecting this kind of mineralization, there are untested areas of mineralization at Telena that further investigation is recommended. The following sample intersected significant copper values over 10.5 metres:

E310624-E310631 Chip Line: 0.385 g/t Au, 2.89 g/t Ag, 1.18% Cu

Table 2: Telena Chip Line Samples

	Au (g/t)	Ag (g/t)	Cu %
E310624	0.097	0.25	0.0747
E310625	0.308	2.2	0.725
E310626	0.382	2.4	0.756
E310627	0.223	1.9	0.666
E310628	0.465	6.2	1.52
E310629	0.998	5.9	3.54
E310631	0.221	1.4	0.888

## Tomb

During the 2014 field program, 22 chip samples were taken across four chip lines as well as two individual chip samples at the Tomb Zone. Although traces of disseminated fine to medium-grained chalcopyrite and malachite stained fracture planes was obvious in numerous samples, metal concentration only demonstrated anomalous copper and gold values in a few samples. The best copper and gold values came from sample H234757 collected from a fault zone containing 2.590% Cu and sample H234819 collected from a bluff 40 metres above the fault zone in a medium-grained andesite that yielded 125 g/t Au. The source of this mineralization is unclear. One possibility is that the Tomb Zone may be the hanging wall block to the Trek Trust Fault. Copper and gold rich fluids may be emanating from a potentially hidden source at the intersection of two major regional faults along Sphaler Creek that form conjugate northeast and northwest trending faults. Further geological exploration is recommended that would require crews with climbing gear to better sample the bluffs at the Tomb Zone.

## **RECONNAISSANCE ROCK GEOCHEMICAL SAMPLING AND RESULTS**

### Burgundy Ridge

During the chip sampling and mapping program at Burgundy Ridge, several isolated chip samples and grab samples were taken, both within the chip sampling area, and to the west along the narrow ridge that extends towards the Backster Zone. The samples show significant copper, gold, silver and rare spotty zinc mineralization across a large area of Burgundy Ridge, extending to the west of the previously known zone of mineralization (Figure 5).

**Table 3: Burgundy Ridge Isolated Samples**

<b>SAMPLE</b>	<b>Cu %</b>	<b>Au g/t</b>	<b>Ag g/t</b>
<b>E310642</b>	3.48	2.15	21.4
<b>E310643</b>	3.03	1.725	25.7
<b>E310644</b>	0.0837	0.012	1.3
<b>E310645</b>	0.387	0.007	5.4
<b>E310646</b>	0.758	0.112	3.7
<b>E310647</b>	4.05	0.479	58.2
<b>E310623</b>	0.348	0.013	1.1
<b>E310529</b>	0.922	0.084	6.4
<b>E310638</b>	0.274	0.003	1.1
<b>E310639</b>	0.1115	0.006	1.5
<b>E310640</b>	1.95	0.216	13.8
<b>E310641</b>	0.841	0.249	10.7
<b>H234801</b>	0.0068	0.0005	0.25

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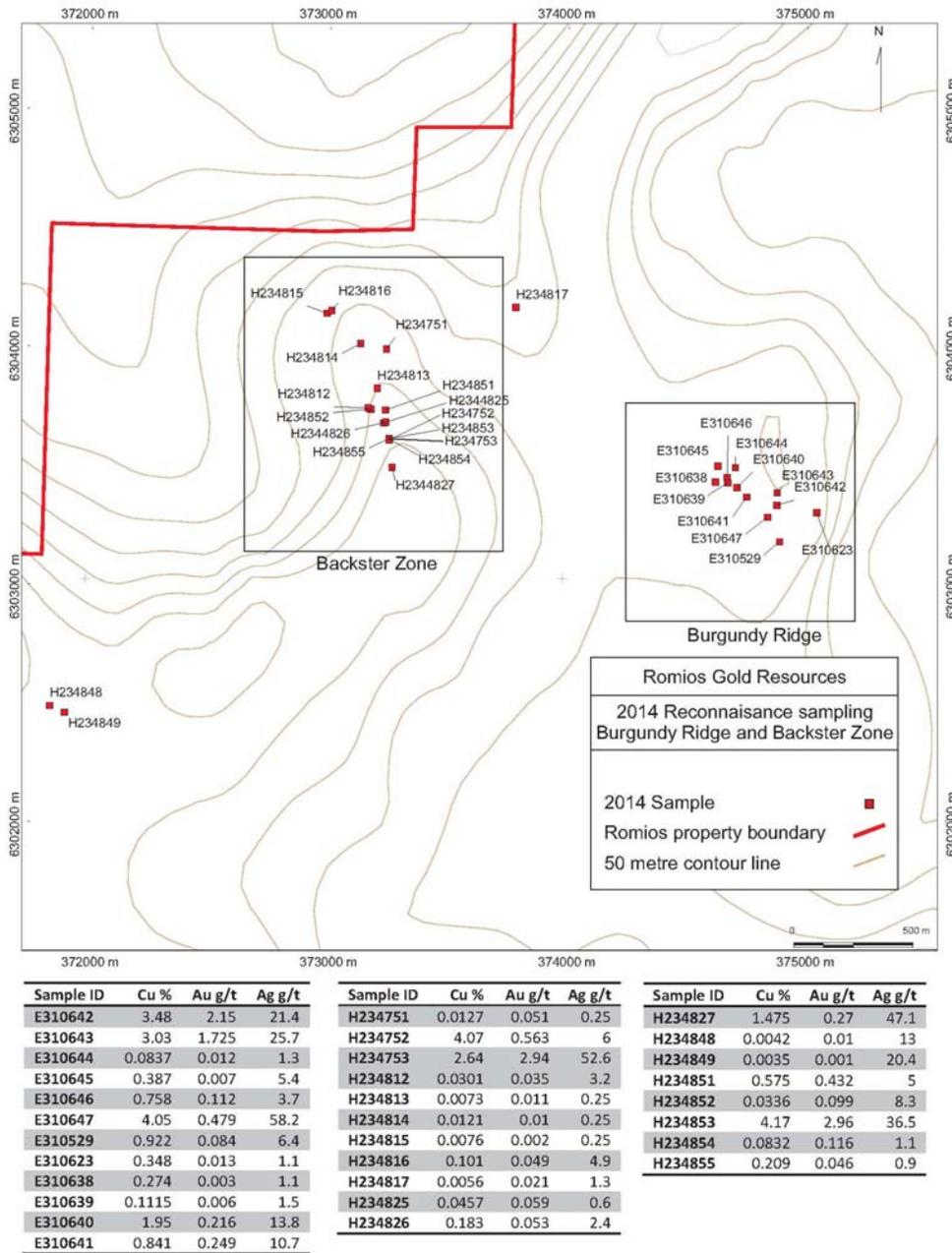


Figure 6: Burgundy Ridge and Backster Zone Reconnaissance Sampling

### Backster Zone

While investigating the geophysical anomaly directly west of Burgundy Ridge (M4R4), the Backster Zone was discovered. It is similar in style to Burgundy Ridge, with strong chalcopyrite mineralization along the margins of a megacrystic syenite dyke where the dyke cuts through crystalline dolomite. The high grade samples taken from near the contact are similar in grade to those at Burgundy Ridge. This occurrence may be a parallel occurrence to that of the Burgundy Ridge. The results at Backster are summarized below:

**Table 4: Backster Zone Sampling Results**

Sample ID	Cu (%)	Au (g/t)	Ag (g/t)
H234812	0.030	0.035	3.2
H234813	0.007	0.011	0.25
H234814	0.012	0.01	0.25
H234815	0.008	0.002	0.25
H234816	0.101	0.049	4.9
H234817	0.006	0.021	1.3
H234848	0.0042	0.01	13
H234849	0.0035	0.001	20.4
H234851	0.575	0.432	5
H234852	0.034	0.099	8.3
H234853	4.17	2.96	36.5
H234854	0.0832	0.116	1.1
H234855	0.209	0.046	0.9
H234825	0.0457	0.059	0.6
H234826	0.183	0.053	2.4
H234827	1.475	0.27	47.1
H234751	0.0127	0.051	0.25
H234752	4.07	0.563	6
H234753	2.64	2.94	52.6

## Tundra

While at the trek core storage site, a brief investigation of the mineralization at the Tundra Zone was undertaken, focusing on the area around the drill pads constructed in 2011 and the area recently uncovered by the glacier. Sample H234844 from a hornfelsed andesite just below the drill pad returned 2.37% Cu, 1.09 g/t Au and 48.5 g/t Ag. Sample H234807, taken from a zone of strong veining to the south of the drill pads returned 1.27% Cu, 0.21 g/t Au and 10.7 g/t Ag. Sample H234808 from the small gully to the north of the drill pads returned 0.681% Cu, 0.433 g/t Au, and 7.2 g/t Ag.

The results of the sampling at the Tundra indicate that a potentially mineralized body lies at depth. It is not yet clear what the source of the copper mineralization is at the Tundra Zone however, the presence of hornfelsed rock and the trend of porphyry related copper mineralization in the area suggests that the source may be a local copper bearing intrusion. Figure 7 shows the sample locations and summary of results for the Tundra Zone, further exploration is recommended for this zone.

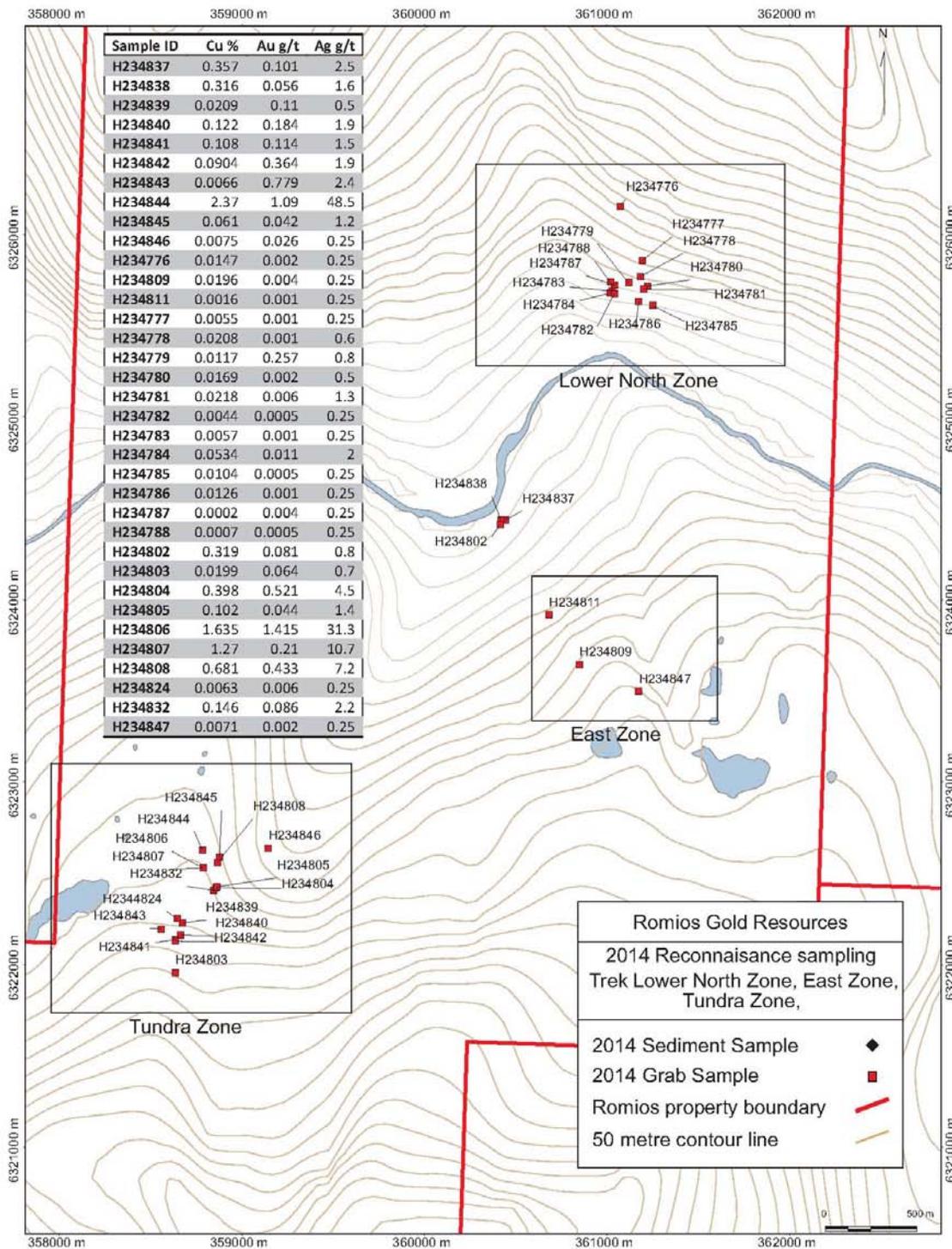


Figure 7: Trek Lower North Zone, East Zone, and Tundra Zone Sampling in 2014

### Trek

An investigation of the southeast portion of the Trek Property was undertaken in order to look for any surface expression of the Lower Breccia zone in an area that had not previously been sampled (See Trek Assessment Report 2011). The most promising

sample, containing semi-massive pyrite, returned 0.259 g/t Au, but no other significant mineralization was encountered. It is possible that no surface expression of the lower breccias zone was encountered because it weathers recessively.

### **East Zone**

The East Zone was investigated as a possible source/extension for the copper mineralization that was found at the Tomb Zone. Three samples were taken for analysis, but no significant mineralization was found.

### **Arseno Ridge Area**

The area to the West of the Arseno Zone was investigated due to the geophysical anomaly present there from the 2013 airborne survey. The lithologies in the area are beds of siltstone, conglomerate, andesites, and basalts, with rare jasperoidal alteration/replacement. One sample of vein material containing chalcopyrite and malachite returned 5.64% Cu, with no precious metals. Although this vein was not large, it may be related to a much larger significant intrusive related system. Further exploration is recommended to determine if the area warrants a diamond drill-hole target.

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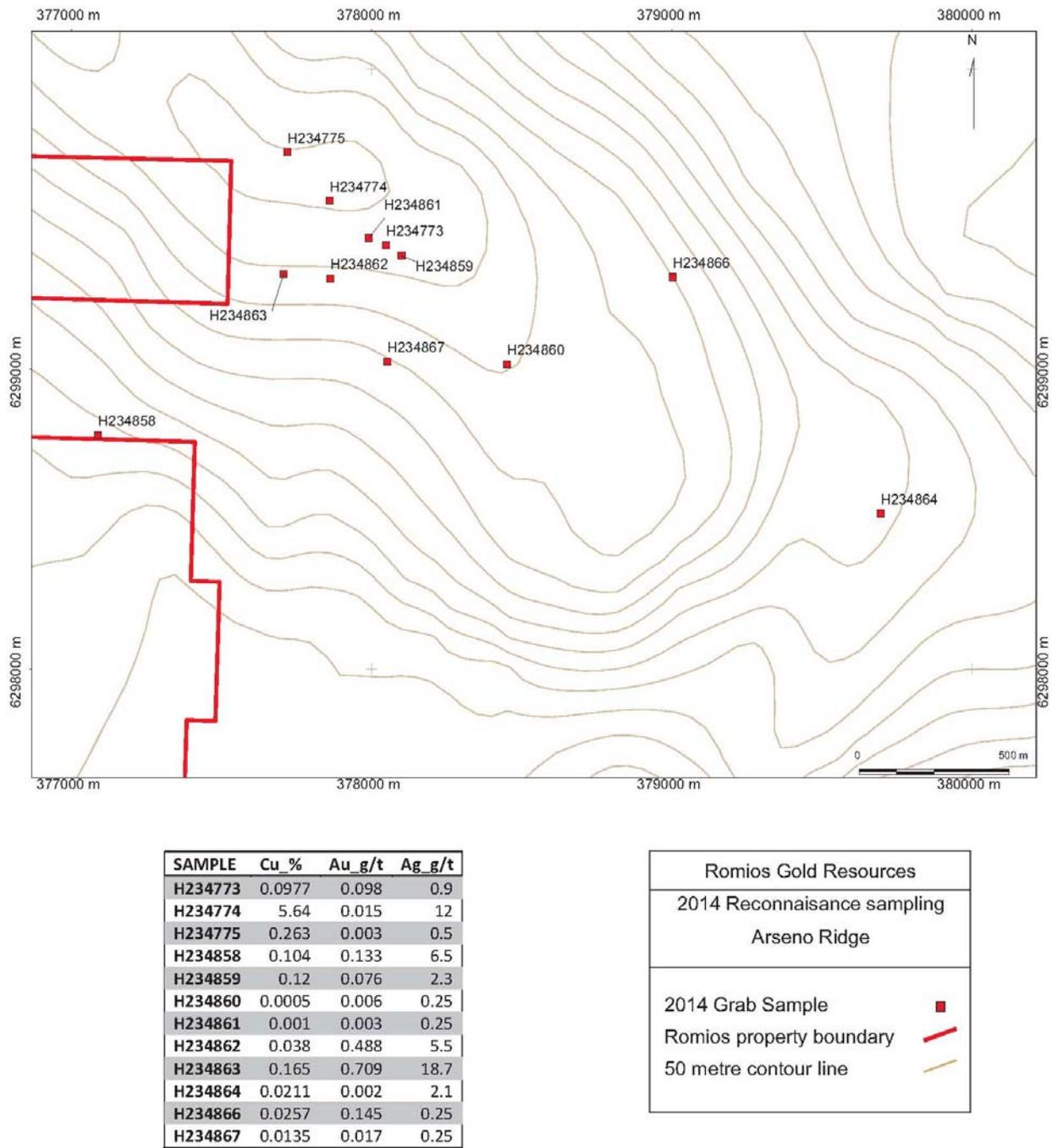


Figure 8: Arseno Ridge Sampling in 2014

### 1920 Zone

The 1920 Zone was investigated as a silt sampling site. During that investigation, river cobbles containing malachite were encountered and sampled. In addition, a large gossanous area on the north side of the river valley was prospected and sampled. Although no significant mineralization was encountered at source, a cliff face was identified with malachite visible on its surface from approximately 100m distance from a helicopter during a reconnaissance flight. The photo below shows clearly the strong copper stains precipitating on the cliff face. Further exploration is recommended for this

showing. As with the bluffs at the Tomb Zone, samplers with climbing experience is required to safely sample this cliff face at the 1920 Zone. The cliff is located at approximately 370500E, 6299000N, where this picture was taken from the helicopter.



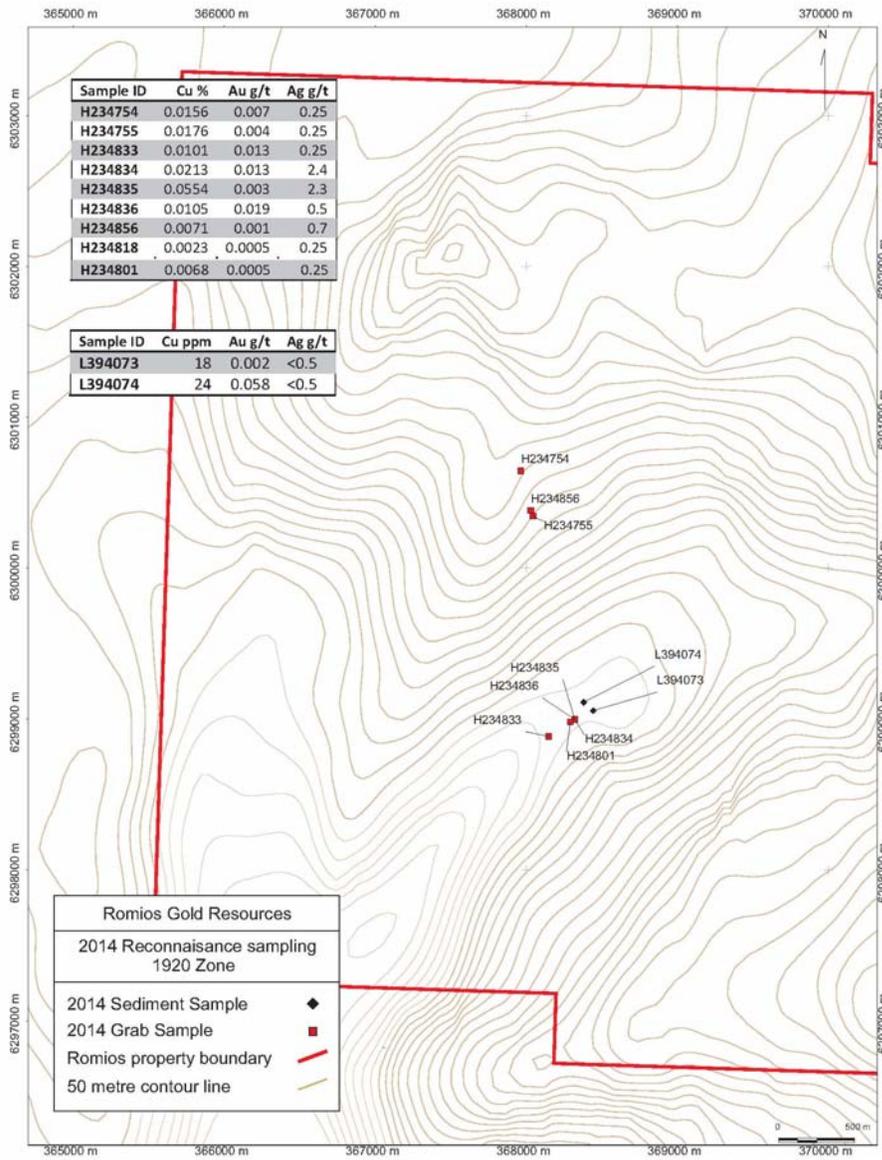


Figure 9: 1920 Zone Sampling 2014

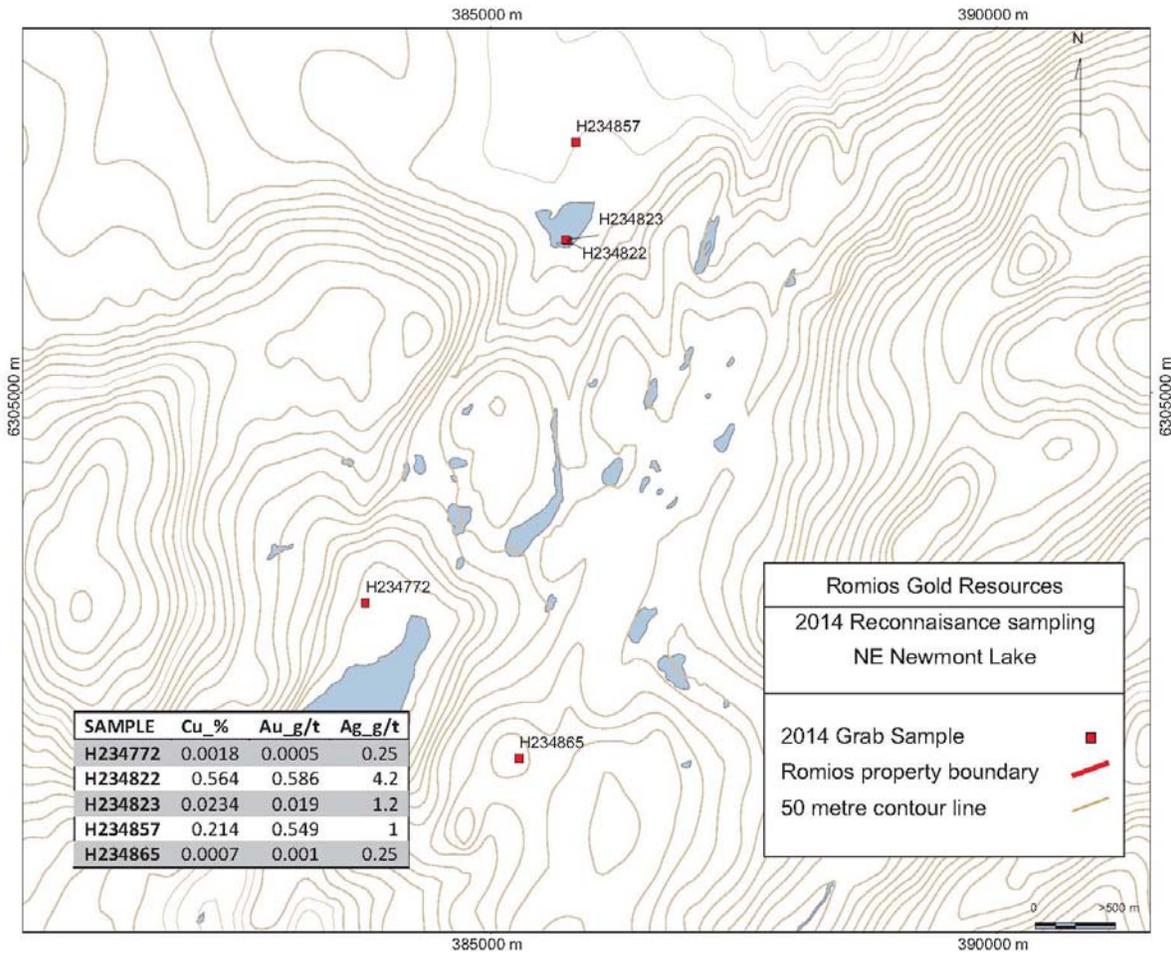
### Newmont Fault Area

One area of the Newmont fault with an airborne electromagnetic geophysical anomaly was investigated while taking stream sediment samples. One sample was taken of a siliceous rock with an unidentified sulphide, but no significant precious or base metals were found.

### North End of Newmont Graben

The northern end of the Newmont Lake graben was investigated while conducting stream sediment sampling. Samples were taken from cobbles and boulders in river beds. Significant copper-gold mineralization was found in these samples associated with tetrahedrite and chalcopyrite. The two samples with significant mineralization assayed

0.549 g/t Au, 1 g/t Ag, and 0.214% Cu; and 0.586 g/t Au, 4.2 g/t Ag, and 0.564% Cu. Further prospecting is recommended in efforts to locate the source to these mineralized boulders.



**Figure 10: 2014 Sampling in the Area Northeast of Newmont Lake**

**Silt Sampling Locations**

The results from the silt samples were encouraging. Some of the areas tested were large drainage areas which contained structurally favorable geological features as well as co-incident Mag-resistivity ZTEM geophysical targets (Appendix IV). The best results were obtained from the areas that drain westward into Newmont Lake. These silt sites were designed to test the mineralized potential of the east-side of the Newmont Lake Graben. Not only were there co-incident Mag-resistivity ZTEM targets indicated but the virtue of structurally parallel, potential mineralized zone similar to that of the Newmont Lake deposit along the western contact of the graben, made this a high-priority target. Several small polymetallic showings were discovered to the east of this drainage along the Kerr intrusives and limestone fault contact or east-side of the graben. However the stream sediments would not have drained into the Newmont basin but rather to the north. Therefore the high arsenic and zinc values may be attributed to sources other than these specific carbonate-hosted showings. Further detailed mapping and prospecting is

recommended for the specific drainages that produced anomalous values in silts sites: SS-11, SS-13 and SS-14.

The best polymetallic silt anomaly was site SS-22. This was taken for the lower portion of the North Trek Zone and it produced anomalous silver-lead-zinc with arsenic values. Further follow-up work is recommended for this area as well as the eastern limb of the Newmont Lake graben. Several of the larger stream drainage areas may have had too much dilution that may have masked potential in-silt geochemical anomalies as most of the anomalous values were obtained from the smaller drainages. Any future stream silt-sediment geochemical surveys should only target very specific smaller drainage patterns. A complete summary of stream sediment sampling data and significant results is given in the following table.

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**STREAM SEDIMENT SAMPLING AND RESULTS**

Sample Name	Sample ID	Sample type	Easting	Northing	Site	Sample r	Date	Description
SS-01	L394051	SILT	377709	6298575	SW M7R7	ON, KK	3-Aug	Sample from creek cutting well layered FeOx-Ank stained sed. River rocks are predominantly subangular cobble-boulder sized fragments of a blue-green volcanics, sample taken between two waterfalls: <b>163ppm Zn</b>
SS-02	L394052	SILT	378786	6297556	West Rusty Shear	JA	3-Aug	collected near bottom of 10m, stepped waterfall; stream sed appeared of coarse clastic sed or tuffaceous composition, pebble to cobble; gossanous rock o/c 20 m west of sample site
SS-03	L394053	SILT	379370	6299725	NW side of Boulder /Arseno ridge	ON	3-Aug	steep stream cutting siltstone and/or tuffaceous rocks; very little silt
SS-04	L394054	SILT	379705	6299305	N side of Boulder /Arseno ridge	JA	3-Aug	target stream located in snow-filled ravine, collected sed sample from within small tributary located ~75m SW; stream sed dominantly of igneous origin; silt grains >50% fspr-qz; locally, o/c is of f to mg, propylitically altered mafic; gossanous o/c 25 m S;
SS-05	L394055	SILT	381030	6298338	South McLymont Fault	ON	6-Aug	Silt sample from creek draining SW along the McLymont Fault, creek bed boulders are 90% tan orthoclase-phyric syenite with strong ankerite veining, 10% other lithologies including a green-black fine grained basalt, a blue-grey poorly sorted grit, and a c
SS-06	L394056	SILT	382221	6298959	Gorge Zone	JA	6-Aug	collected from stream bed within shallow, steep-walled gulch; locally, outcropping rock was all mg intrusive (granite, syenite) in origin, river sed dominantly sub-rounded, intrusive, pebble to cobble-sized
SS-07	L394057	SILT	382460	6298601	Gorge Zone	JA	6-Aug	collected from dry (or seasonally dry) stream bed; fluvial sed preserved located under ~7cm of organic matter; stream sed appeared of intrusive origin, sand to cobble-sized; no o/c locally
SS-08A	L394058	SILT	384739	6300146	Newmont Fault	ON, AG	4-Aug	Creek draining SW from high lake on the Newmont Fault, cuts a granite (Forrest Kerr Pluton), creek boulder 90% from granite, 10% from fine grained green amygdaloidal basalt with calcite fill
SS-08B	L394059	SILT	384743	6300128	Newmo	ON, AG	4-Aug	Creek draining 280 degrees cutting quartz monzonite, <1% green

					nt Fault			basalt creek boulders, Qtz, Kspar, bt, magnetite in the sands, taken below a waterfall.
<b>SS-9A</b>	L394060	SILT	385322	6300989	Kirby	AG/ON	4-Aug	Large stream draining into lake from under snow. Sample is approximately 20% quartz, 20% k-spar, 20% green volcanics (?), 30% black (biotite and magnetite), and 10% other.
<b>SS-09B</b>	L394061	SILT	385254	6301106	Kirby	JA/KK	4-Aug	collected from within small stream delta at south end of lake; locally, area to west consists of limestones and tuffaceous rocks, east is F-K granitic rocks; sed silt to sand-sized: <b>233 ppm Zn</b>
<b>SS-10A</b>	L394062	SILT	386124	6302105	Thumpe r	JA/KK	4-Aug	collected above small plunge pool in creek, east side of small valley; river sed almost entirely of coarse (granitic; Forest-Kerr pluton) intrusive rocks, cobble to boulder-size; silts >60% qz-fspr
<b>SS-10B</b>	L394063	SILT	385985	6302109	Thumpe r	JA/KK	4-Aug	collected from stream bank, west side of small valley; sed dominantly of F-K intrusive origin with lesser volcanic (~30%), cobble to boulder-sized; sed ~60% qz-fspr w/ some lithic/tuffaceous grains and trace sulphide (py)
<b>SS-11</b>	L394064	SILT	383735	6301549	Newmo nt Lake	JA/KK	4-Aug	collected from stream delta at SE end NM Lake; sed appear of volcanic (tuffaceous) origin, sand, pebble to cobble-sized: <b>113 ppm As</b>
<b>SS-12</b>	L394065	SILT	383504	6303208	Newmo nt Lake	AG/ON	4-Aug	Sample taken in side eddy of large fast river draining a faulted gossanous cliff. Sample consists of 25% quartz, 40% dark minerals, 20% rusty gossan, 15% k-spar
<b>SS-13</b>	L394066	SILT	384362	6302785	Newmo nt Lake	JA/KK	4-Aug	silt collected from small stream delta at N end Newmont Lake; sed dominantly of sed and/or volcanic origin, pebble to cobble-sized: <b>640 ppm Zn, 524 ppm As</b>
<b>SS-14</b>	L394067	SILT	384397	6302610	Newmo nt Lake	JA/KK	4-Aug	collected from small stream delta at NE end NM Lake; sed of sed (inc limestone) and/or volcanic origin: <b>308 ppm As, 209 ppm Zn</b>
<b>SS-15A</b>	L394068	SILT	385661	6306557	North McLymo nt Fault	ON, AG	2-Aug	Sample from creek flowing along the McLymont Fault towards Forrest Kerr Lake. Jasper bearing rocks in creek
<b>SS-15B</b>	L394069	SILT	385757	6306480	Northea st	JA	2-Aug	silt sample collected from behind a large boulder near stream center; river sed dominantly of igneous origin, tuffaceous rocks, in particular, cobble to boulder size; cobbles of qz+/-sulphides common in stream bed
<b>SS-16</b>	L394071	SILT	383530	6306905	North of Ken Zone	ON, AG	4-Aug	A NE draining creek, emerging from a gossanous zone on the N flank of the Ken-Rope-Glacier area. Coarse sand is subangular, and composed of 35% quartz, 50% lithic fragments, and 15% feldspar. Sample taken between two waterfalls

<b>SS-17</b>	L394072	SILT	385794	6307540	Forrest Kerr Lake	ON, AG	2-Aug	Sample from a SW flowing creek draining a moraine from the Andrei Icefield
<b>SS-19</b>	L394073	SILT	368444	6299058	1920 Zone	AG/ON	28-Jul	Sample collected on gravel bar in offshoot of large river running through the valley. Sample content is varied and reflects the composition of the larger boulders throughout the river bed.
<b>SS-20</b>	L394074	SILT	368380	6299113	19-20	JA	28-Jul	sample collected near bottom of waterfall on the NW side of valley; stream draining region of gossan alteration; stream sediments appear of sedimentary origin; local outcrops are bedded and laminated sedimentary rocks, with fine veinlets of quartz and Fe-ox
<b>SS-21</b>	L394075	SILT	380838	6300600	South of Mom's Peak	ON	6-Aug	Creek draining S-SE from M3'R5, locally cutting gossanous zone SW of the NW Zone. Very heterolithic stream boulder population, 20% quartz, 80% lithic fragments in the sands, subangular grains
<b>SS-22</b>	L394076	SILT	360840	6325597	Lower North Zone, Trek	ON, JA, AG	7-Aug	sample collected from within deeply incised stream bed, between two waterfalls; river rocks were coated with Fe-ox, those chipped appeared to be of volcanic origin; cobble to coarse cobble-sized: <b>0.8 ppm Ag, 280 ppm As, 65 ppm Pb, 243 ppm Zn</b>

## **GEOLOGICAL OBSERVATIONS**

### **Burgundy Ridge**

There are three different styles of mineralization at the Burgundy Ridge: disseminated copper sulphides in mineralized porphyry dykes; clots and pod-like sulphides in skarn-breccia bodies on the margins of carbonate blocks; and disseminated chalcopyrite in dolomitic breccias on the immediate margins of and invading into zones of limestone. The primary sulphide mineral in the system is chalcopyrite. In the skarn breccia bodies the mineralization is comprised of chalcopyrite, fribergite and tetrahedrite with bornite. Oddly, pyrite is not that common at the Burgundy Ridge system.

The carbonate blocks at the Burgundy Ridge overlie a package of volcanic-volcaniclastic rocks and conglomerates. The carbonate unit extends for several kilometres to the northeast and includes the Telena and '72 showings. The underlying volcanic package is exposed at the Telena Zone, which is stratigraphically lower than Burgundy Ridge, where it hosts vein-style chalcopyrite mineralization. It is possible that similar mineralization is present at depth at Burgundy Ridge.

The relative timing of the breccia bodies and the porphyry intrusions is unclear and are possibly contemporaneous. Some porphyry dykes appear to cut the breccias, while some porphyry bodies appear to be clasts in the breccia. Clearly further detailed mapping is recommended and some samples should be collected for age-dating to better understand the systems and possibly the ore-genesis. Mineralization continues to the north, south, west and the system is open to depth.

### **Tundra Zone**

The Tundra Zone has significant Cu-Au Ag mineralization associated with hornfels-altered metavolcanic rocks. This association indicated that there was a significant local heat source in the past. This could be a nearby intrusion from the Jurassic Copper Mountain Plutonic Suite or an intrusion related to the Eocene Coast Mountain Plutonic Complex monzonite that outcrops to the south of the Tundra Zone. The source of the copper mineralization may potentially be related to a local copper bearing intrusion, given the metallogenic associations in the area.

### **Tomb Zone**

The Tomb Zone contains minor disseminated chalcopyrite in the clean, propylitic altered andesite. The spectacular gossanous zones that are developed along the river bluffs are most probably well leached. Copper mineralization was also discovered to associated to a steeply dipping fault, the source to this mineralization could be from an underlying intrusive related source given the amount of gossan exposed in the hanging wall block to the Trek Thrust Fault. As well, the occurrence is located at the intersection of two regional faults along Sphaler Creek that forms a conjugate northwest and northeast set of steeply dipping faults.

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## **Backster Zone**

At the Backster Zone, there is significant Copper-gold-silver mineralization along the margins of a megacrystic K-spar dyke where it cuts a package of dolomitic rocks. The mineralization is present as chalcopyrite blebs, crystals and pods in a carbonate rich breccia that is present along this margin. There is also a zone of mineralized epidote-skarn breccia developed along the dyke where strong copper-silver-gold mineralization is present as disseminated chalcopyrite. The strongest mineralization appears to be concentrated in the hydrothermal carbonate breccia and the skarn breccia, with only weak copper mineralization present elsewhere. The mineralization appeared to extend down the ridge slope to the west and under the ice to the east from where it was encountered, but these areas were inaccessible due to the steep slope to the west and the glacier to the east. To the north, there were quartz-sericite-ankerite stockwork breccias in a quartz rich rock and to the south, an area of skarn breccia however both of these areas were only poorly mineralized. The mineralization encountered at the Backster Zone has the similar geology to that discovered at the near-by Burgundy Zone. This may be a weaker parallel zone or upper expression of the similar system encountered at Burgundy Ridge.

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## **PROCEDURES AND METHODS**

Samples were loaded in rice sacks and sealed with zap straps. They were then trucked to ALS Canada Inc. in Terrace for drying, crushing and pulverization. The pulps were then sent to Vancouver for analysis. The analytical procedures used to test the samples were 4-Acid digestion followed by inductively coupled plasma (ICP) atomic emission spectroscopy; and fire Assay (30 g) for high grade gold and silver.

As part of the sampling procedure, a QA/QC program was carried out to ensure accuracy with the analysis procedures. Blanks and standards were inserted into the sample stream as well as duplicate check-samples were inserted at frequent intervals. In addition, ALS Minerals ran its standard set of internal checks as part of their in-house QA/QC program. Results were within acceptable limits.

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## **CONCLUSIONS AND RECOMMENDATIONS**

### **Burgundy Ridge**

The chip sampling program at Burgundy Ridge was successful in demonstrating the local continuity of the mineralization that had been identified during the 2013 exploration season. Continuous chip lines were run over the extent of the known mineralized zone and across previously unsampled areas, with a total of 174 samples comprising fifteen chip lines. The results show a zone approximately 300m by 300m of consistent Cu-Ag (Au) mineralization. Furthermore, high-grade 28.9 g/t gold, 89.65 g/t silver and 5.12% copper was discovered over 3.0 metres near the centre of the low-grade Cu-Au-Ag envelope as a center snow patch receded during this program. Obvious massive 10-15% chalcopyrite veinlets brecciate the host skarned volcanic-dolomitic limestone breccia zone. In addition, a chip line was completed approximately 125 metres west of the main Burgundy Zone that contained significant Cu-Au-Ag mineralization that was associated with a strong garnet-bearing skarn. The continuity of mineralization between Line 9 and the main zone has yet to be fully tested, however several reconnaissance samples showed that Cu-Au-Ag mineralization does occur immediately west of the Burgundy Zone. Strongest disseminated mineralization appears to be related to contact zone of steeply dipping porphyry dykes that cut through the zone. This would suggest that there is potential for vertical continuity of mineralization to depth. Continued work to collect additional chip samples across a broader area and drill testing of the mineralization to depth are warranted.

### **Backster Zone**

The Backster Zone was discovered this field season during an investigation of geophysical anomaly M4R4 (Appendix VI). It is a zone of high grade Cu-Ag-(Au) mineralization on the margins of a porphyritic syenite dyke where it cuts a dolomitic package of rocks forming a skarn alteration zone, geologically and mineralogically similar to Burgundy Ridge. Further work should be done on this zone including geological mapping and sampling to determine its extent and if there are genetic links to Burgundy Ridge.

### **Tundra Zone**

The Tundra Zone was investigated briefly during the 2014 field season. Results from the limited sampling confirm the historical samples and more recent soil anomalies in the area. Copper mineralization was found in high temperature metamorphosed volcanic or volcanosedimentary rock. Further work is recommended in attempts to identify the source of this mineralization.

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**STATEMENT OF COSTS**

	<b>Total Newmont Lake Property</b>
<b>Expense</b>	
<b>· SITE COSTS</b>	
· PLANNING EXPENSES & TRAVEL	820.00
· GEOCHEMISTRY	
· Assay	17,149.24
<b>Total · GEOCHEMISTRY</b>	<b>17,149.24</b>
· AVIATION	
5040 · Helicopter	55,791.32
5050 · Aviation Fuel	7,550.88
<b>Total · AVIATION</b>	<b>63,342.20</b>
5200 · COMMUNICATIONS	2,301.00
5300 · LAND & PROPERTY	
5331 · Property Taxes	0.00
5550 · Staking Fees	0.00
<b>Total 5300 · LAND &amp; PROPERTY</b>	<b>0.00</b>
5350 · GEOPHYSICS	
5355 · Airborne Surveys	
5356 · Aeromagnetics	8,279.08
5357 · Electro Magnetic	0.00
5358 · Mobilization/Demobilization	0.00
5359 · Airborne Surveys - Vtem	0.00
5355 · Airborne Surveys - Other	1,519.38
<b>Total 5355 · Airborne Surveys</b>	<b>9,798.46</b>
<b>Total 5350 · GEOPHYSICS</b>	<b>9,798.46</b>
5390 · PERSONNEL	
5400 · Contract Labour - Office	27,103.90
54000 · Contract - Field Work	48,500.00
5410 · Travel- Contract Labour	
5414 · Airfare	1,141.50
5416 · Food - while travelling	428.60
5417 · Hotels	649.50
5418 · Taxi	905.34
5410 · Travel- Contract Labour - Other	3,100.00
<b>Total 5410 · Travel- Contract Labour</b>	<b>6,224.94</b>

<b>Total 5390 - PERSONNEL</b>	84,952.84
<b>5500 - CAMP COSTS</b>	
<b>5250 - Fuel Costs</b>	0.00
<b>5510 - Consumables</b>	1,692.39
<b>5530 - Hardware</b>	70.89
<b>5555 - Transport</b>	5,770.93
<b>5559 - Field Supplies</b>	7,464.38
<b>5571 - Camp Office Expenses</b>	56.79
<b>5572 - Storage Rental</b>	5,806.20
<b>5574 - Camp-Catering</b>	4,272.08
<b>5500 - CAMP COSTS - Other</b>	0.00
<b>Total 5500 - CAMP COSTS</b>	<u>25,133.66</u>
<b>Total 5000 - SITE COSTS</b>	<u>200373.40</u>
<b>Total Expense</b>	<u><u>200373.40</u></u>

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### **STATEMENT OF QUALIFACTIONS**

I, **KENNETH J. KONKIN**, Geologist, resident at 6-415 W. Esplanade Avenue, North Vancouver in the Province of British Columbia, hereby certify that:

- 1) I received a Bachelor of Science degree in Geology from the University of British Columbia in 1984.
- 2) I am registered as a Professional Geoscientist (P.Geo.) with the Association of Professional Engineers and Geoscientists of B.C. (License #20452).
- 3) Since 1984, I have been involved with numerous mineral exploration programs throughout Canada, the United States of America, Mexico, South America and Russia.
- 4) This report is based on a review of reports, documents, maps, other technical data, and on my field work carried out during July 21<sup>st</sup> -August 10<sup>th</sup>, 2014.
- 5) I hold no direct or indirect interest in the property, or in any securities of Romios Gold Resources Inc. or in any associated companies, nor do I expect to receive any.
- 6) I am a “qualified person” for the purposes of Nation Instrument 43-101
- 7) I have conducted and supervised work on the Newmont Lake-Trek Property from July 21<sup>st</sup> – August 10<sup>th</sup>, 2014.
- 8) I am responsible for preparing the technical report, its’ conclusions and recommendations, which are based on my professional assessment of the exploration data generated by Romios Gold Resources Inc, and is accurate to the best of my knowledge.
- 9) I am not aware of any material fact or material change related to this report that is not reflected in this technical report.
- 10) I am an independent geological consultant with no promised or implied affiliation with Romios Gold Resources Inc.
- 11) I have had no prior involvement with the Newmont Lake - Trek Property before I visited it on July 21<sup>st</sup>, 2014. The geological interpretations, conclusions and recommendations in this report are based largely on the data collected from the 2014 exploration program.

Dated at Vancouver, 30<sup>st</sup> of September 2014

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K.J. Konkin, P. Geo.

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Alexander B. Nielsen, M.Sc, GIT

Statement of Qualifications

I, Alexander B. Nielsen, do certify that:

1. I received a bachelor's degree in geology from Queen's University, Kingston, Ontario 2005 and a masters degree in Earth Sciences from Simon Fraser University, Burnaby, British Columbia 2012
2. I am registered as a Geologist in Training (GIT) with the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC), member ID 171093
3. Since 2006 I have been involved in geological mapping and mineral exploration programs in Canada and China
4. This report is based on a review of previous reports and technical documents relating to the property and original geological interpretation based on my fieldwork carried out on the property July 21 – August 10 2014.
5. I conducted fieldwork on the Newmont Lake – Trek property July 21 – August 10 2014.
6. I am an independent geological consultant with no affiliation to Romios Gold Resources.

Dated 05 August 2015



Alexander B. Nielsen

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**APPENDIX II**  
**Mineral Tenure Data**



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**APPENDIX I**  
**Sample Descriptions**

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Sample	Sample ID	Width (m)	Medium	Easting	Northing	Elev (m)	Location	Geo.	Date	Description
KK-01	E310642	float	subcrop	374901	6303307	1870	Burgundy Ridge	KK	25-Jul	angular float, possible sub-crop frags 20-30 cm near ridge line, very close to source. mega xcline syenite with strong ep-gar intense Fe-ox, minor Mn-ox, very strong mal-az stain on fract planes
KK-02	E310643	1.2	outcrop	374902	6303360	1882	Burgundy Ridge	KK	25-Jul	probable source to KK-01 float sample, garnet-epidote skarn with mod mal-az stain, very strong lim-mn ox, fine-grained skarn irregular body along ridge-line.
KK-03	E310644	1.0	subcrop	374727	6303465	1885	Burgundy Ridge	KK	25-Jul	along ridge-line, subcrop of mega-xcline syenite porphyry with tr mal-az stain on fract.
KK-04	E310645	1.3	outcrop	374654	6303472	1868	Burgundy Ridge	KK	25-Jul	contact zone 300/60, ep-gar skarn with mega-xcline syenite porphyry, well leached and fractured with mod mal-az
KK-05	E310646	1.0	outcrop	374692	6303424	1858	Burgundy Ridge	KK	25-Jul	along fault plane 126/60 2-3cm wide ep-gar skarn vlt very strong mal-az ,minor chalcocite in mega xcline porphyry
KK-06	E310647	float	talus	374862	6303256	1839	Burgundy Ridge	KK	25-Jul	30-40cm angular frags over 15-20 m area, intense mal-az-lim stain on fractured ep-gar skarn, no vis sxs, minor mn-ox
KK-08	H234833	float	river bed	368148	6298887	609	1920 Zone	KK	28-Jul	20 cm angular float boulder, modlim-ox qtx vein frag with tr diss cpy and py with black chl? From middle of stream
KK-09	H234834	float	river bed	368322	629900	662	1920 Zone	KK	28-Jul	30-40cm angular boulder, dark grey hornfels vol, very well siled, 1-2% po+cpy in watery grey qtz vlts, very strong lim-oxed meta volcanic
KK-10	H234835	float	river bed	368322	629900	662	1920 Zone	KK	28-Jul	20cm sub-rounded boulder, fine-grained intense siled, skarned? med-pale grey siliceous metamorphosed intrusive? 2-3% qtz+Fe-carb vlts with trace clots of tetrahedrite/fribergite? Trace diss cpy

KK-11	H234836	float	river bed	368322	629900	662	1920 Zone	KK	28-Jul	10-15cm round boulder dark grey meta-sed, very strong lim-ox, 2-3% diss po, tr diss cpy along fract planes
KK-12	H234837	float	cliff base	360443	6324435	561	Trek Tomb	KK	30-Jul	1x2x3m slab of rock from 15m above cliff face, 1.0m chip very well siled mx andesite (non-magnetic), 3-5 % diss py, tr diss cpy, intense lim-ox, mod mal-az stain along fract
KK-13	H234838	1.0	outcrop	360420	6324435	560	Trek Tomb	KK	30-Jul	along shear zone 171/68 mx siled andesite as above with 1-2% cpy diss+vlt, 5-10% vlt+diss py, strong mal-az stain. This sample is between chip line samples H234756 and H234757 along the shear zone
KK-14	H234839	2.0	outcrop	358674	6322229	1389	Trek Tundra	KK	31-Jul	rubbly material, sub-crop? Recessive zone along saddle of small ridge/knoll. Fine-grained weakly magnetic andesite, 2-3% diss+vlt py with strong Fe-ox along fract
KK-15	H234840	1.0	outcrop	358665	6322161	1395	Trek Tundra	KK	31-Jul	fine-grained andesite, weakly magnetic, 2-3% diss+vlt py, strong siled with 1-2mm 3-5% lim-oxed qtz vlts, very strong Fe-oxed with platy sheared cleavage, friable
KK-16	H234841	1.2	outcrop	358636	6322138	1400	Trek Tundra	KK	31-Jul	shear zone 32/78 very well siled, weakly magnetic meta andesite dark grey-green with 3-5% diss+vlt py, very strong Fe-ox
KK-17	H234842	grab	subcrop	358636	6322129	1408	Trek Tundra	KK	31-Jul	same as above, sub-crop 60-70cm boulders rubbly blocky talus slope, 7-10% diss+vlt py
KK-18	H234843	float	talus	358556	6322196	1378	Trek Tundra	KK	31-Jul	angular 30cm boulder in granodiorite talus field in gully, altered meta-andesite with mx coarse-grained py seams, intense Fe-ox, very friable
KK-19	H234844	float	talus	358785	6322628	1283	Trek Tundra	KK	31-Jul	directly below DDH pads, hornfles andesite, fine-grained siled with 2-3% diss py, tr mal-az stain on fract, tr diss cpy in qtz vlts

KK-20	H234845	1.5	outcrop	358877	6322589	1231	Trek Tundra	KK	31-Jul	sheared augite andesite porphyry, 3-5% diss py weakly magnetic, intense Fe-ox, very well siled. in creek ravine
KK-21	H234846	1.5	outcrop	359144	6322638	1080	Trek Tundra	KK	31-Jul	intense Fe-oxed vfg vol? extremely well siled, 7-10% 1-5mm chalcedonic qtz vlt stwk brecciated pale grey host with 3-5% diss+vlt pv
KK-22	H234847	2.0	outcrop	361173	6323497	1153	Trek East	KK	31-Jul	dolomitic coinglomerate with strong ankeritic oxide, no vis sxs or silicification
KK-23	H234848	float	talus	371850	6302466	2037	M4-R4	KK	1-Aug	siled fg siltstone along contact with ankeritic lst/dolomite. 20-25% qtz stwk with intense Fe-ox. minor iarosite
KK-24	H234849	0.6	outcrop	371822	6392475	2040	M4-R4	KK	1-Aug	along same fault contact as above 253/85, qtz stwk as tension in-fill
KK-25	H234851	float	subcrop	373260	6303707	1952	Backster	KK	1-Aug	xtline dolomite in contact with lst along knoll top, frags of mega xtline syenite dyke and granodiorite dyke, frags from a 10-15m area with trace mal-az staining on fract planes in cal-qtz vlts. Tr diss fine-grained cpy
KK-26	H234852	1.0	outcrop	373198	6303711	1938	Backster	KK	1-Aug	QSP with minor scoridite staining along fract, very well siled, possibly a porphyritic vol 3-5% fine-grained diss py, strong Fe-ox
KK-27	H234853	0.3	outcrop	373274	6303587	1946	Backster	KK	1-Aug	metasomatic contact 193/86 along a megaxtline syenite dyke contact with lst, strong mal-az stain, 3-5cm vlt cpv
KK-28	H234854	1.0	outcrop	373274	6303587	1946	Backster	KK	1-Aug	FW contact to above mineralized shear with dyke, pink syenite mega-xtline siled with epidote, tr diss pv, cpv
KK-29	H234855	1.5	outcrop	373274	6303587	1946	Backster	KK	1-Aug	HW contact KK-27, xtline lst with tr diss cpy weak rare mal-az stain on fract, minor mn-ox
KK-30	H234856	float	subcrop	368030	6300382	1420	1920 Zone	KK	1-Aug	very angular 20 cm bolulder with intense lim-ox, pale-med grey siliceous vfg matrix vol? 2-3% fine-grained diss py

KK-31	H234857	float	river bed	385838	6307481	629	North Graben	KK	2-Aug	large flash flooded river bed, 30-40 cm angular lim-oxed pale grey siliceous calc-silicate unit, tr diss tet/friebergite, tr diss pv+cpv
KK-32	H234858	float	moraine	377089	6298779	1273	M7R7	KK	3-Aug	fist-sized rounded cobble intense lim-oxed siled vol ash tuff or siltstone well laminated with 1.5cm of cg pyrite seam
KK-33	H234859	0.4	outcrop	378100	6299378	1691	M7R7	KK	3-Aug	semi-mx steel pyrite in xtl-tuff 327/40 as a matrix to a breccia, form pods of 30-40 cm in contact with a feld-porphyry dyke
KK-34	H234860	1.5	outcrop	378450	6299016	1604	M7R7	KK	3-Aug	pure jasperoidal hematite wispy layers up to 1-2 meters thick over 40-45m on strike 207/57 interbedded with mafic volcanics
KK-35	H234861	1.0	outcrop	377991	6299437	1682	M7R7	KK	5-Aug	2-3% 1-3mm fg py vlts in Fe-oxed heterolithic andesite bx, strong spotty lim+hem-ox, 5-7% siderite 1-5mm vlts with trace diss fine-grained pwrite
KK-36	H234862	0.8	subcrop	377862	6299302	1650	M7R7	KK	5-Aug	vfg greyish-green siltstone or siliceous vol 1-2% 1-3mm py vlts, intense Fe-ox, tr-1% diss pv, verv silicified
KK-37	H234863	0.4	outcrop	377707	6299316	1619	M7R7	KK	5-Aug	cliff face sulphide vlts in well siled andesite or vfg sed, 5-7% qtz-cal vlts with 1-3% 1-5mm tet-pv-cpv blebs
KK-38	H234864	grab	outcrop	379695	6298518	1367	M7R7	KK	5-Aug	gossan 20x60m siled mx andesite with 2-3% diss py, strong pervasive clay alt along western sliver of McLvmt fault
AG-001	H2344824	1.5	outcrop	358646	6322253		Tomb	AG	30-Jul	locally non-magnetic fine grained volcanic (andesite?). 1-2% disseminated pyrite (euhedral to subhedral). Centimetre wide calcite veins with epidote and brown garnet.
AG-002	H2344825	1	outcrop	373252	6303653		Backster	AG	31-Jul	Megacrystic porphyry skarn breccia with some irregular quartz-calcite veins hosting trace dark sulphides. Lots of hematite on fracture planes and in veinlets. Skarn has green garnet and epidote in matrix.

AG-003	H2344826	GRAB	float	373261	6303657	Backster	AG	31-Jul	Quartz-calcite hematite vein (5-7cm) with azurite and malachite staining found in float on talus.
AG-004	H2344827	1.5	outcrop	373287	6303466	Backster	AG	31-Jul	1.5m chip perpendicular to a 2cm hematite vein with azurite and malachite showing in 4cm halo, especially on fracture surfaces. Vein intrudes garnet-epidote skarn breccia. 080/85.
H234776	H234776	1	outcrop	361072	6326153	TREK	AG/ON	07-Aug	Dark green-blue amygduloidal basalt (calcite amygdules with moderate sulfide). Medium to fine grained, with propolytic (carb-chl) alteration. Possible porphyry protolith (augite?). Sample taken from outcrop over 1x1m area
H234777	H234777	GRAB	outcrop	361194	6325857	TREK	AG/ON	07-Aug	Fine grained augite basalt with 1-2% disseminated fine to medium grained pyrite
H234778	H234778	0.75	outcrop	361182	6325769	TREK	AG/ON	07-Aug	Highly altered, appears medium grained (porphyry protolith?). Lots of k-spar, with minor carbonates. Trace sulphides seem to be all pyrite (fine grained subhedral)
H234779	H234779	0.7	outcrop	361119	6325736	TREK	AG/ON	07-Aug	Augite basalt with semi-massive sulphides heavily disseminated. 35%+ mineralization in the highest coarse grained areas, with 3-5% as finer disseminations throughout the host rock. Silica and chlorite altered. Mineralization is 50% brassy subhedral pyrite, and 50% (arseno??) silvery circular blebs. There is a possible intrusion of k-spar rich porphyry ~1m away (edge of outcrop) with weak potassic alteration and moderate carbonates. Sample taken in .70x.5m area on outcrop.

H234780	H234780	GRAB	outcrop	361222	6325717	TREK	AG/ON	07-Aug	Either an intermediate porphyry with k-spar or a potassic alteration of the augite basalt (textures are mottled). 2% sulphides as disseminated subhedral pyrite.
H234781	H234781	GRAB	outcrop	361201	6325700	TREK	AG/ON	07-Aug	same as previous
H234782	H234782					TREK	AG/ON	07-Aug	
H234783	H234783	GRAB	outcrop	361026	6325691	TREK	AG/ON	07-Aug	Chlorite-carbonate altered augite porphyry (fine to medium grained) with 1% sulphides as subhedral-euhedral pyrite.
H234784	H234784	1	outcrop	361018	6325679	TREK	AG/ON	07-Aug	Taken from large outcrop with malachite staining from fractures and bright orange lichen. Rock is ashy and fine grained, with strong k-spar and silica alteration. 1-2% disseminated pyrite, source of copper staining is unknown. See Oscar's photo.
ABN 14-019	E310623	GRAB	OUTCROP	375068	6303276	Burgundy Ridge	AN	25-Jul	Epidote-silica skarn breccia, clasts up to cobble sized, milled, 10-15% cp+mal+chalcocite(?)
ABN 14-020	H234832	Grab	OUTCROP	358845	6322408	Tundra Zone	AN	31-Jul	Epidote-chlorite altered volcanic (?) rock with possible augite-->chlorite phenocrysts. ~ 30m east of a diorite body, approximately 10% pyrite with large clots of chalcopyrite and malachite staining
ABN 14-021	H234751	GRAB	OUTCROP	373264	6303964	M4R4	AN	1-Aug	Small zone of epidote-hematite bearing skarn breccia with veins of calcite containing tr-1% chalcopyrite
ABN 14-022	H234752	Grab	OUTCROP	373276	6303582	M4R4	AN	31-Jul	Strongly malachite stained hydrothermal breccia, matrix is composed of calcite, chalcopyrite, and quartz. Clasts are from local orthoclase dyke. (more matrix rich)
ABN 14-022	H234753	Grab	OUTCROP	373276	6303582	M4R4	AN	1-Aug	Strongly malachite stained hydrothermal breccia, matrix is composed of calcite, chalcopyrite, and quartz. Clasts are from local orthoclase dyke. (more clast rich)

ABN 14-023	H234754	GRAB	OUTCROP	367964	6300645	1920	AN	1-Aug	1 metre wide dyke of flow-banded rhyolite, tr-1% sulphide. Cutting "sea floor" andesite
ABN 14-024	H234755	GRAB	OUTCROP	368045	6300344	1920	AN	1-Aug	Schistose sericitic fine grained, silicified rock, from talus, ~10% very fine grained pyrite
H234772	H234772	Chip	OUTCROP	383759	6302920	Silt Site 12	AN/AG	4-Aug	"Rotten" looking crystal tuff, very soft and gossanous, 2-3% pyrite (very white and anhedral) 2m chip at 215 from co-ordinates
ABN 14-028	H234773	GRAB	OUTCROP	378047	6299412	West of Boulder-Rusty-Arseno	ON,AG	5-Aug	Sulphide cemented breccia cutting banded siliceous tuffs or cherts, 15-20% pyrite
ABN 14-029	H234774	GRAB	Subcrop	377860	6299561	West of Boulder-Rusty-Arseno	ON/AG	5-Aug	Calcite-Ankerite vein with pyrite-chalcopyrite-malachite (2-3% total) in clots cutting a black siltstone with prominent bedding at 124/55
ABN 14-030	H234775	GRAB	Subcrop	377720	6299723	West of Boulder-Rusty-Arseno	ON/AG	5-Aug	Calcite vein bearing chalcopyrite, malachite, hematite, and pyrite, trace-1%, cutting a basaltic intrusive. Basalt has trace chalcopyrite near the vein.
ABN 14-034	H234782	GRAB	OUTCROP	361040	6325675	Trek Lower North Zone	ON /AG	7-Aug	Potassically altered silica flooded augite-phyric rock (rock?) trace-0.5% sulphide very fine grained augite altered to chlorite
E310529	E310529	GRAB	outcrop	374913	6303153	Burgundy Ridge	JA	24-Jul	calc-silicate altered diorite or syentite containing abundant disseminated chalcopyrite
JAR-001	E310638	GRAB	outcrop	374643	6303405	Burgundy Ridge	JA	25-Jul	skarn-altered (igneous?) rocks cross-cut by thin megacrystic dykes; trace Cu-carbonate minerals showing on fracture surfaces
JAR-002	E310639	0.5	outcrop	374695	6303401	Burgundy Ridge	JA	25-Jul	3 m wide skarn occurring between megacrystic dykes, 3-5 m wide; Cu-carb common on fracture surfaces

JAR-003	E310640	0.5	outcrop	374734	6303381	Burgundy Ridge	JA	25-Jul	5 m wide zone of intense skarn alteration (in diorite?) occurring between megacrystic dykes; 'mottled' texture resulting from large, heavily oxidized, chalcopyrite-rich zones within garnet-rich matrix; Cu-carb showings common throughout
JAR-004	E310641	GRAB	outcrop	374775	6303342	Burgundy Ridge	JA	25-Jul	area of skarn; Cu-carb showings common on fracture surfaces
JAR-005	H234801	GRAB	outcrop	368292	6298983	Burgundy Ridge	JA	28-Jul	sub-angular qz cobble taken from river bed; contained mg-magnetite and trace Cu-carb coatings; Fe-ox common on fracture surfaces
JAR-006	H234802	GRAB	outcrop	360416	6324413	Tomb	JA	30-Jul	dark-green (andesite?) rocks; strongly magnetic (fg mag); fine- Cu-carb coatings common on fracture sfcs, trace fg cpy within veinlets
JAR-007	H234803	0.25	outcrop	358635	6321956	Tundra	JA	31-Jul	o/c sampled near glacier toe; taken from thin finger of gossan (biot-qz-py altered sed) extending into monzonite intrusive body; very sulphide-rich, ~20% py
JAR-008	H234804	0.5	outcrop	358858	6322420	Tundra	JA	31-Jul	gossanous o/c with >5% disseminated, fg, subhedral py and possible traces cpy; area sampled included 1-cm qz-py veinlet
JAR-009	H234805	1	outcrop	358862	6322427	Tundra	JA	31-Jul	collected on N side of gossanous o/c; altered intrusives (diorite?); >5% py(+/-cpy). Trace crys observed on nearby fracture sfcs; taken near historical sample 391133 ATS, 2006
JAR-010	H234806	1	vein/oc	358790	6322531	Tundra	JA	31-Jul	1-cm qz-cpy-py veinlet sampled over 1m along trend (030/75); veinlets appeared to occur with ~3-5 m-wide corridor; taken near historical sample DC484636, 1990
JAR-011	H234807	0.5	outcrop	358790	6322531	Tundra	JA	31-Jul	sample including wallrock and veining taken from same location as previous sample; wallrocks of altered sedimentary or tuffaceous composition

JAR-012	H234808	0.5	outcrop	358868	6322562	Tundra	JA	31-Jul	chip from SE side of ravine; fg, intermediate intrusive rocks with 10-15% fg, euhedral to subhedral pyrite; Cu-carb coatings common within local area; taken near historical sample DC484626, 1990
JAR-013	H234809	0.5	outcrop	360848	6323644	East Zone	JA	31-Jul	chip from W side of steeply incised ravine; mg, moderately silicified sedimentary or tuffaceous rocks; trace fg py
CGS-17	H234810	Standard							Standard CGS-17
JAR-014	H234811	0.5	outcrop	360681	6323916	East Zone	JA	31-Jul	weakly altered, medium-grained intrusive or volcanic rocks; no visible sulphide
JAR-015	H234812	1.3	outcrop	373187	6303716	Backster Zone	JA	1-Aug	sample collected from west side of gossanous o/c, approx 200mX200m; QSP altered with ~10%, fine subhedral py
JAR-016	H234813	0.5	outcrop	373225	6303799	Backster Zone	JA	1-Aug	fg, magnetic intrusive rocks (qz-diorite/diorite); fspr
JAR-017	H234814	0.5	outcrop	373156	6303987	Backster Zone	JA	1-Aug	collected from 5mX5m nunatak; strongly silicified, very qz-rich rocks (80% qz, 10-15% fg pv)
JAR-018	H234815	0.5	outcrop	373015	6304115	Backster Zone	JA	1-Aug	zone of anastomosing qz-carb stk and vein bx appx 10m wide and exposed for over 50m along strike (226-046/sub-vertical); trace pyrite; rare Cu-carb coating noted on fracture surfaces
JAR-019	H234816	0.5	outcrop	373034	63041326	Backster Zone	JA	1-Aug	sample taken ~20 m SW of previous, from within region of qz-card stk
JAR-020	H234817	1.5	outcrop	373806	6304139	Backster Zone	JA	1-Aug	sample taken across qz-carb stk, ~50 m SW from previous sample
JAR-021	H234818	GRAB	outcrop	386456	6300802	19-20 Zone	JA	1-Aug	muscovite schist; strongly foliated with fol'n heavily deformed/convoluted; foliation-parallel, disaggregated qz veining common; ~10% euhedral pv
JAR-025	H234822	GRAB	outcrop	385756	6306503	Northeast	JA	2-Aug	sub-rounded cobble of qz-carb veining within fg, dark (andesitic?) rock taken from river bed near SS-15B silt site; abundant cg cov within sample

JAR-026	H234823	GRAB	outcrop	385738	6306516	Northeast	JA	2-Aug	sub-rounded cobble collected from river bed; 80% qz veining within dark, fg matrix; qz veining contained 1-5mm, circular clusters of dark-grey to black, lustrous mineral - snh or black chl?
JAR-027	H234865	GRAB	outcrop	385278	6301382	Kirby	JA	4-Aug	cherty silica (volcanically associated?) with 1-2% very fg, unidentified sulphide
JAR-028	H234866	0.5	outcrop	379002	6299307	Southwest, near SS-5)	JA	5-Aug	rock chip of area of locally strong QSP alteration within otherwise propylitically altered intermediate volcanic flows or tuffs; 10% py occurring as anhedral to subhedral grains in small aggregates/masses(+/-chl) and within fine veinlets
JAR-029	H234867	0.5	outcrop	378052	6299024	Southwest, near SS-5)	JA	5-Aug	gossanous o/c, mod to heavily oxidized on surface; fg, siliceous (silicified?) volcanic rocks with ~20% fine, anhedral py within elongated clusters and aggregates;
JAR-030	H234785	GRAB	outcrop	361252	6325611	Lower North Zone, Trek	JA	7-Aug	augite porphyry with trace sulphide (py); fspr grains replaced with epi
JAR-031	H234786	1	outcrop	361174	6325634	Lower North Zone, Trek	JA	7-Aug	porphyritic volcanic rocks (augite?) with ~1% f to mg py; Fe-ox coating common on rock fractures
JAR-032	H234787	GRAB	outcrop	361041	6325723	Lower North Zone, Trek	JA	7-Aug	white, leached/bleached-looking, pervasively silicified (volcanic) rocks; possibly ash tuff or purely alteration causing appearance; 1-3% mg, subhedral py occurring as rusty 'specs' throughout
JAR-033	H234788	0.3	outcrop	361019	6325739	Lower North Zone, Trek	JA	7-Aug	dark-green, intermediate fspr-phyric volcanic flows or tuffs

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
E310501	CHIP	outcrop	1.5	110	374860	6303220	Burgundy Ridge	JA, AG	23-Jul	
E310502	CHIP	outcrop	1.5	110	374861	6303219	Burgundy Ridge	JA, AG	23-Jul	
E310503	CHIP	outcrop	1.5	110	374865	6303218	Burgundy Ridge	JA, AG	23-Jul	skarn; heavily garnet-sericite-hematite altered; probable diorite protolith
E310504	CHIP	outcrop	1.5	110	374864	6303213	Burgundy Ridge	JA, AG	23-Jul	skarn-altered, porphyritic intrusive rocks; traces Cu-carb (crysocolla, malachite) coatings on fracture surfaces
E310505	CHIP	outcrop	1.5	110	374860	6303206	Burgundy Ridge	JA, AG	23-Jul	skarn; porphyritic to megacrystic intrusive rocks; alteration zoned fspr phenos (1-25mm) common, dominantly kspars (syenite)
E310506	DUP	outcrop	1.5	110	374860	6303206	Burgundy Ridge	JA, AG	23-Jul	
E310507	CHIP	outcrop	1.5	110	374861	6303205	Burgundy Ridge	JA, AG	23-Jul	skarn within porphyritic intrusive rocks; abundant disseminated chalcopyrite (5-10%) occurring near sample end
E310508	CHIP	outcrop	1.5	110	374863	6303205	Burgundy Ridge	JA, AG	23-Jul	skarn within porphyritic intrusive rocks; >10% disseminated chalcopyrite occurring over 80 cm
E310509	CHIP	outcrop	1.5	110	374879	6303186	Burgundy Ridge	JA, AG	23-Jul	skarn within megacrystic intrusive porphyry; euhedral, green garnets common (>10wt%)
E310511	CHIP	outcrop	1.5	110	374880	6303185	Burgundy Ridge	JA, AG	23-Jul	skarn within megacrystic intrusive porphyry; euhedral, green garnets >20wt%; Cu-carbs common throughout outcrop, as fracture/vug coatings: trace chalcovrite
E310512	CHIP	outcrop	1.5	110	374882	6303185	Burgundy Ridge	JA, AG	23-Jul	skarn within megacrystic intrusive porphyry; euhedral, green garnets >20wt%; Cu-carbs common throughout outcrop, as fracture/vug fill; trace chalcovrite
E310513	CHIP	outcrop	1.5	110	374883	6303184	Burgundy Ridge	JA, AG	23-Jul	same as previous with a greater abundance of silicified carbonate clasts
E310514	CHIP	outcrop	1.5	110	374885	6303184	Burgundy Ridge	JA, AG	23-Jul	same as previous
E310515	CHIP	outcrop	1.5	110	374893	6303161	Burgundy Ridge	JA, AG	24-Jul	skarn-altered intrusive breccia; intensely siliceous zone; 10-50 cm, amorphous silica masses (silicified limestone clasts?) within a fine-grained green matrix of ~70% garnet, epidote, calcite; traces of Cu-carb common

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
E310516	CHIP	outcrop	1.5	110	374894	6303160	Burgundy Ridge	JA, AG	24-Jul	same lithology as previously noted: skarn-altered intrusive breccia; strongly silicified and garnet-rich zone
E310517	CHIP	outcrop	1.5	110	374896	6303160	Burgundy Ridge	JA, AG	24-Jul	same lithology as previously noted: skarn-altered intrusive breccia; strongly silicified and garnet-rich zone
E310518	CHIP	outcrop	1.5	110	374897	6303159	Burgundy Ridge	JA, AG	24-Jul	same lithology as previously noted: skarn-altered intrusive breccia; strongly silicified and garnet-rich zone
E310519	CHIP	outcrop	1.5	110	374899	6303159	Burgundy Ridge	JA, AG	24-Jul	same lithology as previously noted: skarn-altered intrusive breccia; strongly silicified and garnet-rich zone
E310520	CHIP	outcrop	1.5	110	374900	6303158	Burgundy Ridge	JA, AG	24-Jul	same lithology as previously noted: skarn-altered intrusive breccia; strongly silicified and garnet-rich zone
E310521	CHIP	outcrop	1.5	110	374901	6303158	Burgundy Ridge	JA, AG	24-Jul	same lithology as previously noted: skarn-altered intrusive breccia; strongly silicified and garnet-rich zone
E310522	CHIP	outcrop	1.5	110	374903	6303157	Burgundy Ridge	JA, AG	24-Jul	skarn breccia; intensely silicified zone; ~1% fine-grained, disseminated chalcopyrite
E310523	CHIP	outcrop	1.5	110	374904	6303157	Burgundy Ridge	JA, AG	24-Jul	same lithology as previously noted: skarn-altered intrusive breccia; strongly silicified and garnet-rich zone
E310524	CHIP	outcrop	1.5	110	374906	6303156	Burgundy Ridge	JA, AG	24-Jul	same lithology as previously noted: skarn-altered intrusive breccia; strongly silicified and garnet-rich zone
E310525	CHIP	outcrop	1.5	110	374907	6303156	Burgundy Ridge	JA, AG	24-Jul	same lithology as previously noted: skarn-altered intrusive breccia; strongly silicified and garnet-rich zone
E310526	DUP	outcrop	1.5	110	374907	6303156	Burgundy Ridge	JA, AG	24-Jul	Duplicate of previous sample
E310527	CHIP	outcrop	1.5	110	374909	6303155	Burgundy Ridge	JA, AG	24-Jul	same lithology as previously noted: skarn-altered intrusive breccia; strongly silicified and garnet-rich zone; small patches of red (hematite altered calc?) alteration occurring in places

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
E310528	CHIP	outcrop	1.5	110	374910	6303155	Burgundy Ridge	JA, AG	24-Jul	sample crossed contact from skarn into medium-grained, calc-silicate(+hematite?)-altered intrusive rocks containing 5-10 % mg, disseminated chalcopyrite (altered diorite from earlier intrusive episode?); sample line ended due to snow
E310531	CHIP	outcrop	1.5	290	374997	6303028	Burgundy Ridge	JA, AG	24-Jul	clean limestone unit is recrystallized and well bedded
E310532	CHIP	outcrop	1.5	290	374996	6303029	Burgundy Ridge	JA, AG	24-Jul	contact between limestone beds and dolomite unit occurs 1m into this sample. Dug under talus to outcrop.
E310533	CHIP	outcrop	1.5	290	374994	6303029	Burgundy Ridge	JA, AG	24-Jul	Dolomitic unit is medium grained, has disseminated cpy (fine to medium grained) upwards of 5%
E310534	CHIP	outcrop	1.5	290	374993	6303030	Burgundy Ridge	JA, AG	24-Jul	Dolomitic unit is medium grained, has disseminated cpy (fine to medium grained) upwards of 5%
E310535	CHIP	outcrop	1.5	290	374991	6303030	Burgundy Ridge	JA, AG	24-Jul	Dolomitic unit is medium grained, has disseminated cpy (fine to medium grained) upwards of 5%
E310536	CHIP	outcrop	1.5	290	374990	6303031	Burgundy Ridge	JA, AG	24-Jul	Dolomitic unit is medium grained, has disseminated cpy (fine to medium grained) upwards of 5%
E310537	CHIP	outcrop	1.5	290	374989	6303031	Burgundy Ridge	JA, AG	24-Jul	Dolomitic unit is medium grained, has disseminated cpy (fine to medium grained) upwards of 5%
E310538	CHIP	outcrop	1.5	290	374987	6303032	Burgundy Ridge	JA, AG	24-Jul	Dolomitic unit is medium grained, has disseminated cpy (fine to medium grained) upwards of 5%
E310539	CHIP	outcrop	1.5	290	374986	6303032	Burgundy Ridge	JA, AG	24-Jul	Dolomitic unit is medium grained, has disseminated cpy (fine to medium grained) upwards of 5%. Sample line stopped due to talus cover and snow patch.
E310540	CHIP	outcrop	1.5	130	374947	6303065	Burgundy Ridge	KK, AG		Megaporphyry skarn breccia with trace to 1% disseminated cpy
E310541	CHIP	outcrop	1.5	130	374948	6303064	Burgundy Ridge	KK, AG		coarse cpy dissemination (5-10%) starts in silica-hematite alteration. Possibly altered diorite?

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
E310542	CHIP	outcrop	1.5	130	374949	6303063	Burgundy Ridge	KK, AG		coarse cpy dissemination (5-10%) in silica-hematite alteration. Possibly altered diorite?
E310543	CHIP	outcrop	1.5	130	374950	6303062	Burgundy Ridge	KK, AG		coarse cpy dissemination (5-10%) in silica-hematite alteration. Possibly altered diorite? Cpy veinlets with q-cal rin approximately 150/sub vertical
E310544	CHIP	outcrop	1.3	130	374952	6303061	Burgundy Ridge	KK, AG		coarse cpy dissemination (5-10%) in silica-hematite alteration. Possibly altered diorite? Cpy veinlets with q-cal rin approximately 150/sub vertical, 1.5cm wide.
E310551	CHIP	Outcrop	1.5	115	375074	6303311	Burgundy Ridge	ON, KK	23-Jul	Dolomitic skarn breccia, rare clasts of porphyritic syenite, chalcopyrite, mal, azu
E310552	CHIP	Outcrop	1.5	115	375075	6303310	Burgundy Ridge	ON, KK	23-Jul	Dolomitic skarn breccia, rare clasts of porphyritic syenite, chalcopyrite, mal, azu
E310553	CHIP	Outcrop	1.5	115	375077	6303310	Burgundy Ridge	ON, KK	23-Jul	Dolomitic skarn breccia, rare clasts of porphyritic syenite, chalcopyrite, mal, azu
E310554	CHIP	Outcrop	1.5	115	375078	6303309	Burgundy Ridge	ON, KK	23-Jul	Dolomitic skarn breccia, rare clasts of porphyritic syenite, chalcopyrite, mal, azu
E310555	CHIP	Outcrop	1.5	115	375079	6303308	Burgundy Ridge	ON, KK	23-Jul	Dolomitic skarn breccia, rare clasts of porphyritic syenite, chalcopyrite, mal, azu
E310556	CHIP	Outcrop	1.5	115	375081	6303308	Burgundy Ridge	ON, KK	23-Jul	Dolomitic skarn breccia, rare clasts of porphyritic syenite, chalcopyrite, mal, azu
E310557	CHIP	Outcrop	1.5	115	375082	6303307	Burgundy Ridge	ON, KK	23-Jul	Dolomitic breccia, v. rare clasts of porphyritic syenite, chalcopyrite, mal, azu
E310558	CHIP	Subcrop	1.5	115	375084	6303307	Burgundy Ridge	ON, KK	23-Jul	Dolomitic breccia, v. rare clasts of porphyritic syenite, chalcopyrite, mal, azu
E310559	CHIP	Subtalus	1.5	115	375085	6303306	Burgundy Ridge	ON, KK	23-Jul	Sub-Talus sample, Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310560	CHIP	Subtalus	1.5	115	375086	6303305	Burgundy Ridge	ON, KK	23-Jul	Sub-Talus sample, Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310561	CHIP	Subtalus	1.5	115	375088	6303305	Burgundy Ridge	ON, KK	23-Jul	Sub-Talus sample, Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
E310562	CHIP	Subtalus	1.5	115	375089	6303304	Burgundy Ridge	ON, KK	23-Jul	Sub-Talus sample, Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310563	CHIP	Subtalus	1.5	115	375090	6303303	Burgundy Ridge	ON, KK	23-Jul	Sub-Talus sample, Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310564	CHIP	Subtalus	1.5	115	375092	6303303	Burgundy Ridge	ON, KK	23-Jul	Sub-Talus sample, Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310565	CHIP	Subtalus	1.5	115	375093	6303302	Burgundy Ridge	ON, KK	23-Jul	Sub-Talus sample, Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310566	CHIP	Subcrop	1.5	115	375094	6303301	Burgundy Ridge	ON, KK	23-Jul	Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310567	CHIP	Subcrop	1.5	115	375096	6303301	Burgundy Ridge	ON, KK	23-Jul	Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310568	CHIP	Subcrop	1.5	115	375097	6303300	Burgundy Ridge	ON, KK	23-Jul	Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310569	CHIP	Subcrop	1.5	115	375098	6303300	Burgundy Ridge	ON, KK	23-Jul	Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310571	CHIP	Subcrop	1.5	115	375100	6303299	Burgundy Ridge	ON, KK	23-Jul	Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310572	CHIP	Subcrop	1.5	115	375101	6303298	Burgundy Ridge	ON, KK	23-Jul	Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310573	CHIP	Subcrop	1.5	115	375103	6303298	Burgundy Ridge	ON, KK	23-Jul	Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310574	CHIP	Subcrop	1.5	115	375104	6303297	Burgundy Ridge	ON, KK	23-Jul	Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310575	CHIP	Subcrop	1.5	115	375105	6303296	Burgundy Ridge	ON, KK	23-Jul	Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310577	CHIP	Subcrop	1.5	115	375107	6303296	Burgundy Ridge	ON, KK	23-Jul	Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310578	CHIP	Subcrop	1.5	115	375108	6303295	Burgundy Ridge	ON, KK	23-Jul	Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310579	CHIP	Subcrop	1.5	115	375109	6303295	Burgundy Ridge	ON, KK	23-Jul	Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310580	CHIP	Subcrop	1.5	115	375111	6303294	Burgundy Ridge	ON, KK	23-Jul	Dolomitic breccia-dolomite, 1-5% chalcopyrite with no visible Cu-carb-oxide

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
E310581	CHIP	Subcrop	1.5	115	375112	6303293	Burgundy Ridge	ON, KK	23-Jul	Dolostone grading into marble, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310582	CHIP	Subcrop	1.5	115	375113	6303293	Burgundy Ridge	ON, KK	23-Jul	Dolostone grading into marble, 1-5% chalcopyrite with no visible Cu-carb-oxide
E310583	CHIP	Outcrop	1.5	115	375033	6303265	Burgundy Ridge	ON, KK	24-Jul	Skarn breccia cutting megacrystic porphyry, abundant porphyry clasts, epidote alteration. Malachite and azurite.
E310584	CHIP	Outcrop	1.5	115	375034	6303264	Burgundy Ridge	ON, KK	24-Jul	Skarn breccia cutting megacrystic porphyry, abundant porphyry clasts, epidote alteration. Malachite and azurite.
E310585	CHIP	Outcrop	1.5	115	375036	6303264	Burgundy Ridge	ON, KK	24-Jul	Barren orthoclase megacrystic syenite, phenocrysts are tabular and lathlike up to 2cm across
E310586	CHIP	Subcrop	1.5	115	375037	6303263	Burgundy Ridge	ON, KK	24-Jul	Barren orthoclase megacrystic syenite, phenocrysts are tabular and lathlike up to 2cm across
E310587	CHIP	Outcrop	1.5	115	375038	6303262	Burgundy Ridge	ON, KK	24-Jul	Barren orthoclase megacrystic syenite, phenocrysts are tabular and lathlike up to 2cm across
E310588	CHIP	Outcrop	1.5	115	375040	6303262	Burgundy Ridge	ON, KK	24-Jul	Barren orthoclase megacrystic syenite, phenocrysts are tabular and lathlike up to 2cm across
E310589	CHIP	Outcrop	1.5	115	375041	6303261	Burgundy Ridge	ON, KK	24-Jul	Fine-grained green garnet skarn, heterolithic with clasts of porphyry and dolostone, malachite visible
E310591	CHIP	Outcrop	1.5	115	375043	6303261	Burgundy Ridge	ON, KK	24-Jul	Fine-grained green garnet skarn, heterolithic with clasts of porphyry and dolostone, malachite visible
E310592	CHIP	Outcrop	1.5	115	375044	6303260	Burgundy Ridge	ON, KK	24-Jul	Porphyritic orthoclase syenite
E310593	CHIP	Outcrop	1.5	115	375045	6303259	Burgundy Ridge	ON, KK	24-Jul	Porphyritic orthoclase syenite invaded by skarn alteration, malachite visible
E310594	CHIP	Outcrop	1.5	115	375047	6303259	Burgundy Ridge	ON, KK	24-Jul	Porphyritic orthoclase syenite invaded by skarn alteration, malachite visible
E310595	CHIP	Outcrop	1.5	115	375048	6303258	Burgundy Ridge	ON, KK	24-Jul	Porphyritic orthoclase syenite invaded by skarn alteration, malachite visible
E310596	DUP						Burgundy Ridge	ON, KK	24-Jul	
E310597	CHIP	Subcrop	1.5	115	375049	6303257	Burgundy Ridge	ON, KK	24-Jul	Porphyritic orthoclase syenite invaded by skarn alteration, malachite visible

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
E310598	CHIP	Subcrop	1.5	115	375051	6303257	Burgundy Ridge	ON, KK	24-Jul	Porphyritic orthoclase syenite invaded by skarn alteration, malachite visible
E310599	CHIP	Subcrop	1.5	115	375052	6303256	Burgundy Ridge	ON, KK	24-Jul	Porphyritic orthoclase syenite invaded by skarn alteration, malachite visible
E310600	CHIP	Subcrop	1.5	115	375053	6303255	Burgundy Ridge	ON, KK	24-Jul	Porphyritic orthoclase syenite invaded by skarn alteration, malachite visible
E310601	CHIP	Subcrop	2.5	115	375055	6303255	Burgundy Ridge	ON, KK	24-Jul	Porphyritic orthoclase syenite invaded by skarn alteration, malachite visible
E310602	CHIP	Subcrop	2.5	115	375056	6303254	Burgundy Ridge	ON, KK	24-Jul	Siliceous jasperoidal dolostone, 1% chalcopyrite
E310603	CHIP	Outcrop	1.5	115	375057	6303254	Burgundy Ridge	ON, KK	24-Jul	Skarn breccia with clasts of dolostone, chalcopyrite and malachite visible
E310604	CHIP	Outcrop	1.5	115	375059	6303253	Burgundy Ridge	ON, KK	24-Jul	Skarn breccia with clasts of dolostone, chalcopyrite and malachite visible
E310605	CHIP	Outcrop	3	115	375060	6303252	Burgundy Ridge	ON, KK	24-Jul	Skarn breccia with clasts of dolostone, chalcopyrite and malachite visible
E310606	CHIP	Outcrop	3	115	375062	6303252	Burgundy Ridge	ON, KK	24-Jul	Skarn breccia with clasts of dolostone, chalcopyrite and malachite visible
E310607	CHIP	Outcrop	1.5	115	375063	6303251	Burgundy Ridge	ON, KK	24-Jul	Skarn breccia with clasts of dolostone, chalcopyrite and malachite visible
E310608	CHIP	Outcrop	1.5	115	375064	6303250	Burgundy Ridge	ON, KK	24-Jul	Skarn breccia with clasts of dolostone, chalcopyrite and malachite visible
E310609	CHIP	Outcrop	1.5	115	375066	6303250	Burgundy Ridge	ON, KK	24-Jul	Skarn breccia with clasts of dolostone, chalcopyrite and malachite visible
E310610	OREAS-151a						Burgundy Ridge	ON, KK	24-Jul	
E310611	CHIP	Outcrop	1.5	115	375067	6303249	Burgundy Ridge	ON, KK	24-Jul	Skarn breccia with clasts of dolostone, chalcopyrite and malachite visible
E310612	CHIP	Outcrop	1.5	115	375068	6303249	Burgundy Ridge	ON, KK	24-Jul	Skarn breccia with clasts of dolostone, chalcopyrite and malachite visible
E310613	CHIP	Outcrop	1.5	115	375070	6303248	Burgundy Ridge	ON, KK	24-Jul	Skarn breccia with clasts of dolostone, chalcopyrite and malachite visible
E310614	CHIP	Outcrop	1.5	115	375071	6303247	Burgundy Ridge	ON, KK	24-Jul	Skarn breccia with clasts of dolostone, chalcopyrite and malachite visible
E310615	CHIP	Outcrop	1.5	115	375072	6303247	Burgundy Ridge	ON, KK	24-Jul	Skarn breccia with clasts of dolostone, chalcopyrite and malachite visible
E310616	DUP						Burgundy Ridge	ON, KK	24-Jul	
E310617	CHIP	Outcrop	1.5	115	375074	6303246	Burgundy Ridge	ON, KK	24-Jul	Skarn breccia with clasts of dolostone, chalcopyrite and malachite visible

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
E310618	CHIP	Outcrop	1.5	115	375075	6303245	Burgundy Ridge	ON, KK	24-Jul	Brecciated marble-limestone with veins of epidote
E310619	CHIP	Outcrop	1.5	115	375077	6303245	Burgundy Ridge	ON, KK	24-Jul	Brecciated marble-limestone with veins of epidote
E310620	CHIP	Outcrop	1.5	115	375078	6303244	Burgundy Ridge	ON, KK	24-Jul	Brecciated marble-limestone with veins of epidote
E310621	CHIP	Outcrop	1.5	115	375079	6303243	Burgundy Ridge	ON, KK	24-Jul	Brecciated marble-limestone with veins of epidote
E310622	CHIP	Outcrop	1.5	115	375081	6303243	Burgundy Ridge	ON, KK	24-Jul	Barren limestone-marble
E310632	CHIP	outcrop	1.5	125	374729	6303381	Burgundy Ridge	ON, JA	27-Jul	On contact between megacrystic porphyry and green garnet rich skarn breccia zone with clasts of the megacrystic porphyry . Original lith possibly diorite magmatic breccia (?) malachite up to 1%, with rusty cavities (ex chalcopryrite?) up to 4%.
E310633	CHIP	outcrop	1.5	125	374730	6303380	Burgundy Ridge	ON, JA	27-Jul	Crossing megacrystic porphyry clast for 0.5 m, matrix is green garnet rich skarn breccia zone, malachite in both the matrix and the clast, 2-5% chalcopvrite
E310634	CHIP	outcrop	1.5	125	374731	6303379	Burgundy Ridge	ON, JA	27-Jul	Zone of green grossular garnet matrix with 15% chalcopryrite and 5% malachite
E310635	CHIP	outcrop	1.5	125	374733	6303378	Burgundy Ridge	ON, JA	27-Jul	cutting through an epidote rich zone (clast?) for 1 metre with disseminated chalcopryrite up to 3%
E310636	CHIP	outcrop	1.5	125	374734	6303378	Burgundy Ridge	ON, JA	27-Jul	75% matrix (green grossular garnet matrix with 15% chalcopryrite and 5% malachite) with 25% clasts of megacrystic porphyry, phenocrysts altered to garnet, trace-1% chalcopryrite, minor malachite
E310637	CHIP	outcrop	1.5	125	374735	6303377	Burgundy Ridge	ON, JA	27-Jul	0.5 m of green grossular garnet matrix with 15% chalcopryrite and 5% malachite , 1 m of grey megacrystic porphyry with rusty patches.
E310651	CHIP	outcrop	1.5	125	374961	6303124	Burgundy Ridge	KK, JA	26-Jul	heavily skarn-altered intrusive rocks; silicified (limestone?) clasts 10-30 cm common with matrix of green garnet (>60%), epidote; traces of fine-grained chalcopryrite; Cu-carb common coating fractures aand within vuggy cavities

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
E310652	CHIP	outcrop	1.5	125	374962	6303123	Burgundy Ridge	KK, JA	26-Jul	same lithology as previously noted; trace fg cpy
E310653	CHIP	outcrop	1.5	125	374963	6303122	Burgundy Ridge	KK, JA	26-Jul	same lithology as previously noted
E310654	CHIP	outcrop	1.5	125	374965	6303121	Burgundy Ridge	KK, JA	26-Jul	same lithology as previously noted
E310655	CHIP	outcrop	1.5	125	374966	6303121	Burgundy Ridge	KK, JA	26-Jul	same lithology as previously noted
E310656	CHIP	outcrop	1.5	125	374967	6303123	Burgundy Ridge	KK, JA	26-Jul	line jumped ~3m N to avoid till; same lithology as previously noted with red very fine-grained, hematite-altered carbonate nodules common; visible increase in fine-grained chalcopyrite
E310657	CHIP	outcrop	1.5	125	374968	6303122	Burgundy Ridge	KK, JA	26-Jul	same lithology as previously noted
E310658	CHIP	outcrop	1.5	125	374968	6303118	Burgundy Ridge	KK, JA	26-Jul	line jumped back S; same lithology as previously noted; trace cpy
E310659	CHIP	outcrop	1.5	125	374969	6303117	Burgundy Ridge	KK, JA	26-Jul	same lithology as previously noted
E310661	CHIP	outcrop	1.5	125	374972	6303115	Burgundy Ridge	KK, JA	26-Jul	same lithology as previously noted
E310662	CHIP	outcrop	1.5	125	374973	6303115	Burgundy Ridge	KK, JA	26-Jul	same lithology as previously noted
E310663	CHIP	outcrop	1.5	125	374974	6303114	Burgundy Ridge	KK, JA	26-Jul	same lithology as previously noted
E310664	CHIP	outcrop	1.5	125	374975	6303113	Burgundy Ridge	KK, JA	26-Jul	same lithology as previously noted
E310665	CHIP	outcrop	1.5	125	374977	6303112	Burgundy Ridge	KK, JA	26-Jul	abundant Fe-oxide within interval (py or cpy, not visible through oxide stain); Cu-carb coatings common on fracture surfaces and also as sub-rounded to amorphous masses - vug/amygdale fill or clast replacement? High relief; Very hard rock; garnet rich skarn-altered (intrusive) rocks
E310666	CHIP	outcrop	1.5	125	374978	6303111	Burgundy Ridge	KK, JA	26-Jul	heavily oxidized, weathered rock; Cu-carb coatings common within sample area; recessive outcrop zone; soft matrix, appeared more clay-altered (ser, chl); 'speckled' appearance resulting from oxidized sulphide grains within matrix, perhaps cpy also?
E310667	CHIP	outcrop	1.5	125	374979	6303110	Burgundy Ridge	KK, JA	26-Jul	same lithology as previously noted
E310668	CHIP	outcrop	1.5	125	374980	6303109	Burgundy Ridge	KK, JA	26-Jul	same lithology as previously noted

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
E310669	CHIP	outcrop	1.5	125	374982	6303109	Burgundy Ridge	KK, JA	26-Jul	crossed contact into megaxitic dyke (final 50 cm); dyke weakly altered close to margins with mafic phenos turned to gt(+/-chl,calc); clean margin - does not appear to be associated with skarn but rather x-cutting it
E310671	CHIP	outcrop	1.5	125	374983	6303108	Burgundy Ridge	KK, JA	26-Jul	megaxitic, intrusive dyke, abundant k-spar both as phenos and matrix (syenite); no visible cpy or other sulphides
E310672	CHIP	outcrop	1.5	100	374986	6303107	Burgundy Ridge	KK, JA, ON	26-Jul	Intense skarn zone (chlorite, epidote and grossular), in a megacrystic feldspar porphyry, some flow textures (trachytic texture in feldspar crystals), shot through with (~35%) black-brown mineral (v. Heavy) 1% chalcopryite+mal staining
E310673	CHIP	outcrop	1.5	100	374987	6303107	Burgundy Ridge	KK, JA, ON	26-Jul	Intense skarn zone (chlorite, epidote and grossular), in a megacrystic feldspar porphyry, some flow textures (trachytic texture in feldspar crystals), shot through with (~35%) black-brown mineral (v. Heavy) 1% chalcopryite+mal staining
E310674	CHIP	outcrop	1.5	100	374989	6303106	Burgundy Ridge	KK, JA, ON	26-Jul	Orange-yellow garnet dominated+silica+chlorite skarn with black-brown mineral (~20%) and 1% chalcopryite+ mal. Jasper in patches with silica up to 20%
E310675	CHIP	outcrop	1.5	100	374990	6303106	Burgundy Ridge	KK, JA, ON	26-Jul	Grossular dominated skarn with 15% black-brown mineral, clasts of silicified rock and limestone with up to 5% chalcopryite+mal. In contact with a darker green, more chloritic body with 10% chalcopryite and pink calcite veins
E310676	CHIP	outcrop	1.5	100	374992	6303106	Burgundy Ridge	KK, JA, ON	26-Jul	Dark green chloritic rock with 5% calcite veins and 10% clots and veins of the black-brown mineral, trace chalcopryite
E310677	CHIP	outcrop	1.5	100	374993	6303106	Burgundy Ridge	KK, JA, ON	26-Jul	Siliceous orange-green skarn with clots of the black-brown mineral and clasts of limestone. Patches of malachite staining

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
E310678	CHIP	outcrop	1.5	100	374995	6303105	Burgundy Ridge	KK, JA, ON	26-Jul	Very siliceous, jasperoidal zone with patches and veins of the black-brown mineral (15-20%), tr-1% chalcopvrite.
E310679	CHIP	outcrop	1.5	100	374996	6303105	Burgundy Ridge	KK, JA, ON	26-Jul	Siliceous jasper skarn with ~40% dolostone clasts, black-brown mineral. Up to 15% chalcopvrite in clasts, weak malachite staining.
E310680	CHIP	outcrop	1.5	100	375003	6303103	Burgundy Ridge	KK, JA, ON	26-Jul	Grossular garnet matrix up to 50%, dolostone clasts to 20%, chaotic breccia. Pods of black-brown mineral make up 10%. Malachite stains on 5% of the overall area
E310681	CHIP	outcrop	1.5	100	375004	6303103	Burgundy Ridge	KK, JA, ON	26-Jul	Large cluster of silicified limestone with clots of the black-brown mineral and grossular garnet. Up to 5% chalcopvrite with no malachite staining.
E310682	CHIP	outcrop	1.5	100	375006	6303102	Burgundy Ridge	KK, JA, ON	26-Jul	
E310683	CHIP	outcrop	1.5	110	375008	6303098	Burgundy Ridge	KK, JA, ON	26-Jul	Large cluster of silicified limestone with orthoclase porphyry clasts. Skarn assemblage matrix (silica, garnet, chlorite) with 5-15% chalcopvrite clots with abundant malachite and staining.
E310684	CHIP	outcrop	1.5	110	375009	6303097	Burgundy Ridge	KK, JA, ON	26-Jul	Pink vesicular megacrystic syenite dyke, crystals to 2 cm, no visible sulphides.
E310685	CHIP	outcrop	1.5	110	375011	6303097	Burgundy Ridge	KK, JA, ON	26-Jul	Pink vesicular megacrystic syenite dyke, crystals to 2 cm, no visible sulphides.
E310686	DUP	outcrop	1.5	110	375012	6303096	Burgundy Ridge	KK, JA, ON	26-Jul	
E310687	CHIP	outcrop	1.5	110	375014	6303096	Burgundy Ridge	KK, JA, ON	26-Jul	Very intense heterolithic breccia developent, milled clasts, pods of jasper and silica. Grossular garnet/epidote/silica matrix with 5-10% chalcopvrite and abundant azurite.
E310688	CHIP	outcrop	1.5	110	375015	6303095	Burgundy Ridge	KK, JA, ON	26-Jul	Very intense heterolithic breccia developent, milled clasts, pods of jasper and silica. Grossular garnet/epidote/silica matrix with 5-10% chalcopvrite and abundant azurite.
E310689	CHIP	outcrop	1.5	110	375016	6303095	Burgundy Ridge	KK, JA, ON	26-Jul	Very intense heterolithic breccia developent, milled clasts, pods of jasper and silica. Grossular garnet/epidote/silica matrix with 1-3%% chalcopvrite and weak malachite staining

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
E310691	CHIP	outcrop	1.5	110	375018	6303094	Burgundy Ridge	KK, JA, ON	26-Jul	Very intense heterolithic breccia development, milled clasts, pods of jasper and silica. Grossular garnet/epidote/silica matrix with 1-3% chalcopyrite and moderate malachite staining
E310692	CHIP	outcrop	1.5	110	375019	6303094	Burgundy Ridge	KK, JA, ON	26-Jul	Very intense heterolithic breccia development, milled clasts, pods of jasper and silica. Grossular garnet/epidote/silica matrix with 1-3% chalcopyrite and moderate malachite staining
E310693	CHIP	outcrop	1.5	110	375021	6303093	Burgundy Ridge	KK, JA, ON	26-Jul	Very intense heterolithic breccia development, milled clasts, pods of jasper and silica. Grossular garnet/epidote/silica matrix with 1-3% chalcopyrite and moderate malachite staining
E310694	CHIP	outcrop	1.5	90	375018	6303095	Burgundy Ridge	KK, JA, ON	26-Jul	Green grossular skarn with veins of silica and jasper (+/- specular hematite) containing clasts of orthoclase megaporphyry, patches of malachite common
E310695	CHIP	outcrop	1.5	90	375020	6303095	Burgundy Ridge	KK, JA, ON	26-Jul	Green grossular skarn with veins of silica and jasper (+/- specular hematite) containing clasts of orthoclase megaporphyry, patches of malachite common
E310696	CHIP	outcrop	1.5	90	375021	6303095	Burgundy Ridge	KK, JA, ON	26-Jul	Green grossular garnet up to 90% of rock, minor malachite along clast margins. Clasts are megacrystic porphyry.
E310697	CHIP	outcrop	1.5	90	375023	6303095	Burgundy Ridge	KK, JA, ON	26-Jul	Green grossular garnet up to 90% of rock, minor malachite along clast margins. Clasts are megacrystic porphyry.
E310698	CHIP	outcrop	1.5	90	375024	6303095	Burgundy Ridge	KK, JA, ON	26-Jul	Small, fine grained siliceous zone (dyke?) in a skarn with abundant green grossular garnet, black pitted mineral in veins accounts for 10% of rock

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
H234868	CHIP	outcrop	1.5	288	374996	6303151	Burgundy Ridge	KK, AG	9-Aug	Heavy skarn alteration with green garnet and jasperoidal cherts. Protolith is brecciated megacrystic porphyry. Moderate malachite and azurite staining can be seen in skarn matrix. Disseminated medium grained chalcopyrite (~5%),
H234869	CHIP	outcrop	1.5	288	374995	6303151	Burgundy Ridge	KK, AG	9-Aug	with some py silicified chunks of jasperoidal chart with minor carbonate in heavy to moderate skarn breccia. Trace amounts of disseminated cpy and py.
H234871	CHIP	outcrop	1.5	288	374993	6303152	Burgundy Ridge	KK, AG	9-Aug	<b>best looking mineral intercept</b> Very heavy (10-15+%) chalcopyrite mineralization in as coarse (up to 1cm) cpy (oxidized to black on surface) in veinlets and as disseminated blebs in skarn breccia. Veinlets/system seems to run East/West. Heavy malachite/azurite staining.
H234872	CHIP	outcrop	1.5	288	374992	6303152	Burgundy Ridge	KK, AG	9-Aug	Skarn breccia with a megacrystic/trachytic porphyry protolith. Minor malachite and azurite staining on fracture surfaces. Trace cpy.
H234873	CHIP	outcrop	1.5	288	374990	6303153	Burgundy Ridge	KK, AG	9-Aug	Skarn breccia with a megacrystic/trachytic porphyry protolith. Minor malachite and azurite staining on fracture surfaces. Trace cpy.
H234874	CHIP	outcrop	1.5	288	374989	6303153	Burgundy Ridge	KK, AG	9-Aug	Skarn breccia with a megacrystic/trachytic porphyry protolith. Minor malachite and azurite staining on fracture surfaces. Trace cpy.
H234875	CHIP	outcrop	1.5	288	374987	6303154	Burgundy Ridge	KK, AG	9-Aug	Skarn breccia with a megacrystic/trachytic porphyry protolith. Minor malachite and azurite staining on fracture surfaces. Cherty jasperoidal nodules throughout. Trace cov.
H234876	CHIP	outcrop	1.5	288	374986	6303154	Burgundy Ridge	KK, AG	9-Aug	Skarn breccia with a megacrystic/trachytic porphyry protolith.No chalcopyrite, malachite or azurite. Disseminated pyrite (trace-1%, with local pods of up to 3%). Cherty jasperoidal nodules.

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
H234877	CHIP	outcrop	1.5	288	374985	6303155	Burgundy Ridge	KK, AG	9-Aug	Skarn breccia with a megacrystic/trachytic porphyry protolith. No chalcopyrite, malachite or azurite. Disseminated pyrite (trace-1%, with local pods of up to 3%). Cherty jasperoidal nodules.
H234878	CHIP	outcrop	1.5	288	374983	6303155	Burgundy Ridge	KK, AG	9-Aug	Skarn breccia with a megacrystic/trachytic porphyry protolith. Trace chalcopyrite, with minor malachite and azurite on fracture surfaces. Disseminated pyrite (trace). Cherty jasperoidal nodules.
H234879	CHIP	outcrop	1.5	280	375006	6303169	Burgundy Ridge	JA, AG	9-Aug	Silicified breccia fragments with abundant hematite alteration in a very green garnet rich (up to 70%) skarn with epidote. Strong medium to coarse cpy dissemination (~5-10%).
H234880	CHIP	outcrop	1.5	280	375005	6303169	Burgundy Ridge	JA, AG	9-Aug	Silicified breccia fragments with abundant hematite alteration in a very green garnet rich (up to 70%) skarn with epidote. Strong medium to coarse cpy dissemination (~5-10%).
H234881	CHIP	outcrop	1.5	280	375003	6303170	Burgundy Ridge	JA, AG	9-Aug	Silicified breccia fragments with abundant hematite alteration in a very green garnet rich (up to 70%) skarn with epidote. Disseminated chalcopvrite wanes to 1-5%
H234882	CHIP	outcrop	1.5	280	375002	6303170	Burgundy Ridge	JA, AG	9-Aug	Silicified breccia fragments with abundant hematite alteration in a very green garnet rich (up to 70%) skarn with epidote. Disseminated chalcopvrite 1-5%
H234883	CHIP	outcrop	1.5	280	375000	6303170	Burgundy Ridge	JA, AG	9-Aug	Silicified breccia fragments with abundant hematite alteration in a very green garnet rich (up to 70%) skarn with epidote. Disseminated chalcopvrite 1-5%
H234884	CHIP	outcrop	1.5	280	374999	6303170	Burgundy Ridge	JA, AG	9-Aug	Silicified breccia fragments in a weakly skarn altered matrix with some epidote. Disseminated chalcopvrite wanes to 1-2%. Silicification/fragment concentration increases strongly. There is a brecciated hematite-carbonate vein running 325/75 with shear structures at margins

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
H234885	CHIP	outcrop	1.5	280	374997	6303171	Burgundy Ridge	JA, AG	9-Aug	Silicified breccia fragments in a weakly skarn altered matrix with some epidote. Disseminated chalcopyrite 1-2%. Silicification/fragment concentration increases strongly
H234886	DUP	outcrop	1.5	280	374997	6303171	Burgundy Ridge	JA, AG	9-Aug	Silicified breccia fragments in a weakly skarn altered matrix with some epidote. Disseminated chalcopyrite 1-2%. Silicification/fragment concentration increases strongly
H234887	CHIP	outcrop	1.5	280	374996	6303171	Burgundy Ridge	JA, AG	9-Aug	Silicification decreases and fragments in skarn become mildly clay altered, with an increase in epidote and chlorite (minor garnets)
E310624	CHIP	outcrop	1.5	80	375711	6303696	Telena	ON, AG, JA	27-Jul	Altered medium grained porphyry with an abundance of hematite. Thin carbonate veinlets (mm to cm) do not follow any distinct orientation. 1% overall disseminated chalcopyrite, with up to 5% locally in clustered fine grained masses.
E310625	CHIP	outcrop	1.5	80	375712	6303696	Telena	ON, AG, JA	27-Jul	altered medium grained porphyry with an abundance of hematite. Beginning to see malachite staining. Disseminated chalcopyrite overall 1%, up to 5% locally. 10-15cm quartz-carbonate vein with 1-5% disseminated pyrite @ 168/76
E310626	CHIP	outcrop	1.5	80	375714	6303697	Telena	ON, AG, JA	27-Jul	
E310627	CHIP	outcrop	1.5	80	375715	6303697	Telena	ON, AG, JA	27-Jul	Altered medium grained porphyry with an abundance of hematite, as well as malachite staining. Vein breccia chunks ~5cm. Overall 1% disseminated cov.
E310628	CHIP	outcrop	1.5	80	375717	6303697	Telena	ON, AG, JA	27-Jul	Heavy skarn at margin of quartz/cal/k-spar vein, with jasper alteration. Vein at 165/sub vertical, and heavily mineralized (10% cpy).
E310629	CHIP	outcrop	1.5	80	375718	6303697	Telena	ON, AG, JA	27-Jul	Altered megacrystic porphyry with skarn alteration. Heavy malachite and azurite staining is leaching out of the skarn (about 20cm into sample) cpy is possibly up to 5-10%, hard to see through oxides

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
E310630	OREAS-151a						Telena			
E310631	CHIP	outcrop	1.5	80	375720	6303698	Telena	ON, AG, JA	27-Jul	Contact with trachitic porphyry about 10cm in from end of sample.
H234765	CHIP	outcrop	2	256	360381	6324436	Tomb	KK, ON	2-Aug	ser-chl-epidote altered, mg fspr-phyric volcanic rocks (andesite?); ~5% mg, subhedral py occurring as aggregates/clusters
H234766	CHIP	outcrop	2	256	360379	6324436	Tomb	KK, ON	2-Aug	QSP-altered volcanic rocks, pervasive alteration making texture difficult to identify; heavily oxidized near surface and along fractures; 5-10% fg pv. ~1% cpy
H234767	CHIP	outcrop	2	256	360377	6324435	Tomb	KK, ON	2-Aug	QSP-altered volcanic rocks; 10-15% fine, euhedral py, 1% cpy; rocks within interval were strongly oxidized and rubbly as the sample was taken in close proximity to fault
H234768	CHIP	outcrop	2	256	360375	6324435	Tomb	KK, ON	2-Aug	very rubbly, oxidized rocks as sample crosses a ~50cm-wide fault with attitude 310/60; strong foliation (heavily sericitized); ~10% fine, disseminated pvrite.
H234769	CHIP	outcrop	2	256	360373	6324434	Tomb	KK, ON	2-Aug	5-10% disseminated py with traces of cpy noted; heavily oxidized, weathered (volcanic?) rocks
H234770	CHIP	outcrop	2	256	360371	6324434	Tomb	KK, ON	2-Aug	QSP altered volcanic rocks; 10% disseminated py, trace cpy
H234771	CHIP	outcrop	2.5	256	360369	6324433	Tomb	KK, ON	2-Aug	fine- to medium-grained igneous; strong QSP alteration has nearly obliterated rock textures; py disseminated throughout and occurring as small amalgamations of euhedral grains, 5-10%; trace cpy
H234819	CHIP	outcrop	1.5	270	360397	6324425	Tomb	JA	2-Aug	JAR-22: dark-green, ser-chl-epi altered, medium-grained volcanic rocks (andesite flows or tuffaceous rocks?); trace fine-grained sulphides (py); collected 40 m up bluff from stream bed
H234820	CHIP	outcrop	1.5	230	360396	6324425	Tomb	JA	2-Aug	JAR-23: same lithology as previously noted; thin Cu-carb coatings noted along some fracture surfaces; located 1 m SW of prev sample

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
H234821	CHIP	outcrop	1.5	260	360394	6324485	Tomb	JA	2-Aug	JAR-24: same lithology as previously noted; thin Cu-carb coatings common on fracture surfaces
H234828	CHIP	outcrop	1.5	270	360397	6324462	Tomb	AG	2-Aug	fine to medium grained igneous (andesite?) some small sulphide stringers and disseminations. Mineralization is ~2% py (mg, subhedral), 1% cpy (fg). One spot (loonie sized) of malachite at fracture. **no GPS reading, referenced off of Joel's samp's (15m due west)
H234829	CHIP	outcrop	1.5	270	360412	6324431	Tomb	AG	2-Aug	fine to medium grained igneous (andesite?) some small cpy stringers and disseminations. Mineralization is ~1% py (mg, subhedral, disseminated), 1% cpy (fg, 0.5% in stringers, 0.5% disseminated). Minor malachite and azurite staining. ** GPS reading poor, should be NorthEast of previous sample
H234831	CHIP	outcrop	1.5	270	360411	6324431	Tomb	AG	2-Aug	fine to medium grained igneous (andesite?) some small cpy stringers and disseminations. Mineralization is ~1% py (mg, subhedral, disseminated), 1% cpy (fg, 0.5% in stringers, 0.5% disseminated). Minor malachite and azurite staining
H234756	CHIP	outcrop	2	260	360439	6324524	Tomb Zone	ON, KK	2-Aug	Light green silicified sericitized rock , fine matrix, 15% pyrite
H234757	CHIP	outcrop	2	260	360438	6324524	Tomb Zone	ON, KK	2-Aug	Darker green silicified sericitized rock, faintly visible "phenocrysts" (?) composed of chlorite, 20% pyrite with 1% chalcopyrite. Sample crosses malachite bearing fault zone
H234758	CHIP	outcrop	2	260	360436	6324523	Tomb Zone	ON, KK	2-Aug	Darker green silicified sericitized rock, faintly visible "phenocrysts" (?) composed of chlorite, 10-15% pyrite with 1% chalcopyrite. Including a 0.5 cm veinlet of pyrite.

Sample ID	Type	Medium	Width m	Bearing	E start	N start	Location	Sampler	Date	Description
H234759	CHIP	outcrop	2	260	36436	6324522	Tomb Zone	ON, KK	2-Aug	Strongly bleached rock, possibly a volcanic due to the presence of crystals (?) in the fine grained matrix. 15-20 % white and brassy sulphides (possibly pyrite/arsenopyrite?) Strong jarosite staining of surface
H234760	CHIP	outcrop	2	260	36435	6324521	Tomb Zone	ON, KK	2-Aug	Strongly bleached rock, possibly a volcanic due to the presence of crystals (?) in the fine grained matrix. 15-20 % white and brassy sulphides (possibly pyrite/arsenopyrite?) Strong jarosite staining of surface
H234761	CHIP	outcrop	2	260	36433	6324521	Tomb Zone	ON, KK	2-Aug	10-15% pyrite in a "greasy" looking sericitic matrix, moderate-waek jarosite staining on surface
H234762	CHIP	outcrop	2	260	36432	6324521	Tomb Zone	ON, KK	2-Aug	Propylitic alteration, chlorite dominates with lesser sericite. Pyrite to 5%, chalcopyrite 0.5-1%, little to no silicification.
H234763	CHIP	outcrop	1.5	260	36430	6324520	Tomb Zone	ON, KK	2-Aug	Propylitic alteration, chlorite dominates with lesser sericite. Pyrite to 15%, chalcopyrite 2-3%, little to no silicification.
H234764	CHIP	outcrop	2.5	260	36429	6324520	Tomb Zone	ON, KK	2-Aug	Strong silicification, "phenocrysts" composed of chlorite highlighted by white matrix, 2-5% pyrite.

Site	ID	Type	Easting	Northing	Location	Sampler	Date	Description
SS-01	L394051	SILT	377709	6298575	SW M7R7	ON, KK	3-Aug	Sample from creek cutting well layered FeOx-Ank stained sed. River rocks are predominantly subangular cobble-boulder sized fragments of a blue-green volcanics, sample taken between two waterfalls
SS-02	L394052	SILT	378786	6297556	West Rusty Shear	JA	3-Aug	collected near bottom of 10m, stepped waterfall; stream sed appeared of coarse clastic sed or tuffaceous composition, pebble to cobble; gossanous rock o/c 20 m west of sample site
SS-03	L394053	SILT	379370	6299725	NW side of Boulder/Arseno ridge	ON	3-Aug	steep stream cutting siltstone and/or tuffaceous rocks; very little silt
SS-04	L394054	SILT	379705	6299305	N side of Boulder/Arseno ridge	JA	3-Aug	target stream located in snow-filled ravine, collected sed sample from within small tributary located ~75m SW; stream sed dominantly of igneous origin; silt grains >50% fspr-qz; locally, o/c is of f to mg, propylitically altered mafic; gossanous o/c 25 m S.
SS-05	L394055	SILT	381030	6298338	South McLymont Fault	ON	6-Aug	Silt sample from creek draining SW along the McLymont Fault, creek bed boulders are 90% tan orthoclase-phyric syenite with strong ankerite veining, 10% other lithologies including a green-black fine grained basalt, a blue-grey poorly sorted grit, and a c
SS-06	L394056	SILT	382221	6298959	Gorge Zone	JA	6-Aug	collected from stream bed within shallow, steep-walled gulch; locally, outcropping rock was all mg intrusive (granite, syenite) in origin, river sed dominantly sub-rounded, intrusive, pebble to cobble-sized
SS-07	L394057	SILT	382460	6298601	Gorge Zone	JA	6-Aug	collected from dry (or seasonally dry) stream bed; fluvial sed preserved located under ~7cm of organic matter; stream sed appeared of intrusive origin, sand to cobble-sized; no o/c
SS-08A	L394058	SILT	384739	6300146	Newmont Fault	ON, AG	4-Aug	locally Creek draining SW from high lake on the Newmont Fault, cuts a granite (Forrest Kerr Pluton), creek boulder 90% from granite, 10% from fine grained green amygdaloidal basalt with calcite fill
SS-08B	L394059	SILT	384743	6300128	Newmont Fault	ON, AG	4-Aug	Creek draining 280 degrees cutting quartz monzonite, <1% green basalt creek boulders, Qtz, Kspar, bt, magnetite in the sands. taken below a waterfall.
SS-9A	L394060	SILT	385322	6300989	Kirby	AG/ON	4-Aug	Large stream draining into lake from under snow. Sample is approximately 20% quartz, 20% k-spar, 20% green volcanics(?), 30% black (biotite and magnetite), 10% other.

Site	ID	Type	Easting	Northing	Location	Sampler	Date	Description
SS-09B	L394061	SILT	385254	6301106	Kirby	JA	4-Aug	collected from within small stream delta at south end of lake; locally, area to west consists of limestones and tuffaceous rocks, east is F-K granitic rocks; sed silt to sand-sized
SS-10A	L394062	SILT	386124	6302105	Thumper	JA	4-Aug	collected above small plunge pool in creek, east side of small valley; river sed almost entirely of coarse (granitic; Forest-Kerr pluton) intrusive rocks, cobble to boulder-size; silts >60% qz-fcr
SS-10B	L394063	SILT	385985	6302109	Thumper	JA	4-Aug	collected from stream bank, west side of small valley; sed dominantly of F-K intrusive origin with lesser volcanic (~30%), cobble to boulder-sized; sed ~60% qz-fspr w/ some lithic/tuffaceous grains and trace sulphide (py)
SS-11	L394064	SILT	383735	6301549	Newmont Lake	JA	4-Aug	collected from stream delta at SE end NM Lake; sed appear of volcanic (tuffaceous) origin, sand, pebble to cobble-sized
SS-12	L394065	SILT	383504	6303208	Newmont Lake	AG/ON	4-Aug	sample taken in side eddy of large fast river draining a faulted gossanous cliff. Sample consists of 25% quartz, 40% dark minerals. 20% rustv gossan. 15% k-spar
SS-13	L394066	SILT	384362	6302785	Newmont Lake	JA	4-Aug	silt collected from small stream delta at N end Newmont Lake; sed dominantly of sed and/or volcanic origin, pebble to cobble-sized
SS-14	L394067	SILT	384397	6302610	Newmont Lake	JA	4-Aug	collected from small stream delta at NE end NM Lake; sed of sed (inc limestone) and/or volcanic origin
SS-15A	L394068	SILT	385661	6306557	North Mclymont Fault	ON, AG	2-Aug	Sample from creek flowing along the Mclymont Fault towards Forrest Kerr Lake. Jasper bearing rocks in creek
SS-15B	L394069	SILT	385757	6306480	Northeast	JA	2-Aug	silt sample collected from behind a large boulder near stream center; river sed dominantly of igneous origin, tuffaceous rocks, in particular, cobble to boulder size; cobbles of qz+/- sulphides common in stream bed
standard SS-16	L394070 L394071	SILT	383530	6306905	North of Ken Zone	ON, AG	4-Aug	OREAS-151a A NE draining creek, emerging from a gossanous zone on the N flank of the Ken-Rope-Glacier area. Coarse sand is subangular, and composed of 35% quartz, 50% lithic fragments, and 15% feldspar. Sample taken between two waterfalls
SS-17	L394072	SILT	385794	6307540	Forrest Kerr Lake	ON, AG	2-Aug	Sample from a SW flowing creek draining a moraine from the Andrei Icefield

Site	ID	Type	Easting	Northing	Location	Sampler	Date	Description
SS-19	L394073	SILT	368444	6299058	1920 Zone	AG/ON	28-Jul	Sample collected on gravel bar in offshoot of large river running through the valley. Sample content is varied and reflects the composition of the larger boulders throughout the river bed
SS-20	L394074	SILT	368380	6299113	19-20	JA	28-Jul	sample collected near bottom of waterfall on the NW side of valley; stream draining region of gossan alteration; stream sediments appear of sedimentary origin; local outcrops are bedded and laminated sedimentary rocks, with fine veinlets of quartz and Fe-ox
SS-21	L394075	SILT	380838	6300600	South of Mom's Peak	ON	6-Aug	Creek draining S-SE from M3'R5, locally cutting gossanous zone SW of the NW Zone. Very heterolithic stream boulder population, 20% quartz, 80% lithic fragments in the sands, subangular grains
SS-22	L394076	SILT	360840	6325597	Lower North Zone, Trek	ON, JA, AG	7-Aug	sample collected from within deeply incised stream bed, between two waterfalls; river rocks were coated with Fe-ox, those chipped appeared to be of volcanic origin; cobble to coarse cobble-sized
SS-18		<b>no sample</b>						No sample collected at sight-stream no longer exists

OBJECTID	NTRTMSTMP	TNRNBR	CLNUM	GDTDT	CLNAME	ISSUE_DATE	HCTRS	OWNER_NAME
27944	20050406224747	510300	146096	20190301000000		20050406224744	424.356	MCLYMONT MINES INC.
27945	20050406225249	510301	146096	20190301000000		20050406225246	336.043	MCLYMONT MINES INC.
27946	20050406225952	510302	146096	20190301000000		20050406225933	442.282	MCLYMONT MINES INC.
27950	20050501225335	511908	146096	20190301000000		20050501225332	140.957	MCLYMONT MINES INC.
27951	20050628145741	515492	146096	20180301000000	ICE 2005	20050628145733	335.493	MCLYMONT MINES INC.
27952	20050610180235	514295	146096	20180301000000		20050610180232	194.79	MCLYMONT MINES INC.
27953	20060116100927	525599	146096	20180301000000		20060116100913	317.533	MCLYMONT MINES INC.
27954	20041206000000	414380	146096	20180301000000	MCX 12	20040914000000	25	MCLYMONT MINES INC.
27955	20041206000000	414379	146096	20180301000000	MCX 11	20040914000000	25	MCLYMONT MINES INC.
27956	20041206000000	414381	146096	20180301000000	MCX 13	20040914000000	25	MCLYMONT MINES INC.
27957	20041206000000	414382	146096	20180301000000	MCX 14	20040914000000	25	MCLYMONT MINES INC.
27958	20060222154656	528739	146096	20190301000000		20060222154639	352.361	MCLYMONT MINES INC.
27959	20060222155008	528740	146096	20190301000000		20060222154918	422.901	MCLYMONT MINES INC.
27960	20060222155317	528741	146096	20190301000000		20060222155228	299.59	MCLYMONT MINES INC.
27962	20060305155417	529446	146096	20190301000000		20060305155349	387.787	MCLYMONT MINES INC.
27964	20060501185715	533293	146096	20180301000000		20060501185651	388.756	MCLYMONT MINES INC.
27965	20060501190022	533295	146096	20180301000000		20060501185935	423.877	MCLYMONT MINES INC.
27966	20060501190430	533298	146096	20180301000000		20060501190412	388.384	MCLYMONT MINES INC.
27967	20060501190634	533300	146096	20180301000000		20060501190630	388.308	MCLYMONT MINES INC.
27968	20060501190940	533302	146096	20180301000000		20060501190849	423.484	MCLYMONT MINES INC.
27969	20060501191144	533304	146096	20180301000000		20060501191112	423.606	MCLYMONT MINES INC.
27970	20060501191747	533305	146096	20180301000000		20060501191657	441.603	MCLYMONT MINES INC.
27971	20060501191950	533306	146096	20180301000000		20060501191944	388.479	MCLYMONT MINES INC.
27972	20060501192852	533307	146096	20180301000000		20060501192819	388.275	MCLYMONT MINES INC.
27973	20060501193255	533308	146096	20180301000000		20060501193159	441.325	MCLYMONT MINES INC.
27974	20060501193558	533309	146096	20180301000000		20060501193555	423.398	MCLYMONT MINES INC.
27975	20060501193900	533310	146096	20180301000000		20060501193857	440.887	MCLYMONT MINES INC.
27976	20060501194303	533311	146096	20180301000000		20060501194208	405.692	MCLYMONT MINES INC.
27977	20060501194806	533312	146096	20180301000000		20060501194801	440.68	MCLYMONT MINES INC.
27978	20060501195309	533313	146096	20180301000000		20060501195207	440.568	MCLYMONT MINES INC.
27979	20050318135621	509238	146096	20220301000000		20050318135535	633.572	MCLYMONT MINES INC.
27980	20050318140422	509239	146096	20220301000000		20050318140405	527.976	MCLYMONT MINES INC.
27981	20050318140724	509240	146096	20220301000000		20050318140710	633.997	MCLYMONT MINES INC.

OBJECTID	NTRTMSTMP	TNRNBR	CLNUM	GDTDT	CLNAME	ISSUE_DATE	HCTRS	OWNER_NAME
27982	20050318141028	509243	146096	20220301000000		20050318140953	528.33	MCLYMONT MINES INC.
27983	20050318141231	509245	146096	20220301000000		20050318141148	369.398	MCLYMONT MINES INC.
27987	20070509152421	558326	146096	20180301000000	AFTERACQPROPERTY	20070509152334	1024.51	MCLYMONT MINES INC.
27988	20080605000441	585817	146096	20180301000000		20080605000357	442.306	MCLYMONT MINES INC.
27989	20080605000745	585820	146096	20180301000000		20080605000653	407.015	MCLYMONT MINES INC.
27990	20080605001049	585823	146096	20180301000000		20080605000940	318.678	MCLYMONT MINES INC.
27991	20080605001353	585826	146096	20180301000000		20080605001251	301	MCLYMONT MINES INC.
27992	20080605001656	585829	146096	20180301000000		20080605001520	424.877	MCLYMONT MINES INC.
27993	20080605002100	585832	146096	20180301000000		20080605002014	442.242	MCLYMONT MINES INC.
27994	20080605002403	585834	146096	20180301000000		20080605002225	17.6887	MCLYMONT MINES INC.
27995	20080605003004	585835	146096	20180301000000		20080605002849	424.057	MCLYMONT MINES INC.
27996	20080605003106	585837	146096	20180301000000		20080605003046	425.114	MCLYMONT MINES INC.
27997	20080605003708	585839	146096	20180301000000		20080605003604	442.301	MCLYMONT MINES INC.
27998	20080605004009	585840	146096	20180301000000		20080605003943	229.752	MCLYMONT MINES INC.
27999	20080605000542	585818	146096	20180301000000		20080605000450	353.714	MCLYMONT MINES INC.
28000	20080605000746	585821	146096	20180301000000		20080605000700	424.69	MCLYMONT MINES INC.
28001	20080605001050	585824	146096	20180301000000		20080605001010	17.6907	MCLYMONT MINES INC.
28002	20080605001352	585825	146096	20180301000000		20080605001238	159.108	MCLYMONT MINES INC.
28003	20080605001554	585827	146096	20180301000000		20080605001447	53.0427	MCLYMONT MINES INC.
28004	20080605001758	585830	146096	20180301000000		20080605001652	441.786	MCLYMONT MINES INC.
28005	20080605002201	585833	146096	20180301000000		20080605002048	442.726	MCLYMONT MINES INC.
28006	20080605003005	585836	146096	20180301000000		20080605002917	441.965	MCLYMONT MINES INC.
28007	20080605003307	585838	146096	20180301000000		20080605003251	407.348	MCLYMONT MINES INC.
28008	20080605000948	585822	146096	20180301000000		20080605000821	441.98	MCLYMONT MINES INC.
28009	20080605000439	585815	146096	20180301000000		20080605000341	106.127	MCLYMONT MINES INC.
28010	20080605001555	585828	146096	20180301000000		20080605001510	106.19	MCLYMONT MINES INC.
28011	20080605001859	585831	146096	20180301000000		20080605001723	17.679	MCLYMONT MINES INC.
28012	20130704100437	1020797	146096	20180301000000		20130704100357	53.1261	MCLYMONT MINES INC.
28013	20071012233207	567889	146096	20180301000000	KEN EXTENSION	20071012233138	123.783	MCLYMONT MINES INC.
28014	20050117000000	222489	146096	20220301000000	MCLYMONT #1	19860723000000	500	MCLYMONT MINES INC.
28015	20050117000000	222490	146096	20220301000000	MCLYMONT #2	19860723000000	500	MCLYMONT MINES INC.
28016	20050117000000	222491	146096	20220301000000	MCLYMONT #3	19860723000000	500	MCLYMONT MINES INC.
28017	20050117000000	222492	146096	20220301000000	MCLYMONT #4	19860723000000	500	MCLYMONT MINES INC.

OBJECTID	NTRTMSTMP	TNRNBR	CLNUM	GDTDT	CLNAME	ISSUE_DATE	HCTRS	OWNER_NAME
28018	20040930123259	393653	146096	20180301000000	MCX 1	20020603000000	200	MCLYMONT MINES INC.
28019	20050117000000	393654	146096	20180301000000	MCX 2	20020603000000	500	MCLYMONT MINES INC.
28020	20040930123259	393655	146096	20180301000000	MCX 3	20020603000000	500	MCLYMONT MINES INC.
28021	20040930123259	393656	146096	20180301000000	MCX 4	20020603000000	500	MCLYMONT MINES INC.
28022	20040930123259	393657	146096	20180301000000	MCX 5	20020604000000	500	MCLYMONT MINES INC.
28023	20040930123259	393658	146096	20180301000000	MCX 6	20020604000000	400	MCLYMONT MINES INC.
28024	20040930123259	393659	146096	20180301000000	MCX 7	20020603000000	500	MCLYMONT MINES INC.
28025	20040930123259	393660	146096	20180301000000	MCX 8	20020604000000	375	MCLYMONT MINES INC.
28026	20040930123259	393661	146096	20180301000000	MCX 9	20020604000000	500	MCLYMONT MINES INC.
28027	20040930123259	393662	146096	20180301000000	MCX 10	20020604000000	100	MCLYMONT MINES INC.
28028	20060831104700	540179	146096	20180301000000		20060831104614	422.941	MCLYMONT MINES INC.
28029	20060831105102	540180	146096	20180301000000		20060831104953	422.935	MCLYMONT MINES INC.
28030	20060831110605	540182	146096	20180301000000		20060831110542	405.523	MCLYMONT MINES INC.
28031	20060831110906	540183	146096	20180301000000		20060831110847	423.029	MCLYMONT MINES INC.
28032	20060831111208	540184	146096	20180301000000		20060831111139	370.407	MCLYMONT MINES INC.
28033	20060831112010	540185	146096	20180301000000		20060831111904	352.947	MCLYMONT MINES INC.
28034	20060831112212	540186	146096	20180301000000		20060831112129	423.278	MCLYMONT MINES INC.
28035	20060831112815	540188	146096	20180301000000		20060831112727	440.956	MCLYMONT MINES INC.
28036	20060831114121	540192	146096	20180301000000		20060831114105	423.142	MCLYMONT MINES INC.
28037	20060831114522	540193	146096	20180301000000		20060831114408	282.079	MCLYMONT MINES INC.
28038	20091031100237	662944	146096	20190301000000		20091031100142	423.882	MCLYMONT MINES INC.
28039	20091031100553	662961	146096	20190301000000		20091031100453	424.614	MCLYMONT MINES INC.
28040	20091031100656	662965	146096	20190301000000		20091031100640	441.72	MCLYMONT MINES INC.
28041	20091031100901	662969	146096	20180301000000		20091031100840	371.599	MCLYMONT MINES INC.
28042	20091031101105	662974	146096	20180301000000		20091031101010	442.022	MCLYMONT MINES INC.
28043	20091031101309	662978	146096	20180301000000		20091031101208	441.814	MCLYMONT MINES INC.
28044	20091031101410	662980	146096	20180301000000		20091031101327	317.765	MCLYMONT MINES INC.
28045	20091031101513	662983	146096	20180301000000		20091031101438	441.787	MCLYMONT MINES INC.
28046	20091031101917	663024	146096	20180301000000		20091031101858	265.125	MCLYMONT MINES INC.
28047	20091031101915	663023	146096	20180301000000		20091031101841	442.525	MCLYMONT MINES INC.
28048	20091031100135	662924	146096	20190301000000		20091031100051	424.735	MCLYMONT MINES INC.
28049	20091031100240	662947	146096	20190301000000		20091031100210	424.896	MCLYMONT MINES INC.
28050	20091031100449	662957	146096	20190301000000		20091031100350	424.885	MCLYMONT MINES INC.

OBJECTID	NTRTMSTMP	TNRNBR	CLNUM	GDTDT	CLNAME	ISSUE_DATE	HCTRS	OWNER_NAME
28051	20091031100552	662960	146096	20190301000000		20091031100450	425.075	MCLYMONT MINES INC.
28052	20091031100657	662966	146096	20190301000000		20091031100645	425.071	MCLYMONT MINES INC.
28053	20091031100900	662970	146096	20180301000000		20091031100841	53.1197	MCLYMONT MINES INC.
28054	20091031101003	662972	146096	20180301000000		20091031100948	53.126	MCLYMONT MINES INC.
28055	20091031101206	662976	146096	20180301000000		20091031101130	425.237	MCLYMONT MINES INC.
28056	20091031101308	662979	146096	20180301000000		20091031101252	425.234	MCLYMONT MINES INC.
28057	20091031101411	662981	146096	20180301000000		20091031101401	425.024	MCLYMONT MINES INC.
28058	20091031101714	663003	146096	20180301000000		20091031101653	424.679	MCLYMONT MINES INC.
28059	20091031100346	662955	146096	20190301000000		20091031100333	423.767	MCLYMONT MINES INC.
28060	20091031100859	662968	146096	20180301000000		20091031100839	441.607	MCLYMONT MINES INC.
28061	20091031100347	662953	146096	20190301000000		20091031100259	442.007	MCLYMONT MINES INC.
28062	20100801191057	830956	146096	20180301000000	TREK TO SW	20100801191005	423.067	MCLYMONT MINES INC.
28063	20100801191503	830960	146096	20180301000000	TREK 2 SW 2	20100801191429	70.525	MCLYMONT MINES INC.
28064	20091031100134	662923	146096	20190301000000		20091031100050	423.877	MCLYMONT MINES INC.
28065	20110129094242	844989	146096	20190301000000	ANDREI R	20110129094201	441.245	MCLYMONT MINES INC.
28066	20110129094743	844990	146096	20190301000000	ANDREI S	20110129094738	441.155	MCLYMONT MINES INC.
28067	20110129100045	844991	146096	20190301000000	ANDREI T	20110129100002	440.446	MCLYMONT MINES INC.
28068	20110129100152	844998	146096	20190301000000	ANDREI U	20110129100143	123.319	MCLYMONT MINES INC.
28069	20110128194706	844938	146096	20180301000000	DIRK G11	20110128194627	442.493	MCLYMONT MINES INC.
28070	20110128195207	844939	146096	20180301000000	DIRK H11	20110128195202	442.786	MCLYMONT MINES INC.
28071	20110128195609	844941	146096	20180301000000	DIRK I11	20110128195547	442.738	MCLYMONT MINES INC.
28072	20110128200010	844942	146096	20180301000000	DIRK J11	20110128195955	442.549	MCLYMONT MINES INC.
28073	20110128201012	844943	146096	20180301000000	VERRETT A	20110128200936	443.21	MCLYMONT MINES INC.
28074	20110128201813	844944	146096	20190301000000	ANDREI A	20110128201744	440.5	MCLYMONT MINES INC.
28075	20110128202214	844945	146096	20190301000000	ANDREI B	20110128202212	440.482	MCLYMONT MINES INC.
28076	20110128202715	844946	146096	20190301000000	ANDREI C	20110128202655	440.591	MCLYMONT MINES INC.
28077	20110128203017	844948	146096	20190301000000	ANDREI D	20110128202942	439.952	MCLYMONT MINES INC.
28078	20110128203318	844949	146096	20190301000000	ANDREI E	20110128203234	440.195	MCLYMONT MINES INC.
28079	20110128203619	844950	146096	20190301000000	ANDREI F	20110128203610	440.246	MCLYMONT MINES INC.
28080	20110128203920	844951	146096	20190301000000	ANDREI G	20110128203846	440.1	MCLYMONT MINES INC.
28081	20110128204822	844952	146096	20190301000000	ANDREI H	20110128204746	440.197	MCLYMONT MINES INC.
28082	20110128205023	844953	146096	20190301000000	ANDREI I	20110128205018	440.288	MCLYMONT MINES INC.
28083	20110128205325	844955	146096	20190301000000	ANDREI J	20110128205244	440.518	MCLYMONT MINES INC.

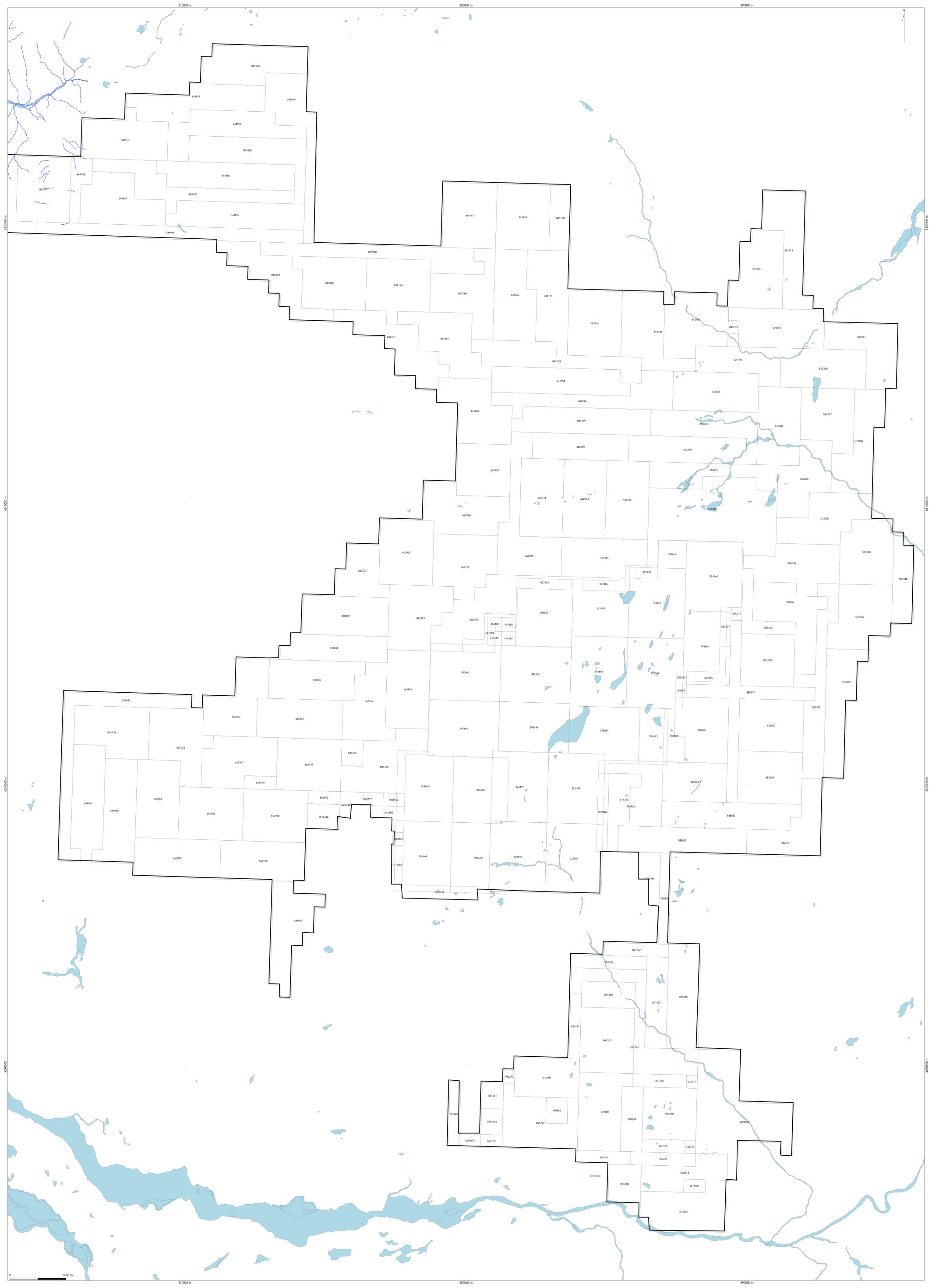
OBJECTID	NTRTMSTMP	TNRNBR	CLNUM	GDTDT	CLNAME	ISSUE_DATE	HCTRS	OWNER_NAME
28084	20110128205526	844956	146096	20190301000000	ANDREI K	20110128205520	440.37	MCLYMONT MINES INC.
28085	20110128205827	844957	146096	20190301000000	ANDREI L	20110128205756	440.417	MCLYMONT MINES INC.
28086	20110128210329	844959	146096	20190301000000	ANDREI M	20110128210313	440.484	MCLYMONT MINES INC.
28087	20110128211130	844960	146096	20190301000000	ANDREI N	20110128211102	440.649	MCLYMONT MINES INC.
28088	20110129092939	844986	146096	20190301000000	ANDREI O	20110129092850	441.222	MCLYMONT MINES INC.
28089	20110129093340	844987	146096	20190301000000	ANDREI P	20110129093240	440.988	MCLYMONT MINES INC.
28090	20110129093741	844988	146096	20190301000000	ANDREI Q	20110129093646	440.758	MCLYMONT MINES INC.
28091	20110131191006	845156	146096	20190301000000	ANDREI V	20110131190947	440.766	MCLYMONT MINES INC.
28092	20110131191407	845157	146096	20190301000000	ANDREI W	20110131191315	440.966	MCLYMONT MINES INC.
28093	20110131191608	845158	146096	20190301000000	ANDREI X	20110131191605	441.101	MCLYMONT MINES INC.
28094	20110131192209	845159	146096	20190301000000	ANDREI Y	20110131192157	441.016	MCLYMONT MINES INC.
28095	20110131192510	845160	146096	20190301000000	ANDREI Z	20110131192423	440.79	MCLYMONT MINES INC.
28096	20110131192812	845161	146096	20190301000000	ANDREI AA	20110131192717	440.491	MCLYMONT MINES INC.
28097	20110131193013	845162	146096	20190301000000	ANDREI AB	20110131192951	440.797	MCLYMONT MINES INC.
28098	20110131193214	845163	146096	20190301000000	ANDREI AC	20110131193152	440.493	MCLYMONT MINES INC.
28099	20110131193415	845164	146096	20190301000000	ANDREI AD	20110131193352	440.782	MCLYMONT MINES INC.
28100	20110131193616	845165	146096	20190301000000	ANDREI AE	20110131193600	440.881	MCLYMONT MINES INC.
28101	20110131193817	845166	146096	20190301000000	ANDREI AF	20110131193814	440.911	MCLYMONT MINES INC.
28102	20110131194218	845167	146096	20190301000000	ANDREI AG	20110131194148	440.88	MCLYMONT MINES INC.
28103	20110131194419	845168	146096	20190301000000	WHY NOT	20110131194351	176.197	MCLYMONT MINES INC.
28104	20110131194621	845169	146096	20180301000000	THE LAST ONE	20110131194552	17.6355	MCLYMONT MINES INC.
28105	20110720215954	866949	146096	20190301000000	ANDREI AGAIN	20110720215911	423.116	MCLYMONT MINES INC.
28106	20111101100408	927481	146096	20190301000000	NEW1	20111101100325	88.3756	MCLYMONT MINES INC.
28107	20111101101012	927485	146096	20190301000000	NEW2	20111101101009	70.6996	MCLYMONT MINES INC.
28108	20111101101316	927489	146096	20190301000000	NEW3	20111101101237	35.3457	MCLYMONT MINES INC.
28109	20100121230707	703885	146096	20180301000000	MORNING STAR 1	20100121230627	443.839	MCLYMONT MINES INC.
28110	20100121231211	703889	146096	20180301000000	MORNING STAR 2	20100121231120	177.547	MCLYMONT MINES INC.
28111	20100812004131	831385	146096	20180301000000	MORNING STAR 5	20100812004129	88.7441	MCLYMONT MINES INC.
28112	20100812100612	831398	146096	20180301000000	MORNING STAR 6	20100812100541	319.48	MCLYMONT MINES INC.
28113	20100812102230	831416	146096	20180301000000	MORNING STAR 10	20100812102119	443.519	MCLYMONT MINES INC.
28114	20100812102231	831417	146096	20180301000000	MORNING STAR 9	20100812102150	88.7066	MCLYMONT MINES INC.
28115	20100812103537	831422	146096	20180301000000	MORNING STAR 11	20100812103500	124.122	MCLYMONT MINES INC.
28116	20100812104342	831425	146096	20180301000000	MORNING STAR 12	20100812104246	248.323	MCLYMONT MINES INC.

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28117	20100816084944	831562	146096	20180301000000	MORNING STAR 12	20100816084842	106.378	MCLYMONT MINES INC.
28120	20101008102341	835462	146096	20180301000000	NEW 1	20101008102249	442.587	MCLYMONT MINES INC.
28121	20101008102643	835463	146096	20180301000000	NEW 2	20101008102556	70.8087	MCLYMONT MINES INC.
28123	20101008111146	835465	146096	20180301000000	MORNING STAR EAST	20101008111121	425.673	MCLYMONT MINES INC.
28124	20110213100206	846348	146096	20180301000000	MORNING STAR EAST 1	20110213100133	355.074	MCLYMONT MINES INC.
28125	20110213100311	846352	146096	20180301000000	MORNING STAR CENTER	20110213100210	443.578	MCLYMONT MINES INC.
28126	20110213101232	846373	146096	20180301000000	MORNING STAR LT	20110213101156	17.7586	MCLYMONT MINES INC.
28127	20110213101536	846377	146096	20180301000000	MORNING STAR LTN	20110213101436	17.7488	MCLYMONT MINES INC.
28128	20110518100102	855173	146096	20180301000000		20110518100041	71.0343	MCLYMONT MINES INC.
28129	20110519100438	855247	146096	20180301000000	MORNING STAR WEST	20110519100422	443.896	MCLYMONT MINES INC.
28130	20110519100642	855251	146096	20180301000000		20110519100619	71.0075	MCLYMONT MINES INC.
28131	20110519101047	855255	146096	20180301000000	MORNING STAR WEST 1	20110519101006	35.5174	MCLYMONT MINES INC.
28132	20110601100147	856051	146096	20180301000000		20110601100129	106.563	MCLYMONT MINES INC.
28133	20110602100334	856135	146096	20180301000000		20110602100310	88.803	MCLYMONT MINES INC.
28134	20110602100537	856138	146096	20180301000000	MORNING STAR SOUTH	20110602100510	159.88	MCLYMONT MINES INC.
28135	20110813100056	889450	146096	20180301000000		20110813100038	177.366	MCLYMONT MINES INC.
28136	20120102100651	939562	146096	20180301000000	ARGENT	20120102100609	71.015	MCLYMONT MINES INC.
28137	20120308084632	955909	146096	20180301000000	LINK 1	20120308084621	124.053	MCLYMONT MINES INC.
28138	20120601093634	992242	146096	20180228000000	MORNING STAR 13	20120601093617	17.7489	MCLYMONT MINES INC.
28139	20120906224916	1012648	146096	20180301000000	NIGHT STAR 1	20120906224912	106.269	MCLYMONT MINES INC.
28140	20120906230126	1012650	146096	20180301000000	NIGHT STAR 2	20120906230053	70.8445	MCLYMONT MINES INC.
28141	20120906230552	1012651	146096	20180301000000	NIGHT STAR 3	20120906230542	53.1552	MCLYMONT MINES INC.
28142	20140502195108	1028019	146096	20150502000000	KING_EAST	20140502195016	124.056	MCLYMONT MINES INC.
28143	20140502195709	1028020	146096	20150502000000	KING2	20140502195647	887.657	MCLYMONT MINES INC.
28144	20140502195911	1028021	146096	20150502000000	KING 3	20140502195841	444.199	MCLYMONT MINES INC.
28145	20130116100305	1016017	146096	20180301000000	WEDNESDAY1	20130116100204	88.7743	MCLYMONT MINES INC.
28148	20130626100122	1020526	146096	20150626000000		20130626100047	35.4174	MCLYMONT MINES INC.
28149	20130626100229	1020531	146096	20180301000000		20130626100150	17.7145	MCLYMONT MINES INC.
28152	20130116100200	1016011	146096	20180301000000	A	20130116100102	35.5289	MCLYMONT MINES INC.
28155	20130521100219	1019673	146096	20180301000000		20130521100119	71.0231	MCLYMONT MINES INC.
28156	20130521100222	1019675	146096	20180301000000		20130521100214	35.5174	MCLYMONT MINES INC.
28157	20130603132426	1020043	146096	20180301000000		20130603132407	35.4193	MCLYMONT MINES INC.
28158	20130603132627	1020044	146096	20180301000000		20130603132607	106.256	MCLYMONT MINES INC.

OBJECTID	NTRTMSTMP	TNRNBR	CLNUM	GDTDT	CLNAME	ISSUE_DATE	HCTRS	OWNER_NAME
28159	20130603132829	1020046	146096	20180301000000		20130603132822	106.31	MCLYMONT MINES INC.
28161	20130603133232	1020048	146096	20180301000000		20130603133145	266.439	MCLYMONT MINES INC.

**APPENDIX III**  
**Mineral Tenure Maps**







**APPENDIX IV**  
**Analytical Results and Certificates**





ALS Canada Ltd.  
 2103 Dollarton Hwy  
 North Vancouver BC V7H 0A7  
 Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: ROMIOS GOLD RESOURCES INC.  
 1220, 20 TORONTO ST.  
 TORONTO ON M5C 2B8

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 Plus Appendix Pages  
 Finalized Date: 18- AUG- 2014  
 Account: ROGORE

**CERTIFICATE TR14101973**

Project: Newmont Lake  
 P.O. No.: NL2014- 01  
 This report is for 189 Rock samples submitted to our lab in Terrace, BC, Canada on 30- JUL- 2014.  
 The following have access to data associated with this certificate:  

TOM DRIVAS FRANK VAN DE WATER	KEN KONKIN	THOMAS SKIMMING
----------------------------------	------------	-----------------

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/o BarCode
CRU- 31	Fine crushing - 70% <2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85% <75 um
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
Zn- OG62	Ore Grade Zn - Four Acid	VARIABLE
ME- ICP61	33 element four acid ICP- AES	ICP- AES
Au- ICP21	Au 30g FA ICP- AES Finish	ICP- AES
ME- OG62	Ore Grade Elements - Four Acid	ICP- AES
Cu- OG62	Ore Grade Cu - Four Acid	VARIABLE

To: ROMIOS GOLD RESOURCES INC.  
 ATTN: FRANK VAN DE WATER  
 1220, 20 TORONTO ST.  
 TORONTO ON M5C 2B8

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

Signature:   
 Colin Ramshaw, Vancouver Laboratory Manager



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Project: Newmont Lake

CERTIFICATE OF ANALYSIS TR14101973

Sample Description	Method Analyte Units LOR	WEI- 21	Au- ICP21	ME- ICP61												
		Recvd Wt. kg	Au ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm
E310501		1.48	0.009	<0.5	7.04	21	1720	3.1	<2	8.48	<0.5	8	14	223	5.12	10
E310502		1.23	0.032	1.0	6.94	32	2220	2.6	<2	6.32	0.6	21	21	580	5.27	20
E310503		1.54	0.145	1.6	7.48	46	1250	4.7	<2	9.78	1.2	22	23	998	5.27	20
E310504		1.96	0.072	1.9	7.28	37	1310	3.9	7	9.36	3.3	21	38	1160	4.97	20
E310505		1.36	0.087	0.7	6.12	30	2320	1.5	<2	10.15	0.8	11	16	1070	6.90	20
E310506		1.57	0.044	0.7	6.88	28	3070	1.9	<2	8.92	<0.5	9	18	610	5.28	20
E310507		1.52	0.057	1.9	4.09	40	1310	2.7	<2	14.7	0.7	13	11	1020	8.18	10
E310508		1.53	0.232	10.0	5.99	66	1460	2.8	<2	10.00	1.5	38	14	7230	5.08	10
E310509		1.62	0.122	1.6	5.68	58	1670	2.4	2	11.85	2.0	20	18	1060	8.48	20
E310510		0.08	2.49	3.6	7.23	12	730	0.9	<2	1.84	<0.5	16	53	>10000	5.72	10
E310511		1.70	0.180	12.9	5.35	101	1380	2.2	<2	11.50	10.9	28	19	7060	8.12	20
E310512		1.61	0.021	2.0	3.84	35	990	2.3	3	12.15	3.0	15	13	1610	5.45	10
E310513		1.72	0.012	0.8	2.63	69	400	2.0	<2	17.4	2.8	16	9	567	9.11	10
E310514		1.86	0.054	<0.5	3.36	48	840	1.8	<2	15.1	0.6	12	5	119	8.52	10
E310515		1.76	0.256	4.0	7.29	41	1560	4.1	2	9.48	3.3	19	11	2120	4.54	20
E310516		1.68	0.942	13.7	6.90	59	960	3.9	2	9.78	4.9	33	17	>10000	5.61	20
E310517		1.30	0.031	1.2	1.68	19	150	2.0	<2	18.4	7.7	19	13	507	6.66	10
E310518		1.75	0.026	<0.5	1.31	27	150	2.0	<2	18.3	<0.5	14	6	76	6.55	10
E310519		1.41	0.005	<0.5	1.78	39	130	2.6	2	18.5	<0.5	19	10	39	8.56	10
E310520		1.67	0.002	<0.5	1.34	27	80	2.5	3	19.2	<0.5	19	4	20	7.61	10
E310521		1.50	0.028	1.0	1.25	21	130	3.1	<2	15.7	0.6	26	11	572	5.84	10
E310522		1.61	0.021	8.9	1.39	59	170	1.5	2	15.6	1.6	27	8	6650	6.68	10
E310523		1.16	0.003	<0.5	1.15	37	130	1.7	5	13.90	0.6	16	6	85	5.63	10
E310524		1.45	0.004	<0.5	1.49	47	200	1.5	4	17.4	<0.5	16	5	27	6.93	10
E310525		1.60	0.022	<0.5	2.20	19	570	1.7	<2	16.2	0.5	15	16	622	4.55	10
E310526		1.39	0.049	<0.5	1.61	17	240	1.8	2	15.9	0.7	11	4	258	4.98	10
E310527		1.52	0.131	1.0	1.88	23	530	1.2	<2	12.75	1.0	15	9	1800	6.06	10
E310528		1.75	0.361	3.3	7.06	36	2780	1.4	<2	7.63	1.6	27	13	7260	4.16	10
E310529		2.28	0.084	6.4	6.31	49	2090	0.7	<2	8.30	4.5	43	9	9220	3.68	10
E310530		0.08	NSS	3.6	7.23	12	740	0.9	<2	1.78	0.6	15	48	>10000	5.68	20
E310531		1.45	0.009	<0.5	0.32	8	160	<0.5	2	30.7	1.8	3	3	210	0.65	<10
E310532		1.56	0.170	5.3	0.50	43	740	0.8	4	16.0	27.6	39	3	970	2.76	<10
E310533		1.93	0.326	79.3	1.21	256	2770	0.5	4	16.8	92.8	46	4	3590	5.43	<10
E310534		1.97	0.187	9.7	1.10	42	970	1.0	3	14.85	33.6	44	9	1975	3.73	10
E310535		2.07	0.365	9.7	1.02	22	490	3.7	<2	16.7	80.5	78	12	5800	3.26	<10
E310536		2.16	0.402	11.7	1.47	33	880	4.3	5	16.3	105.0	72	16	4000	3.70	10
E310537		1.70	0.226	7.4	1.21	53	520	1.2	3	18.0	102.0	79	32	4280	2.57	<10
E310538		1.61	0.128	7.5	0.97	24	480	5.6	5	16.8	105.5	77	28	4390	3.09	10
E310539		1.76	1.010	6.4	3.17	36	1190	0.9	2	19.6	71.8	83	21	6280	2.92	10
E310540		2.06	0.160	0.8	6.68	14	2400	1.7	<2	8.54	2.4	14	14	868	4.39	20

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 Account: ROGORE

Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14101973**

Sample Description	Method Analyte Units LOR	ME-ICP61														
		K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %
E310501		4.12	10	1.33	1900	1	0.84	6	1400	14	0.03	<5	7	466	<20	0.29
E310502		3.78	10	2.56	1620	2	0.54	17	1820	9	0.07	5	15	578	<20	0.50
E310503		3.43	20	2.50	2210	1	0.71	16	2080	7	0.06	5	14	272	<20	0.45
E310504		3.86	20	2.20	1905	1	0.64	15	2220	13	0.04	5	15	255	<20	0.46
E310505		4.51	30	0.94	1990	1	1.25	12	2360	17	0.06	12	8	713	<20	0.28
E310506		5.13	40	0.87	1565	1	1.25	10	2360	16	0.04	9	7	923	<20	0.28
E310507		2.74	50	1.32	2600	1	1.11	14	2420	17	0.10	13	5	552	<20	0.17
E310508		4.23	70	1.99	2150	<1	1.40	29	3770	20	0.55	<5	11	467	<20	0.31
E310509		4.04	20	2.07	2940	2	0.50	12	1660	16	0.38	7	12	477	<20	0.33
E310510		1.44	10	1.02	713	334	2.06	22	610	23	2.40	6	13	276	<20	0.33
E310511		3.81	50	1.30	2710	7	0.49	20	4090	70	0.31	7	12	319	<20	0.32
E310512		4.04	20	1.81	4140	4	0.25	25	700	55	0.05	5	6	243	<20	0.21
E310513		1.31	30	2.15	5380	3	0.29	8	1310	29	0.03	<5	5	183	<20	0.16
E310514		2.52	30	2.51	4730	<1	0.31	8	1260	7	0.02	<5	4	226	<20	0.16
E310515		3.82	20	2.11	3200	1	0.73	12	1540	69	0.14	7	14	316	<20	0.43
E310516		3.70	20	1.88	2670	3	1.04	32	1120	256	0.37	<5	12	241	<20	0.33
E310517		1.22	10	2.56	5680	9	0.27	6	360	17	0.06	<5	2	232	<20	0.07
E310518		1.02	20	2.27	5530	152	0.21	7	900	17	0.02	<5	1	255	<20	0.06
E310519		1.10	30	2.67	6060	11	0.29	11	1760	8	0.01	<5	3	145	<20	0.11
E310520		0.75	20	3.44	6600	14	0.26	12	1020	7	0.01	<5	2	159	<20	0.07
E310521		0.94	20	2.93	6430	7	0.33	7	820	14	0.04	8	1	131	<20	0.05
E310522		0.86	30	2.57	4960	6	0.25	12	2640	25	0.47	<5	3	134	<20	0.09
E310523		0.81	20	2.89	5650	4	0.29	12	1530	6	0.01	11	1	151	<20	0.05
E310524		1.34	30	2.75	5170	5	0.29	8	1640	5	0.01	6	2	151	<20	0.07
E310525		2.04	20	1.76	4490	30	0.35	11	670	10	0.08	10	3	333	<20	0.09
E310526		1.31	20	1.68	4000	22	0.34	8	500	10	0.04	15	3	279	<20	0.08
E310527		1.26	20	1.66	4030	10	0.26	9	710	13	0.14	11	3	196	<20	0.08
E310528		4.91	20	0.50	1840	5	0.61	12	1190	13	0.59	<5	12	559	<20	0.33
E310529		4.47	20	0.16	1500	4	1.87	16	2030	19	0.92	17	12	443	<20	0.31
E310530		1.42	10	1.00	702	332	2.05	26	620	20	2.36	<5	14	264	<20	0.32
E310531		0.20	10	0.96	1045	3	0.03	1	220	24	0.06	8	1	363	<20	0.03
E310532		0.27	20	0.41	4360	54	0.02	24	310	155	0.12	21	4	537	<20	0.03
E310533		0.78	20	5.27	5260	12	0.02	16	400	153	0.35	647	3	381	<20	0.05
E310534		0.62	20	1.49	3910	27	0.02	15	620	53	0.66	39	4	381	<20	0.06
E310535		0.86	30	2.05	4970	10	0.05	19	980	74	1.30	12	6	510	<20	0.11
E310536		1.32	30	2.87	4660	10	0.07	26	1170	554	1.05	9	6	598	<20	0.15
E310537		0.91	40	0.80	3620	10	0.02	26	1290	100	1.14	7	6	386	<20	0.17
E310538		0.67	30	3.64	6040	19	0.13	28	1350	57	1.20	15	6	466	<20	0.15
E310539		3.01	40	0.85	4260	13	0.04	36	1570	76	1.51	5	8	494	<20	0.23
E310540		4.58	20	0.40	2330	4	0.20	10	1560	22	0.13	9	12	776	<20	0.30

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Project: Newmont Lake

CERTIFICATE OF ANALYSIS TR14101973

Sample Description	Method Analyte Units LOR	ME- ICP61	Cu- OC62	Zn- OC62				
		Ti ppm 10	U ppm 10	V ppm 1	W ppm 10	Zn ppm 2	Cu % 0.001	Zn % 0.001
E310501		<10	<10	230	<10	112		
E310502		<10	<10	215	<10	181		
E310503		<10	<10	222	<10	248		
E310504		<10	<10	216	<10	415		
E310505		<10	<10	309	<10	119		
E310506		<10	<10	270	10	105		
E310507		<10	<10	332	10	129		
E310508		<10	<10	179	<10	271		
E310509		<10	<10	349	<10	311		
E310510		<10	<10	102	<10	108	2.34	
E310511		<10	<10	268	<10	1150		
E310512		<10	<10	147	<10	241		
E310513		<10	<10	300	10	300		
E310514		<10	<10	315	10	129		
E310515		<10	<10	178	10	779		
E310516		<10	<10	182	10	875	1.050	
E310517		<10	<10	255	10	795		
E310518		<10	<10	257	10	144		
E310519		<10	<10	288	10	154		
E310520		<10	<10	213	<10	161		
E310521		<10	<10	148	<10	227		
E310522		<10	<10	184	10	229		
E310523		<10	10	187	<10	140		
E310524		<10	<10	235	<10	107		
E310525		<10	<10	151	<10	100		
E310526		<10	<10	148	<10	104		
E310527		<10	<10	263	<10	144		
E310528		10	<10	153	10	257		
E310529		10	<10	152	<10	577		
E310530		<10	<10	103	<10	105	NSS	
E310531		<10	10	15	<10	253		
E310532		<10	<10	76	<10	3110		
E310533		<10	10	42	<10	7000		
E310534		<10	<10	140	<10	4080		
E310535		<10	<10	56	<10	9280		
E310536		<10	<10	54	<10	>10000		1.085
E310537		<10	<10	34	<10	>10000		1.355
E310538		<10	<10	48	<10	>10000		1.180
E310539		<10	10	57	<10	8040		
E310540		<10	<10	209	<10	400		

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Sample Description	Method Analyte Units LOR	WEI- 21	Au- ICP21	ME- ICP61												
		Recvd Wt. kg	Au ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm
E310541		3.01	0.382	2.2	4.91	18	1410	1.7	3	10.65	1.1	32	8	3910	4.39	10
E310542		3.60	0.097	1.6	4.81	16	1450	2.0	3	12.45	13.1	17	12	1260	5.25	10
E310543		2.92	0.214	3.5	4.99	17	1450	1.6	6	11.95	3.1	28	47	3060	4.48	10
E310544		2.46	0.925	13.9	3.04	37	740	1.5	<2	12.45	54.8	81	64	>10000	6.89	10
E310551		2.32	0.053	2.3	3.37	26	1380	4.8	<2	11.00	25.9	52	17	3220	2.56	10
E310552		2.23	0.053	2.3	1.16	36	440	4.5	3	16.3	28.7	51	16	2380	2.29	10
E310553		2.17	0.023	1.3	0.93	32	160	4.5	2	18.2	21.0	47	17	1605	2.10	<10
E310554		2.33	0.089	2.7	0.47	30	90	3.5	2	17.0	9.2	47	19	3600	2.05	<10
E310555		2.77	0.119	3.2	2.38	33	1000	4.9	3	10.85	9.2	51	18	4070	2.48	10
E310556		2.49	0.081	1.7	5.13	32	2370	3.2	<2	6.67	10.0	25	23	1235	2.20	10
E310557		2.44	0.183	3.8	1.29	29	540	4.6	2	11.15	7.2	42	15	3370	2.21	<10
E310558		2.49	0.130	3.8	1.54	33	2440	4.0	4	10.25	10.2	38	19	2700	2.07	<10
E310559		3.68	0.120	6.1	2.26	106	550	2.3	2	14.5	21.5	66	18	5770	3.05	10
E310560		2.62	0.064	6.1	1.26	121	330	1.4	<2	17.5	48.1	66	15	6490	3.43	<10
E310561		3.70	0.081	8.5	0.73	108	160	1.8	3	16.8	43.2	67	14	7760	2.92	<10
E310562		3.70	0.104	5.1	0.88	45	240	2.8	2	17.1	29.4	56	13	5600	2.64	<10
E310563		3.05	0.013	0.8	1.08	17	260	<0.5	3	24.7	7.0	16	4	529	2.83	<10
E310564		2.47	0.005	<0.5	2.41	11	590	0.7	2	22.7	1.1	14	6	361	3.06	10
E310565		1.62	0.022	0.6	0.73	9	120	<0.5	<2	29.0	5.2	10	4	1540	1.51	<10
E310566		1.91	0.002	<0.5	0.61	8	50	<0.5	2	28.9	0.7	3	4	37	0.79	<10
E310567		2.47	0.022	2.1	1.03	22	170	3.3	<2	21.5	31.8	44	8	3250	2.22	<10
E310568		3.03	0.201	7.4	1.24	63	590	2.8	<2	12.60	39.8	59	10	5700	2.99	<10
E310569		1.97	0.026	2.6	0.78	31	720	2.4	<2	18.7	29.2	44	8	4380	2.40	<10
E310570		0.09	0.044	<0.5	7.39	31	80	<0.5	<2	1.90	<0.5	12	19	1650	4.07	10
E310571		2.50	0.046	1.8	0.71	41	240	0.8	<2	18.6	16.7	26	10	3320	1.91	<10
E310572		2.43	0.019	2.5	1.01	30	100	1.1	3	23.1	45.0	56	9	5270	1.71	<10
E310573		2.05	0.008	<0.5	0.41	15	70	<0.5	2	30.7	0.6	5	5	124	1.02	<10
E310574		2.14	0.002	<0.5	0.45	12	80	<0.5	<2	26.2	0.8	5	5	96	1.12	<10
E310575		1.72	0.003	0.8	0.48	16	80	<0.5	2	27.0	1.9	4	4	104	1.17	<10
E310576		2.02	0.003	<0.5	0.39	15	70	<0.5	2	27.9	2.0	5	4	117	1.43	<10
E310577		2.36	0.014	1.0	2.11	36	950	<0.5	<2	20.9	2.7	11	7	362	3.09	<10
E310578		2.22	0.037	7.4	1.88	168	1310	2.3	<2	12.60	74.7	76	11	6910	2.94	<10
E310579		2.95	0.203	5.7	1.02	69	390	1.0	<2	19.1	46.9	44	13	2990	2.19	<10
E310580		2.34	0.347	3.8	0.74	54	620	0.5	<2	23.5	39.5	33	7	2990	2.21	<10
E310581		2.38	0.068	3.4	0.96	37	110	0.7	2	20.3	34.0	31	9	2520	2.60	<10
E310582		2.91	0.066	7.9	1.16	101	380	1.9	<2	16.0	103.0	75	13	5810	3.05	<10
E310583		2.36	0.342	2.8	6.49	29	860	1.7	3	10.55	1.9	27	49	4460	3.92	10
E310584		2.53	0.131	1.0	4.83	43	1080	2.6	5	11.45	19.7	25	17	2460	6.47	10
E310585		1.92	0.106	1.6	6.99	46	2030	2.2	<2	5.85	4.3	25	17	1150	4.66	20
E310586		2.01	0.174	1.1	5.14	25	1450	2.5	<2	8.82	4.7	20	13	1450	4.71	10

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*



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Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14101973**

Sample Description	Method Analyte Units LOR	ME-ICP61														
		K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %
E310541		4.26	30	1.02	3030	2	0.13	17	1430	14	0.64	6	6	596	<20	0.19
E310542		4.40	30	0.53	2920	17	0.18	18	1680	48	0.26	13	7	726	<20	0.23
E310543		4.26	30	0.50	2950	18	0.21	43	1500	125	0.35	13	9	663	<20	0.35
E310544		2.17	30	0.52	3990	18	0.12	43	2370	46	1.06	17	8	379	<20	0.36
E310551		3.41	30	5.22	4440	11	0.18	20	1120	102	0.49	5	6	739	<20	0.11
E310552		0.76	40	6.45	4970	34	0.12	17	1630	25	0.43	5	5	373	<20	0.07
E310553		0.46	30	4.20	5010	1	0.07	22	1820	63	0.36	8	6	301	<20	0.08
E310554		0.05	30	3.42	4660	5	0.05	14	1700	21	0.49	9	5	407	<20	0.09
E310555		2.17	40	5.62	4600	1	0.15	17	1770	68	0.54	15	6	746	<20	0.12
E310556		4.29	30	3.02	3410	5	0.24	12	1330	90	0.32	5	6	1310	<20	0.13
E310557		1.03	30	5.08	4880	12	0.10	15	1190	152	0.53	8	5	545	<20	0.09
E310558		1.31	30	5.10	4530	4	0.10	12	1360	31	0.49	19	6	708	<20	0.11
E310559		1.88	30	3.67	4320	<1	0.12	16	1500	33	0.62	164	7	1115	<20	0.15
E310560		0.91	20	3.80	3980	2	0.05	16	1140	12	0.63	136	5	1375	<20	0.12
E310561		0.48	20	4.60	4080	1	0.03	15	1160	14	0.64	171	4	1135	<20	0.09
E310562		0.47	20	4.90	4270	1	0.11	11	940	8	0.74	33	4	723	<20	0.07
E310563		0.66	10	4.13	2780	1	0.24	8	360	11	0.06	13	3	1060	<20	0.06
E310564		2.15	20	2.29	2420	1	0.31	12	340	11	0.03	12	4	1305	<20	0.07
E310565		0.47	10	0.61	1390	1	0.05	3	240	8	0.09	5	2	960	<20	0.03
E310566		0.26	10	0.80	886	3	0.02	2	150	25	0.02	<5	2	1085	<20	0.05
E310567		0.60	20	4.32	3620	<1	0.13	10	600	62	0.50	<5	4	618	<20	0.11
E310568		1.00	20	4.40	4730	41	0.06	14	550	69	0.79	188	4	696	<20	0.11
E310569		0.63	10	4.07	3490	4	0.05	10	490	32	0.59	26	4	612	<20	0.10
E310570		1.04	<10	1.93	421	38	1.65	9	520	10	0.83	<5	19	118	<20	0.29
E310571		0.57	10	4.17	2500	115	0.04	7	520	16	0.26	7	3	260	<20	0.10
E310572		0.87	10	4.42	2620	1	0.03	8	550	40	0.74	13	3	276	<20	0.10
E310573		0.21	10	1.60	1365	<1	0.01	4	230	10	0.02	8	2	439	<20	0.03
E310574		0.26	10	3.46	1535	1	0.01	5	260	12	0.01	6	2	375	<20	0.04
E310575		0.35	10	2.19	1160	2	0.01	1	260	11	0.03	19	2	393	<20	0.04
E310576		0.28	10	1.53	1320	2	0.01	6	220	12	<0.01	<5	2	379	<20	0.03
E310577		1.95	10	2.25	2360	2	0.04	13	600	22	0.16	11	5	401	<20	0.12
E310578		0.99	10	2.47	4050	2	0.02	16	680	58	0.78	76	5	530	<20	0.13
E310579		0.60	20	1.60	3620	6	0.01	7	960	37	0.44	48	4	466	<20	0.15
E310580		0.43	10	1.89	2590	4	0.01	8	440	42	0.31	19	2	312	<20	0.06
E310581		0.52	10	2.58	2860	2	0.01	15	640	36	0.28	11	3	309	<20	0.10
E310582		0.89	20	4.26	4170	2	0.02	16	910	53	1.01	39	4	427	<20	0.11
E310583		4.51	20	1.32	2530	2	1.88	10	1380	20	0.05	<5	15	327	<20	0.41
E310584		3.79	30	2.12	3650	1	0.66	13	1310	23	0.10	<5	11	317	<20	0.28
E310585		4.04	20	1.63	2300	1	0.36	15	1610	25	0.05	<5	15	441	<20	0.32
E310586		4.46	20	2.09	3360	8	0.52	10	1230	77	0.04	<5	11	435	<20	0.26

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Project: Newmont Lake

CERTIFICATE OF ANALYSIS TR14101973

Sample Description	Method Analyte Units LOR	ME- ICP61	Cu- OC62	Zn- OC62				
		Ti ppm 10	U ppm 10	V ppm 1	W ppm 10	Zn ppm 2	Cu % 0.001	Zn % 0.001
E310541		<10	<10	166	10	183		
E310542		<10	<10	190	<10	1405		
E310543		<10	<10	135	<10	440		
E310544		<10	10	156	<10	6670	1.890	
E310551		<10	10	59	<10	3380		
E310552		<10	<10	37	<10	3540		
E310553		<10	10	25	<10	2530		
E310554		<10	<10	33	<10	1070		
E310555		<10	<10	47	<10	1070		
E310556		<10	<10	79	<10	1120		
E310557		<10	10	38	<10	740		
E310558		<10	<10	41	<10	1230		
E310559		<10	<10	58	<10	1870		
E310560		<10	10	50	<10	4780		
E310561		<10	10	37	<10	4280		
E310562		<10	<10	34	<10	3190		
E310563		<10	10	29	<10	706		
E310564		<10	<10	45	<10	179		
E310565		<10	<10	15	<10	490		
E310566		<10	<10	14	<10	102		
E310567		<10	<10	23	<10	3640		
E310568		<10	<10	41	<10	4090		
E310569		<10	<10	25	<10	3280		
E310570		<10	<10	260	<10	79		
E310571		<10	<10	23	<10	1970		
E310572		<10	<10	18	<10	5080		
E310573		<10	<10	12	<10	104		
E310574		<10	<10	17	<10	123		
E310575		<10	<10	13	<10	285		
E310576		<10	<10	15	<10	258		
E310577		<10	<10	59	<10	327		
E310578		<10	<10	32	<10	8630		
E310579		<10	<10	29	<10	4890		
E310580		<10	<10	20	<10	3670		
E310581		<10	<10	29	<10	3850		
E310582		<10	<10	23	<10	>10000		1.185
E310583		<10	<10	146	<10	357		
E310584		<10	<10	198	<10	2080		
E310585		<10	<10	178	10	473		
E310586		<10	<10	157	10	619		

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Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14101973**

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- ICP21 Au ppm	ME- ICP61 Ag ppm	ME- ICP61 Al %	ME- ICP61 As ppm	ME- ICP61 Ba ppm	ME- ICP61 Be ppm	ME- ICP61 Bi ppm	ME- ICP61 Ca %	ME- ICP61 Cd ppm	ME- ICP61 Co ppm	ME- ICP61 Cr ppm	ME- ICP61 Cu ppm	ME- ICP61 Fe %	ME- ICP61 Ga ppm
E310587		2.09	0.023	1.4	7.31	101	2180	2.2	<2	5.44	2.6	18	20	146	4.49	20
E310588		1.86	0.091	5.2	5.17	69	1470	2.5	<2	8.00	5.0	22	13	2020	4.22	10
E310589		1.96	0.229	2.0	5.80	67	1610	2.7	<2	9.72	5.8	22	25	1360	5.33	10
E310590		0.09	0.043	<0.5	7.35	37	80	<0.5	2	1.91	<0.5	13	18	1640	4.09	20
E310591		2.13	0.307	1.7	5.81	20	2240	2.5	<2	9.54	3.8	20	14	2180	2.56	10
E310592		1.66	0.101	1.8	6.56	14	3220	1.3	3	6.21	3.4	18	22	1660	2.98	10
E310593		2.03	0.914	4.0	6.73	79	2760	1.9	9	7.70	11.1	16	26	1800	3.91	10
E310594		2.09	0.169	1.2	7.30	<5	3060	2.5	3	4.63	1.9	17	3	1920	4.04	10
E310595		1.99	0.107	0.5	7.04	5	3150	1.5	2	4.36	2.4	15	26	941	3.26	10
E310596		2.10	0.124	0.7	6.76	9	3020	1.8	5	4.44	3.3	13	26	876	3.32	10
E310597		2.26	0.078	0.9	7.20	5	2850	2.3	<2	4.34	2.6	13	24	1120	2.85	10
E310598		1.46	0.240	1.8	6.69	8	2610	1.7	4	6.22	8.2	14	18	1580	2.63	10
E310599		1.67	0.132	1.4	7.34	8	3360	1.3	2	3.73	2.6	12	28	953	3.12	10
E310600		1.75	0.085	0.9	7.45	5	3400	1.3	<2	2.98	2.3	15	33	968	2.95	10
E310601		1.99	0.032	1.0	6.65	18	2100	1.3	5	2.65	2.3	16	22	945	3.30	10
E310602		2.38	0.110	3.7	0.91	31	340	3.1	4	13.25	31.8	54	17	3900	2.65	10
E310603		2.16	0.066	0.7	0.74	26	200	4.2	5	15.9	11.3	26	4	51	3.21	10
E310604		2.03	0.029	<0.5	0.75	20	690	2.3	2	10.60	8.9	17	7	56	2.44	10
E310605		3.33	0.137	5.0	4.12	39	1060	2.5	3	7.11	18.6	44	16	4930	3.14	10
E310606		3.35	0.048	8.5	0.56	34	210	4.2	9	15.4	44.8	53	12	4150	3.62	10
E310607		1.84	0.036	3.3	0.66	90	250	4.0	9	12.60	135.5	82	14	1670	2.43	<10
E310608		1.88	0.124	3.0	0.48	43	270	5.2	3	11.85	36.4	98	16	>10000	2.76	<10
E310609		2.17	0.116	5.4	2.20	40	910	4.9	5	11.70	49.3	100	20	>10000	3.13	10
E310610		0.09	0.044	<0.5	7.61	34	80	<0.5	2	1.94	<0.5	12	18	1660	4.16	20
E310611		2.23	0.041	5.6	1.39	30	650	4.2	<2	16.2	51.5	70	22	7490	2.56	10
E310612		2.64	0.039	4.2	0.84	24	270	5.0	4	18.2	65.5	74	26	6520	2.56	<10
E310613		3.42	0.043	3.1	3.03	17	1380	3.5	5	15.0	40.0	40	16	2340	2.81	10
E310614		3.26	0.076	7.8	2.00	40	850	5.0	11	16.4	141.5	100	16	8800	3.61	10
E310615		1.48	0.045	1.9	2.66	41	1320	4.1	2	16.3	53.0	44	19	2320	2.96	10
E310616		1.53	0.047	2.7	2.65	34	1210	4.2	2	16.4	54.1	48	20	2680	2.73	10
E310617		2.29	0.084	5.6	0.99	31	320	5.4	<2	16.3	109.5	114	30	>10000	3.04	10
E310618		1.83	0.026	1.7	0.51	24	450	4.4	6	18.4	35.5	39	14	2040	1.86	<10
E310619		1.76	0.062	2.1	0.46	18	420	3.3	3	18.4	35.0	50	14	4400	2.03	<10
E310620		1.95	0.035	1.8	0.29	11	210	3.7	7	20.3	29.2	37	10	2810	1.82	<10
E310621		2.07	0.040	1.7	0.26	9	130	3.7	9	21.8	25.0	30	17	1260	1.73	<10
E310622		1.80	0.003	<0.5	0.66	5	20	<0.5	6	30.9	1.4	<1	1	51	0.31	<10
E310623		0.91	0.013	1.1	0.79	46	260	3.5	5	15.4	103.5	85	9	3480	1.88	<10
E310624		2.86	0.097	<0.5	3.28	12	140	1.1	4	11.95	1.0	17	20	747	10.10	10
E310625		3.04	0.308	2.2	2.64	38	50	0.7	<2	10.25	0.6	53	23	7250	12.20	10
E310626		2.51	0.382	2.4	2.77	42	40	0.7	<2	9.98	<0.5	63	23	7560	12.30	10

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**CERTIFICATE OF ANALYSIS TR14101973**

Sample Description	Method Analyte Units LOR	ME-ICP61 K % 0.01	ME-ICP61 La ppm 10	ME-ICP61 Mg % 0.01	ME-ICP61 Mn ppm 5	ME-ICP61 Mo ppm 1	ME-ICP61 Na % 0.01	ME-ICP61 Ni ppm 1	ME-ICP61 P ppm 10	ME-ICP61 Pb ppm 2	ME-ICP61 S % 0.01	ME-ICP61 Sb ppm 5	ME-ICP61 Sc ppm 1	ME-ICP61 Sr ppm 1	ME-ICP61 Th ppm 20	ME-ICP61 Ti % 0.01
E310587		4.70	20	1.33	1980	1	0.65	14	1970	70	0.12	<5	17	474	<20	0.34
E310588		5.00	20	2.25	3730	10	0.26	21	1280	140	0.11	7	11	315	<20	0.24
E310589		5.72	20	1.64	3710	1	0.19	16	1330	77	0.07	<5	13	366	<20	0.38
E310590		1.04	<10	1.82	421	39	1.65	13	530	12	0.83	<5	19	118	<20	0.29
E310591		4.11	20	1.68	3140	17	0.25	13	720	93	0.10	<5	14	351	<20	0.39
E310592		4.32	20	1.09	2200	1	0.19	12	1530	27	0.04	<5	13	942	<20	0.32
E310593		4.18	20	1.53	2450	<1	0.71	11	1900	14	0.03	9	17	821	<20	0.35
E310594		4.32	10	1.43	1855	1	0.83	13	1880	21	0.02	<5	15	861	<20	0.36
E310595		4.37	20	1.34	1530	<1	0.56	11	1730	24	0.02	<5	14	960	<20	0.34
E310596		4.12	20	1.30	1545	<1	0.80	10	1710	25	0.02	<5	14	938	<20	0.33
E310597		4.17	20	1.07	1430	<1	0.85	9	1440	22	0.03	<5	11	949	<20	0.29
E310598		4.06	20	1.09	2380	<1	0.64	10	1210	28	0.04	<5	13	810	<20	0.39
E310599		4.16	20	0.95	1740	<1	0.85	11	1860	27	0.02	<5	14	1115	<20	0.35
E310600		4.31	20	1.21	1675	<1	0.73	11	1920	20	0.02	<5	15	1115	<20	0.37
E310601		4.59	20	0.49	1925	7	0.21	13	1750	44	0.08	10	14	601	<20	0.33
E310602		0.63	30	3.13	5470	1	0.05	11	1480	88	0.55	19	5	624	<20	0.09
E310603		0.39	40	4.54	5650	<1	0.10	10	900	5	0.07	9	2	216	<20	0.04
E310604		0.54	20	2.38	5080	8	0.08	5	360	24	0.06	7	2	204	<20	0.03
E310605		3.77	30	1.48	4000	7	0.21	9	1230	254	0.32	24	7	837	<20	0.20
E310606		0.08	20	4.65	5730	10	0.06	9	790	405	0.65	<5	3	371	<20	0.08
E310607		0.28	20	4.40	5300	14	0.07	12	760	218	0.32	34	3	300	<20	0.09
E310608		0.20	20	6.10	4790	15	0.06	25	940	11	0.51	<5	4	261	<20	0.08
E310609		1.58	30	5.10	4780	1	0.25	26	1620	327	0.60	7	8	480	<20	0.21
E310610		1.05	<10	1.94	429	38	1.65	11	520	6	0.82	9	20	120	<20	0.31
E310611		1.12	30	3.74	5170	51	0.09	15	1240	16	1.01	9	7	375	<20	0.19
E310612		0.34	20	4.39	5230	1	0.06	14	1110	25	0.99	12	5	345	<20	0.18
E310613		2.63	20	3.16	4070	<1	0.31	9	1150	152	0.35	10	8	744	<20	0.18
E310614		1.34	30	4.10	5050	2	0.29	19	1140	422	0.58	5	7	573	<20	0.14
E310615		2.20	30	3.24	4310	1	0.19	10	1670	26	0.55	14	9	661	<20	0.19
E310616		2.06	30	3.44	4480	2	0.17	11	1560	21	0.60	7	9	632	<20	0.18
E310617		0.59	30	4.83	4930	<1	0.09	20	1240	12	1.39	7	7	272	<20	0.22
E310618		0.20	30	4.37	4900	<1	0.05	9	810	5	0.36	11	3	338	<20	0.08
E310619		0.12	20	3.67	5050	8	0.04	10	800	14	0.57	10	4	338	<20	0.08
E310620		0.05	20	4.52	4750	2	0.05	5	480	24	0.47	<5	3	321	<20	0.05
E310621		0.03	20	4.86	4520	4	0.05	4	610	118	0.31	<5	3	356	<20	0.08
E310622		0.03	10	4.33	574	1	0.01	<1	110	8	<0.01	7	1	305	<20	0.01
E310623		0.40	40	6.95	4570	3	0.07	15	1380	32	0.76	<5	6	267	<20	0.13
E310624		0.86	30	1.04	3740	23	0.04	14	790	15	0.17	19	15	234	<20	0.13
E310625		0.12	40	1.14	3540	11	0.01	26	340	13	0.70	13	23	190	<20	0.11
E310626		0.02	50	1.02	3150	9	0.01	32	360	12	0.66	9	22	193	<20	0.11

\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*



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Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14101973**

Sample Description	Method Analyte Units LOR	ME- ICP61	Cu- OC62	Zn- OC62				
		Ti ppm 10	U ppm 10	V ppm 1	W ppm 10	Zn ppm 2	Cu % 0.001	Zn % 0.001
E310587		<10	<10	223	10	445		
E310588		<10	<10	183	<10	704		
E310589		<10	<10	180	<10	808		
E310590		<10	<10	264	<10	78		
E310591		<10	<10	69	10	311		
E310592		<10	<10	143	<10	320		
E310593		<10	<10	185	<10	1100		
E310594		<10	<10	200	<10	283		
E310595		<10	<10	175	<10	292		
E310596		<10	<10	179	<10	306		
E310597		<10	<10	151	<10	307		
E310598		<10	<10	102	<10	630		
E310599		<10	<10	181	10	387		
E310600		<10	<10	164	<10	351		
E310601		<10	<10	124	<10	290		
E310602		<10	<10	42	<10	3670		
E310603		<10	<10	51	<10	1400		
E310604		<10	<10	41	<10	1200		
E310605		<10	<10	65	<10	2300		
E310606		<10	<10	39	<10	5090		
E310607		<10	<10	30	<10	>10000		4.05
E310608		<10	<10	27	<10	6030	2.02	
E310609		<10	<10	53	<10	4630	1.270	
E310610		<10	<10	274	<10	87		
E310611		<10	<10	44	<10	5240		
E310612		<10	<10	38	<10	7200		
E310613		<10	<10	85	<10	3470		
E310614		<10	<10	62	<10	>10000		1.130
E310615		<10	<10	80	<10	5710		
E310616		<10	<10	68	<10	5940		
E310617		<10	<10	45	<10	>10000	1.170	1.145
E310618		<10	<10	26	<10	3810		
E310619		<10	<10	19	<10	3620		
E310620		<10	<10	20	<10	3280		
E310621		<10	<10	18	<10	2840		
E310622		<10	<10	3	<10	111		
E310623		<10	<10	25	<10	>10000		1.185
E310624		<10	<10	202	10	111		
E310625		<10	<10	247	10	109		
E310626		<10	<10	251	10	98		

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Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14101973**

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- ICP21 Au ppm	ME- ICP61 Ag ppm	ME- ICP61 Al %	ME- ICP61 As ppm	ME- ICP61 Ba ppm	ME- ICP61 Be ppm	ME- ICP61 Bi ppm	ME- ICP61 Ca %	ME- ICP61 Cd ppm	ME- ICP61 Co ppm	ME- ICP61 Cr ppm	ME- ICP61 Cu ppm	ME- ICP61 Fe %	ME- ICP61 Ga ppm
		0.02	0.001	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10
E310627		2.34	0.223	1.9	2.58	27	40	0.7	6	10.75	<0.5	48	22	6660	12.50	10
E310628		2.09	0.465	6.2	2.50	52	150	0.7	7	10.05	0.5	82	22	>10000	14.20	10
E310629		1.83	0.998	5.9	2.65	76	740	0.8	4	9.05	0.6	159	19	>10000	13.10	10
E310630		0.09	0.044	<0.5	7.66	33	80	<0.5	4	1.94	<0.5	14	18	1680	4.20	20
E310631		1.09	0.221	1.4	2.50	36	90	1.0	<2	15.3	0.5	68	29	8880	15.60	10
E310632		3.08	0.094	7.6	1.42	114	320	1.7	3	17.1	6.1	42	7	6320	4.35	10
E310633		2.48	0.112	4.3	3.37	91	990	1.8	<2	13.80	4.8	38	5	4660	3.97	10
E310634		2.57	0.127	18.2	1.79	157	60	1.6	5	16.0	3.9	57	4	>10000	6.02	10
E310635		2.67	0.059	6.7	3.76	82	110	3.2	8	15.8	8.1	48	72	>10000	6.14	10
E310636		3.19	0.085	7.1	3.13	104	140	1.9	3	16.6	4.3	36	31	8360	6.19	10
E310637		3.02	0.219	4.9	5.16	92	1270	2.3	<2	10.85	2.1	26	25	4110	4.04	10
E310638		1.58	0.003	1.1	6.98	25	610	4.8	<2	13.6	1.2	18	7	2740	7.96	20
E310639		1.85	0.006	1.5	4.33	83	120	3.0	2	17.3	0.8	27	8	1115	5.40	10
E310640		2.04	0.216	13.8	1.62	176	50	1.6	<2	15.9	4.6	88	15	>10000	5.60	10
E310641		1.54	0.249	10.7	5.76	20	2010	1.9	<2	8.23	1.4	21	8	8410	4.75	20
E310642		0.99	2.15	21.4	8.88	79	1740	4.5	<2	2.04	3.8	60	19	>10000	4.15	20
E310643		1.56	1.725	25.7	1.40	77	120	<0.5	<2	17.7	14.5	71	29	>10000	15.55	10
E310644		0.74	0.012	1.3	7.40	12	2840	3.5	<2	8.57	0.9	11	9	537	5.77	20
E310645		1.30	0.007	5.4	2.32	24	170	2.3	2	16.3	2.8	51	2	3870	7.13	10
E310646		0.93	0.112	3.7	7.44	8	1670	4.8	<2	6.42	2.9	57	7	7580	4.14	20
E310647		1.43	0.479	58.2	1.86	111	890	0.6	14	17.8	15.7	40	20	>10000	16.55	10
E310651		2.25	0.020	<0.5	1.61	35	250	2.5	<2	17.3	1.1	14	9	346	6.35	10
E310652		2.62	0.017	0.6	2.04	46	490	1.9	4	16.5	0.8	12	12	281	7.02	10
E310653		3.17	0.074	2.3	3.47	55	1660	1.2	<2	12.25	2.7	16	200	2900	6.33	10
E310654		2.86	0.004	<0.5	2.36	43	730	1.6	<2	13.50	1.4	15	44	598	5.46	10
E310655		2.96	0.002	<0.5	2.01	26	660	1.5	<2	20.9	1.8	10	11	133	5.01	10
E310656		3.53	0.004	0.6	1.17	55	670	3.1	<2	14.10	11.2	32	5	2490	3.02	10
E310657		3.29	0.014	<0.5	0.89	53	190	3.2	<2	14.3	8.1	22	3	571	2.14	<10
E310658		2.99	0.090	4.6	1.63	61	380	1.8	<2	18.4	5.6	29	12	3420	6.15	10
E310659		2.54	0.076	3.2	1.66	45	340	2.2	<2	18.8	4.5	31	25	3290	5.40	10
E310660		2.94	0.055	7.8	3.55	54	890	1.9	<2	14.0	7.8	44	71	6210	1.97	10
E310661		2.73	0.003	<0.5	1.02	25	160	2.9	<2	18.4	1.6	20	12	242	2.66	10
E310662		3.04	0.007	1.9	2.01	56	350	2.0	<2	19.7	3.9	20	73	1975	2.45	10
E310663		2.49	0.006	2.5	1.13	24	170	2.1	4	20.7	2.9	13	12	224	2.08	10
E310664		3.07	0.203	7.5	1.46	42	210	2.7	2	20.3	32.3	31	13	6250	3.54	10
E310665		4.34	0.667	5.3	6.95	67	1870	2.0	7	8.73	10.6	131	10	>10000	7.60	20
E310666		1.90	0.279	2.9	6.36	25	1580	1.7	<2	12.00	7.8	48	6	>10000	6.93	20
E310667		1.50	0.067	0.9	7.31	13	1950	3.0	<2	9.15	3.1	15	8	2120	4.56	20
E310668		1.51	0.066	1.7	7.58	11	2210	2.7	<2	8.47	3.2	12	8	1495	4.13	20
E310669		2.01	0.057	0.8	7.46	12	3040	3.0	<2	4.74	9.9	16	13	1220	3.40	20

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Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14101973**

Sample Description	Method Analyte Units LOR	ME- ICP61 K %	ME- ICP61 La ppm	ME- ICP61 Mg %	ME- ICP61 Mn ppm	ME- ICP61 Mo ppm	ME- ICP61 Na %	ME- ICP61 Ni ppm	ME- ICP61 P ppm	ME- ICP61 Pb ppm	ME- ICP61 S %	ME- ICP61 Sb ppm	ME- ICP61 Sc ppm	ME- ICP61 Sr ppm	ME- ICP61 Th ppm	ME- ICP61 Ti %
		0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01
E310627		0.02	40	1.11	3440	19	0.01	32	330	12	0.42	12	18	177	<20	0.10
E310628		0.14	40	0.73	3200	49	0.01	40	420	21	0.93	16	13	148	<20	0.10
E310629		0.03	40	0.73	3310	60	0.01	62	310	14	1.18	17	20	166	<20	0.10
E310630		1.06	<10	1.95	423	39	1.66	12	540	9	0.83	9	20	120	<20	0.31
E310631		0.10	40	0.71	2640	7	0.01	27	620	18	0.34	22	13	240	<20	0.15
E310632		0.47	280	6.09	2590	2	0.39	80	9350	7	0.11	7	3	325	<20	0.07
E310633		1.95	240	5.59	2440	<1	0.49	64	7480	14	0.08	8	3	650	<20	0.10
E310634		0.14	290	6.98	2600	<1	0.27	130	>10000	10	0.38	<5	2	232	<20	0.07
E310635		0.24	120	5.72	2950	<1	0.83	137	6910	15	0.07	8	20	352	<20	0.25
E310636		0.33	190	5.17	2710	<1	0.76	95	7810	32	0.37	9	10	340	<20	0.19
E310637		3.22	130	4.35	2130	1	0.86	68	6280	18	0.21	5	9	614	<20	0.17
E310638		0.73	20	1.51	2610	<1	2.42	15	1070	7	0.17	6	7	329	<20	0.27
E310639		0.15	140	4.67	3290	<1	0.73	24	9880	54	0.05	<5	5	317	20	0.15
E310640		0.12	240	7.16	3370	1	0.41	166	>10000	44	1.00	7	5	262	<20	0.08
E310641		4.19	30	1.60	2670	2	0.57	23	2820	8	0.17	12	12	274	<20	0.38
E310642		4.19	10	0.88	846	12	0.67	86	1480	22	0.09	8	23	671	<20	0.57
E310643		0.19	30	0.34	2800	6	0.08	54	4180	11	0.54	14	5	77	<20	0.13
E310644		4.80	20	0.88	1785	<1	1.27	8	780	93	0.04	8	6	732	<20	0.26
E310645		0.21	10	5.42	4410	3	0.94	35	340	76	0.14	12	1	392	<20	0.08
E310646		5.34	10	1.04	1600	<1	0.70	24	690	11	0.03	<5	3	966	<20	0.18
E310647		0.43	40	0.20	2570	6	0.26	56	5380	10	1.88	9	5	102	<20	0.12
E310651		0.86	30	1.99	5740	6	0.31	9	1220	7	0.02	13	2	220	<20	0.09
E310652		1.44	40	1.77	4970	2	0.28	9	1630	20	0.03	8	3	202	<20	0.12
E310653		3.41	40	1.02	3240	10	0.26	46	2040	6	0.11	12	9	255	<20	0.68
E310654		2.34	30	2.07	4220	7	0.31	22	1530	10	0.04	10	4	222	<20	0.19
E310655		1.92	30	1.38	4740	9	0.19	7	1090	136	0.04	10	2	341	<20	0.10
E310656		1.00	30	3.62	7540	25	0.25	14	1100	110	0.17	8	2	225	<20	0.04
E310657		0.28	30	5.27	7370	98	0.37	10	620	41	0.07	9	1	162	<20	0.02
E310658		1.22	30	1.46	5090	8	0.21	18	1340	234	0.18	<5	3	232	<20	0.10
E310659		1.28	30	2.19	5680	5	0.35	20	1050	106	0.26	10	3	308	<20	0.13
E310660		3.79	30	1.85	4420	75	0.66	45	2070	111	0.49	8	7	267	<20	0.41
E310661		0.86	20	2.08	6180	23	0.30	11	500	15	0.04	7	1	278	<20	0.04
E310662		2.15	40	2.06	5530	7	0.30	24	1960	41	0.17	<5	4	264	<20	0.27
E310663		1.12	20	1.53	6030	2	0.33	7	450	170	0.05	8	1	304	<20	0.04
E310664		1.29	30	1.97	7090	16	0.18	16	720	331	0.15	12	1	326	<20	0.05
E310665		4.94	40	1.11	3600	7	0.74	34	1990	51	0.09	6	8	411	<20	0.30
E310666		4.61	30	0.89	3540	2	0.45	13	1370	15	0.02	<5	7	432	<20	0.28
E310667		4.52	20	0.93	2680	1	0.38	6	1200	13	0.02	<5	8	488	<20	0.28
E310668		5.00	20	0.98	2150	<1	0.47	5	1100	55	0.02	11	8	564	<20	0.29
E310669		4.15	20	0.98	1680	<1	0.41	6	1410	15	0.02	6	9	861	<20	0.33

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Sample Description	Method Analyte Units LOR	ME- ICP61	Cu- OC62	Zn- OC62				
		Ti ppm 10	U ppm 10	V ppm 1	W ppm 10	Zn ppm 2	Cu % 0.001	Zn % 0.001
E310627		<10	<10	264	10	103		
E310628		<10	<10	320	10	120	1.520	
E310629		<10	<10	245	20	152	3.54	
E310630		<10	<10	272	<10	80		
E310631		<10	10	380	20	103		
E310632		<10	10	98	<10	811		
E310633		<10	10	109	<10	591		
E310634		<10	10	101	<10	853	1.495	
E310635		<10	10	183	<10	1040	1.405	
E310636		<10	10	164	<10	568		
E310637		10	<10	121	<10	343		
E310638		<10	<10	455	<10	243		
E310639		10	<10	209	<10	191		
E310640		<10	<10	82	<10	889	1.950	
E310641		<10	<10	173	<10	238		
E310642		<10	<10	233	<10	579	3.48	
E310643		<10	<10	306	<10	1615	3.03	
E310644		<10	<10	376	<10	199		
E310645		<10	<10	427	<10	402		
E310646		<10	<10	199	<10	994		
E310647		<10	<10	389	20	1580	4.05	
E310651		<10	<10	148	<10	211		
E310652		<10	<10	159	10	172		
E310653		<10	<10	174	<10	327		
E310654		<10	<10	119	<10	256		
E310655		<10	<10	134	<10	239		
E310656		<10	<10	45	<10	1500		
E310657		<10	<10	28	<10	1055		
E310658		<10	<10	120	10	641		
E310659		<10	<10	110	<10	485		
E310660		<10	<10	31	<10	831		
E310661		<10	<10	42	<10	341		
E310662		<10	<10	49	<10	504		
E310663		<10	<10	32	<10	357		
E310664		<10	<10	55	<10	2670		
E310665		<10	<10	208	<10	2440	2.77	
E310666		<10	<10	197	<10	1085	1.175	
E310667		<10	<10	170	<10	339		
E310668		<10	<10	163	<10	432		
E310669		<10	<10	155	<10	955		

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 Account: ROGORE

Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14101973**

Sample Description	Method Analyte Units LOR	WEI-21	Au- ICP21	ME- ICP61												
		Recvd Wt. kg	Au ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm
		0.02	0.001	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10
E310670		0.08	NSS	3.6	7.21	12	750	0.9	<2	1.83	<0.5	15	51	>10000	5.72	20
E310671		2.14	0.083	<0.5	7.89	8	3930	1.6	4	2.33	1.1	18	32	681	3.19	20
E310672		2.31	0.006	0.5	3.27	13	1400	0.9	<2	12.45	23.1	19	6	396	3.53	10
E310673		3.03	0.375	4.6	4.72	37	1220	1.0	3	12.65	13.4	25	6	4630	6.20	10
E310674		2.42	0.014	<0.5	3.72	27	890	1.4	<2	15.6	3.3	15	10	62	10.50	20
E310675		2.16	0.085	1.4	5.77	16	2020	1.8	<2	8.93	12.1	25	16	1455	4.21	20
E310676		2.06	0.191	3.1	6.97	20	3360	1.3	<2	2.88	3.4	18	12	2430	2.93	10
E310677		2.87	0.077	4.0	1.93	17	930	1.8	2	10.40	84.0	59	8	3740	3.70	10
E310678		2.76	0.239	1.4	4.42	24	2030	1.6	2	12.30	28.6	30	130	2370	4.15	10
E310679		2.53	0.272	3.7	4.41	24	1810	1.4	6	8.97	10.7	28	21	5860	3.21	10
E310680		3.33	0.513	1.9	5.71	18	1680	0.9	<2	8.19	3.4	61	18	3830	3.92	10
E310681		2.54	0.044	1.5	1.35	24	360	0.6	<2	12.05	6.1	67	16	2290	4.15	<10
E310682		2.35	0.053	1.9	3.80	20	290	1.0	2	11.25	0.9	142	14	2470	9.44	10
E310683		2.57	0.735	3.4	4.21	36	880	0.7	7	17.3	2.0	110	52	5830	6.39	10
E310684		3.06	1.245	10.9	6.29	95	2050	1.1	2	3.37	74.7	187	103	>10000	7.25	20
E310685		2.16	0.344	9.0	5.57	44	1960	0.8	<2	8.96	10.0	106	105	8640	4.24	10
E310686		2.21	0.273	8.4	5.24	51	1750	0.9	2	11.50	9.6	129	103	>10000	4.56	10
E310687		3.08	0.124	2.8	1.73	21	790	0.5	2	19.9	74.7	97	18	3010	3.03	10
E310688		2.63	0.334	6.0	3.10	29	1180	3.5	2	14.4	120.0	89	27	7630	2.79	10
E310689		2.20	0.089	1.2	6.73	22	2810	1.2	2	3.50	2.9	17	20	1240	2.26	10
E310690		0.08	2.69	3.4	7.11	11	660	0.9	<2	1.82	0.5	16	48	>10000	5.83	20
E310691		2.23	0.069	4.7	6.94	42	2590	1.9	<2	5.41	38.1	42	24	2430	3.68	20
E310692		3.28	0.275	11.3	3.78	36	1280	1.5	<2	13.5	56.2	94	111	8560	4.05	10
E310693		2.76	0.120	4.6	1.96	21	760	2.3	3	13.9	108.5	64	20	4800	2.98	10
E310694		2.58	0.045	3.9	2.38	39	1070	4.8	3	12.40	50.9	46	28	4080	2.79	<10
E310695		2.78	0.050	3.2	1.70	32	550	3.6	<2	9.75	42.6	30	10	3230	2.06	<10
E310696		3.00	0.064	6.8	2.68	80	720	5.1	<2	11.30	131.0	97	27	>10000	3.02	10
E310697		3.40	0.112	2.7	2.78	46	940	6.2	2	11.60	178.5	75	28	4760	3.73	10
E310698		2.35	0.011	0.6	7.35	8	2580	1.9	<2	4.55	8.1	25	64	479	4.93	20

\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*



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Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14101973**

Sample Description	Method Analyte Units LOR	ME-ICP61														
		K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %
E310670		1.41	10	1.03	735	328	2.02	24	620	19	2.48	11	14	284	<20	0.32
E310671		3.82	10	0.77	1245	<1	0.74	14	2030	13	0.02	<5	14	1005	<20	0.39
E310672		3.18	20	0.44	3710	20	0.15	5	650	10	0.06	7	2	675	<20	0.10
E310673		4.26	30	0.64	2640	24	0.24	11	1630	17	0.11	13	6	350	<20	0.19
E310674		2.27	30	0.82	4140	1	0.15	18	1000	15	0.01	19	4	295	<20	0.18
E310675		4.90	30	0.76	3010	5	0.14	16	1090	20	0.16	13	14	355	<20	0.48
E310676		5.09	10	0.75	1380	2	0.19	12	660	66	0.05	13	13	1030	<20	0.47
E310677		1.46	30	3.14	4980	83	0.10	16	350	648	0.23	13	4	387	<20	0.09
E310678		4.52	40	1.37	3660	1	0.18	59	2780	20	0.18	14	9	737	<20	0.58
E310679		4.90	20	0.70	3080	2	0.12	12	730	35	0.19	5	6	484	<20	0.27
E310680		5.00	30	1.17	2790	2	0.09	51	1520	9	0.35	6	12	348	<20	0.29
E310681		0.51	20	1.52	4200	128	0.05	79	660	13	0.24	5	6	287	<20	0.06
E310682		0.07	30	3.26	3250	1	0.01	220	1380	13	0.30	11	6	224	<20	0.14
E310683		2.41	60	2.02	4840	<1	0.04	157	2050	28	0.54	10	8	358	<20	0.57
E310684		4.27	50	1.57	2470	7	0.08	159	3690	50	0.97	13	14	243	<20	0.68
E310685		4.48	50	0.81	2740	3	0.08	125	3420	31	0.82	9	12	260	<20	0.68
E310686		4.65	60	1.02	3670	3	0.07	138	3740	38	0.91	9	14	272	<20	0.89
E310687		0.96	40	0.78	4840	9	0.02	39	1480	24	0.74	6	7	250	<20	0.11
E310688		3.03	40	1.82	3690	19	0.08	24	1370	35	1.37	6	9	325	<20	0.28
E310689		4.86	10	0.50	1330	<1	0.32	12	1910	13	0.12	13	14	566	<20	0.35
E310690		1.40	10	1.04	754	311	2.07	23	640	18	2.38	7	14	262	<20	0.32
E310691		4.78	20	1.44	2360	<1	0.24	18	2000	27	0.56	16	16	650	<20	0.35
E310692		3.86	50	1.00	4310	2	0.13	73	3110	27	1.01	9	9	378	<20	0.80
E310693		1.84	30	3.09	5090	66	0.10	27	880	139	0.64	6	6	233	<20	0.18
E310694		2.35	40	5.60	4880	1	0.16	28	1250	29	0.08	6	7	287	<20	0.26
E310695		1.67	20	3.86	4380	13	0.13	9	480	29	0.07	7	4	188	<20	0.12
E310696		2.61	30	6.16	4650	2	0.19	27	1400	13	0.71	5	8	249	<20	0.25
E310697		2.35	30	5.97	5560	1	0.16	22	1400	20	0.39	14	9	298	<20	0.20
E310698		5.79	20	2.55	2050	<1	0.12	26	2450	27	0.02	5	20	548	<20	0.38

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Project: Newmont Lake

CERTIFICATE OF ANALYSIS TR14101973

Sample Description	Method Analyte Units LOR	ME- ICP61	Cu- OC62	Zn- OC62				
		Ti ppm 10	U ppm 10	V ppm 1	W ppm 10	Zn ppm 2	Cu % 0.001	Zn % 0.001
E310670		<10	<10	100	<10	111	NSS	
E310671		<10	<10	194	<10	229		
E310672		<10	<10	99	<10	1695		
E310673		<10	<10	141	<10	1840		
E310674		<10	<10	265	<10	520		
E310675		<10	<10	116	<10	1455		
E310676		<10	<10	91	<10	442		
E310677		<10	<10	67	<10	7020		
E310678		<10	10	137	<10	2030		
E310679		10	<10	86	<10	1605		
E310680		<10	<10	87	<10	606		
E310681		<10	<10	51	<10	817		
E310682		<10	<10	93	10	597		
E310683		<10	<10	104	<10	764		
E310684		<10	<10	187	<10	>10000	1.995	1.150
E310685		<10	<10	163	<10	1270		
E310686		<10	<10	180	10	1340	1.140	
E310687		<10	<10	53	<10	8720		
E310688		<10	<10	52	<10	>10000		1.380
E310689		<10	<10	122	10	579		
E310690		<10	<10	102	<10	110	2.36	
E310691		<10	<10	159	<10	4020		
E310692		<10	<10	119	<10	6380		
E310693		<10	<10	61	<10	>10000		1.100
E310694		<10	<10	49	<10	4330		
E310695		<10	<10	39	<10	3120		
E310696		<10	<10	56	<10	>10000	1.000	1.630
E310697		<10	<10	74	<10	>10000		1.445
E310698		<10	<10	198	10	1315		

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**CERTIFICATE TR14119930**

Project: Newmont Lake  
 P.O. No.: NL2014- 02  
 This report is for 92 Rock samples submitted to our lab in Terrace, BC, Canada on 6- AUG- 2014.  
 The following have access to data associated with this certificate:  
 TOM DRIVAS                      KEN KONKIN                      THOMAS SKIMMING  
 FRANK VAN DE WATER

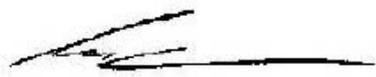
SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/o BarCode
CRU- 31	Fine crushing - 70% <2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85% <75 um
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
Zn- OG62	Ore Grade Zn - Four Acid	VARIABLE
ME- ICP61	33 element four acid ICP- AES	ICP- AES
Au- ICP21	Au 30g FA ICP- AES Finish	ICP- AES
ME- OG62	Ore Grade Elements - Four Acid	ICP- AES
Cu- OG62	Ore Grade Cu - Four Acid	VARIABLE

To: ROMIOS GOLD RESOURCES INC.  
 ATTN: FRANK VAN DE WATER  
 1220, 20 TORONTO ST.  
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This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

Signature:   
 Colin Ramshaw, Vancouver Laboratory Manager



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Project: Newmont Lake

CERTIFICATE OF ANALYSIS TR14119930

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg 0.02	Au- ICP21 Au ppm 0.001	ME- ICP61 Ag ppm 0.5	ME- ICP61 Al % 0.01	ME- ICP61 As ppm 5	ME- ICP61 Ba ppm 10	ME- ICP61 Be ppm 0.5	ME- ICP61 Bi ppm 2	ME- ICP61 Ca % 0.01	ME- ICP61 Cd ppm 0.5	ME- ICP61 Co ppm 1	ME- ICP61 Cr ppm 1	ME- ICP61 Cu ppm 1	ME- ICP61 Fe % 0.01	ME- ICP61 Ga ppm 10
H234751		1.76	0.051	<0.5	5.91	28	1840	2.9	2	10.25	0.5	13	19	127	8.43	20
H234752		1.89	0.563	6.0	3.65	364	2420	1.2	4	7.80	5.3	151	3	>10000	14.10	20
H234753		2.35	2.94	52.6	1.80	108	490	1.5	<2	2.32	1.2	118	1	>10000	34.6	20
H234754		0.87	0.007	<0.5	6.99	5	2120	1.9	<2	0.59	<0.5	1	6	156	1.03	10
H234755		0.89	0.004	<0.5	7.90	<5	970	0.9	<2	2.04	<0.5	10	62	176	5.20	20
H234756		2.37	0.019	0.6	7.66	10	1040	0.6	<2	2.66	<0.5	13	54	526	5.77	10
H234757		2.44	0.089	1.6	7.31	20	1050	0.6	<2	3.83	<0.5	25	90	2590	7.13	10
H234758		2.65	0.024	0.7	7.03	21	660	0.6	<2	3.60	<0.5	16	80	711	7.18	20
H234759		1.95	0.014	0.5	6.81	6	400	0.5	<2	2.53	<0.5	11	57	251	5.64	10
H234760		2.18	0.006	<0.5	7.63	11	380	0.6	<2	1.47	<0.5	14	26	97	6.94	10
H234761		2.93	0.009	<0.5	8.35	18	720	0.6	2	1.74	<0.5	7	31	331	5.55	20
H234762		2.09	0.014	<0.5	7.78	10	920	0.6	<2	2.45	<0.5	11	42	212	6.19	10
H234763		2.00	0.005	<0.5	7.93	14	860	0.7	<2	3.01	0.5	14	25	144	6.44	20
H234764		2.38	0.005	<0.5	7.65	10	1330	0.6	<2	2.44	<0.5	9	29	100	5.58	20
H234765		2.55	0.003	<0.5	7.93	9	410	0.7	<2	2.02	<0.5	12	18	68	6.69	20
H234766		2.52	0.003	<0.5	7.71	8	800	0.6	<2	2.11	<0.5	12	24	202	5.19	20
H234767		2.53	0.002	<0.5	8.12	10	780	0.7	<2	1.86	<0.5	12	10	269	4.87	20
H234768		2.65	0.003	<0.5	7.69	13	120	0.7	<2	2.17	14.5	14	11	137	7.80	10
H234769		3.02	0.009	<0.5	7.41	13	510	0.7	<2	2.89	0.8	18	14	94	7.03	20
H234770		2.31	0.002	<0.5	7.35	15	250	0.6	2	2.25	<0.5	17	14	156	7.18	20
H234771		3.14	0.005	<0.5	7.11	14	220	0.7	<2	3.48	0.5	24	12	258	5.94	10
H234772		1.33	<0.001	<0.5	8.61	1010	2070	1.2	<2	0.26	<0.5	7	7	18	4.85	20
H234773		1.86	0.098	0.9	3.77	35	40	0.5	5	1.18	0.5	85	75	977	19.55	10
H234774		1.19	0.015	12.0	0.61	45	70	<0.5	11	0.35	<0.5	4	3	>10000	6.70	<10
H234775		1.58	0.003	0.5	1.51	6	610	<0.5	<2	3.01	<0.5	4	22	2630	1.73	<10
H234801		1.11	<0.001	<0.5	0.12	11	340	<0.5	<2	0.78	<0.5	2	23	68	0.83	<10
H234802		2.19	0.081	0.8	7.06	12	1050	0.5	<2	5.38	<0.5	27	120	3190	7.26	10
H234803		1.58	0.064	0.7	7.55	<5	500	0.9	<2	1.63	<0.5	29	50	199	10.85	20
H234804		1.22	0.521	4.5	7.40	<5	380	1.1	<2	7.25	0.6	23	109	3980	8.87	10
H234805		1.24	0.044	1.4	6.99	<5	850	1.0	<2	3.43	<0.5	34	49	1020	6.31	20
H234806		1.51	1.415	31.3	2.10	11	150	0.5	5	4.11	3.1	9	28	>10000	8.67	<10
H234807		1.91	0.210	10.7	5.58	5	490	0.9	<2	7.18	2.1	34	61	>10000	7.20	10
H234808		2.78	0.433	7.2	7.10	8	1150	2.7	<2	5.36	3.9	72	24	6810	5.71	20
H234809		1.51	0.004	<0.5	6.64	19	2270	2.6	<2	5.77	0.6	14	6	196	4.62	10
H234810		0.08	NSS	3.6	7.17	12	740	0.9	<2	1.85	0.5	15	50	>10000	5.82	10
H234811		1.09	0.001	<0.5	7.65	5	1410	0.7	<2	2.41	<0.5	24	13	16	5.57	20
H234812		0.96	0.035	3.2	6.29	459	800	1.0	<2	1.50	1.1	35	90	301	5.83	10
H234813		1.23	0.011	<0.5	6.72	49	3180	1.7	<2	5.77	<0.5	22	73	73	5.13	10
H234814		1.12	0.010	<0.5	6.40	48	2020	1.0	<2	4.46	0.5	18	58	121	3.95	10
H234815		1.32	0.002	<0.5	5.39	31	1880	0.9	<2	10.55	13.2	21	39	76	6.44	10

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Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14119930**

Sample Description	Method Analyte Units LOR	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	
		K % 0.01	La ppm 10	Mg % 0.01	Mn ppm 5	Mo ppm 1	Na % 0.01	Ni ppm 1	P ppm 10	Pb ppm 2	S % 0.01	Sb ppm 5	Sc ppm 1	Sr ppm 1	Th ppm 20	Ti % 0.01
H234751		5.09	30	0.85	1790	1	0.07	11	2250	17	0.03	21	14	844	<20	0.34
H234752		2.53	460	2.38	3300	2	0.03	251	>10000	26	0.38	9	2	500	40	0.16
H234753		0.59	80	0.62	1285	3	0.01	171	4770	31	1.70	5	1	240	20	0.04
H234754		2.90	10	0.09	560	<1	2.62	2	120	14	0.02	<5	1	330	<20	0.05
H234755		1.44	10	2.07	832	<1	3.14	8	1000	6	1.64	<5	23	668	<20	0.43
H234756		2.32	10	2.33	727	2	3.08	19	1580	4	3.09	6	25	629	<20	0.33
H234757		2.13	10	2.89	1090	2	2.18	35	1360	3	3.25	12	29	731	<20	0.32
H234758		2.27	10	2.77	1020	1	2.16	27	1410	8	4.12	8	27	794	<20	0.33
H234759		3.76	10	2.18	526	1	2.27	17	990	<2	3.57	<5	26	527	<20	0.32
H234760		3.54	10	1.80	607	1	2.65	7	1510	3	3.98	<5	22	482	<20	0.31
H234761		4.30	10	1.96	680	1	2.61	11	1540	<2	3.31	<5	23	503	<20	0.32
H234762		3.01	10	2.34	853	<1	2.74	17	1410	6	3.75	5	25	518	<20	0.33
H234763		1.89	10	2.49	947	<1	2.98	11	1650	14	3.48	8	27	570	<20	0.38
H234764		2.69	10	2.41	827	<1	2.84	10	1440	4	2.70	<5	26	480	<20	0.36
H234765		1.87	10	2.69	769	<1	3.27	10	1670	4	4.25	7	25	302	<20	0.34
H234766		1.06	10	2.30	781	<1	4.12	9	1920	6	2.29	5	33	415	<20	0.40
H234767		1.18	10	1.93	717	<1	4.85	6	2280	4	2.42	7	29	411	<20	0.39
H234768		2.32	<10	1.31	669	<1	3.09	10	2090	638	5.57	5	27	269	<20	0.36
H234769		2.21	10	2.14	795	<1	2.70	15	1870	128	5.04	7	27	252	<20	0.37
H234770		1.80	10	2.08	706	<1	3.15	12	1810	7	4.63	<5	27	263	<20	0.37
H234771		2.94	10	1.84	1020	<1	1.88	10	1890	11	3.35	6	27	1020	<20	0.32
H234772		2.78	10	0.46	1030	<1	3.07	1	1300	10	0.54	11	15	327	<20	0.41
H234773		0.12	20	0.84	246	12	0.02	144	5610	18	>10.0	<5	9	16	<20	0.25
H234774		0.17	<10	0.02	351	<1	0.06	6	60	23	4.17	31	3	1120	<20	0.03
H234775		0.32	<10	0.33	485	<1	0.29	2	210	2	0.41	<5	9	4220	<20	0.20
H234801		0.03	<10	0.01	216	1	0.02	<1	10	3	0.02	10	<1	23	<20	<0.01
H234802		2.36	10	3.26	1370	1	2.20	42	1250	4	0.16	8	29	743	<20	0.32
H234803		4.40	10	2.86	3340	8	0.81	22	1980	20	5.22	<5	36	131	<20	0.43
H234804		3.39	10	1.85	9190	1	0.62	26	2020	8	2.95	6	33	189	<20	0.34
H234805		3.66	10	2.17	3280	<1	0.82	20	1630	6	1.51	<5	17	318	<20	0.25
H234806		0.54	10	2.09	7020	1	0.08	22	530	10	5.65	<5	8	135	<20	0.09
H234807		2.85	10	2.21	5480	176	0.20	39	2720	6	3.35	8	23	448	<20	0.23
H234808		3.55	20	1.78	1470	1	2.01	74	2280	20	2.11	5	18	737	<20	0.59
H234809		3.75	20	0.89	1440	<1	1.35	4	1850	11	0.43	<5	16	1305	<20	0.50
H234810		1.44	10	1.03	734	327	2.09	24	620	26	2.46	5	14	288	<20	0.33
H234811		4.29	<10	2.27	2900	<1	1.48	12	1560	9	0.02	9	19	239	<20	0.27
H234812		4.44	10	0.31	1330	44	0.11	32	2630	51	3.29	20	17	526	<20	0.36
H234813		4.59	10	1.49	1120	<1	0.12	24	3000	16	0.72	6	25	1250	<20	0.39
H234814		4.32	10	0.66	1280	<1	0.09	18	1990	18	0.36	6	15	950	<20	0.32
H234815		4.49	10	1.63	3040	<1	0.17	12	1730	30	1.29	31	20	564	<20	0.24

\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*



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Project: Newmont Lake

CERTIFICATE OF ANALYSIS TR14119930

Sample Description	Method Analyte Units LOR	ME- ICP61	Cu- OG62	Zn- OG62				
		Ti ppm 10	U ppm 10	V ppm 1	W ppm 10	Zn ppm 2	Cu % 0.001	Zn % 0.001
H234751		10	<10	298	<10	111		
H234752		<10	<10	491	<10	624	4.07	
H234753		10	<10	253	<10	556	2.64	
H234754		10	<10	4	<10	34		
H234755		<10	<10	200	<10	86		
H234756		10	<10	237	<10	58		
H234757		<10	<10	236	<10	62		
H234758		<10	<10	241	<10	61		
H234759		<10	<10	227	<10	27		
H234760		10	<10	223	<10	48		
H234761		<10	<10	234	<10	56		
H234762		<10	<10	233	<10	69		
H234763		<10	<10	293	<10	68		
H234764		<10	<10	273	<10	60		
H234765		<10	<10	266	10	86		
H234766		<10	<10	301	<10	81		
H234767		<10	<10	280	10	69		
H234768		<10	<10	292	<10	2200		
H234769		<10	<10	274	10	172		
H234770		<10	<10	300	<10	73		
H234771		<10	<10	280	<10	75		
H234772		<10	<10	149	<10	51		
H234773		<10	10	923	<10	20		
H234774		<10	<10	10	<10	40	5.64	
H234775		<10	<10	76	<10	13		
H234801		<10	<10	4	<10	17		
H234802		<10	<10	232	<10	83		
H234803		<10	<10	310	<10	142		
H234804		<10	<10	282	10	81		
H234805		<10	<10	207	<10	65		
H234806		<10	<10	90	30	146	1.635	
H234807		<10	<10	215	<10	116	1.270	
H234808		<10	<10	214	10	207		
H234809		<10	<10	246	<10	67		
H234810		<10	<10	103	<10	100	NSS	
H234811		<10	<10	222	<10	262		
H234812		<10	<10	208	10	140		
H234813		<10	<10	215	<10	84		
H234814		<10	<10	129	<10	73		
H234815		<10	<10	143	<10	1690		

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Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14119930**

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg	Au- ICP21 Au ppm	ME- ICP61 Ag ppm	ME- ICP61 Al %	ME- ICP61 As ppm	ME- ICP61 Ba ppm	ME- ICP61 Be ppm	ME- ICP61 Bi ppm	ME- ICP61 Ca %	ME- ICP61 Cd ppm	ME- ICP61 Co ppm	ME- ICP61 Cr ppm	ME- ICP61 Cu ppm	ME- ICP61 Fe %	ME- ICP61 Ga ppm
H234816		1.62	0.049	4.9	5.49	309	2090	0.7	<2	6.19	19.4	28	47	1010	4.31	10
H234817		1.24	0.021	1.3	4.59	71	1580	0.8	<2	10.50	1.2	28	39	58	6.11	10
H234818		0.78	<0.001	<0.5	7.94	8	400	1.3	<2	0.36	<0.5	22	56	23	5.46	20
H234819		2.22	0.125	1.0	7.22	9	740	0.8	<2	4.05	0.5	19	96	1740	7.75	20
H234820		1.93	0.051	0.6	7.07	15	550	0.5	<2	5.73	0.5	23	108	892	7.02	20
H234821		2.36	0.018	<0.5	7.05	8	970	0.6	<2	3.38	<0.5	22	124	1240	7.23	20
H234822		1.91	0.586	4.2	2.24	85	160	<0.5	7	8.36	14.4	13	15	5640	8.82	10
H234823		1.96	0.019	1.2	3.88	31	760	0.7	<2	5.13	213	4	5	234	1.49	10
H234824		1.94	0.006	<0.5	7.85	<5	1320	1.5	<2	3.74	0.5	19	24	63	5.03	20
H234825		2.18	0.059	0.6	5.49	20	2370	1.8	<2	9.27	0.8	10	5	457	7.11	10
H234826		1.61	0.053	2.4	2.76	54	450	1.8	<2	11.15	1.0	5	5	1830	7.86	10
H234827		1.80	0.270	47.1	4.87	174	1240	2.8	<2	10.55	2.2	47	8	>10000	9.88	10
H234828		1.43	0.017	0.9	7.66	22	1740	0.6	<2	1.47	<0.5	14	30	242	8.35	20
H234829		2.05	0.013	<0.5	7.37	15	1070	0.6	<2	3.59	<0.5	22	57	326	7.61	20
H234830		0.09	0.041	<0.5	7.09	30	80	<0.5	<2	1.90	<0.5	13	19	1630	4.06	20
H234831		2.25	0.012	<0.5	7.72	13	1160	0.6	<2	4.07	<0.5	14	31	126	7.62	20
H234832		1.38	0.086	2.2	7.27	7	720	1.0	<2	8.39	1.3	38	84	1460	9.72	20
H234833		0.56	0.013	<0.5	0.06	5	70	<0.5	<2	0.02	<0.5	4	21	101	0.58	<10
H234834		1.28	0.013	2.4	4.46	8	110	0.7	<2	13.9	1.7	9	56	213	7.75	10
H234835		1.10	0.003	2.3	5.36	17	2410	1.1	<2	7.43	<0.5	67	18	554	2.50	20
H234836		0.70	0.019	0.5	8.69	<5	870	1.2	<2	1.26	<0.5	25	5	105	7.12	20
H234837		1.44	0.101	2.5	7.63	13	140	0.6	<2	2.61	<0.5	34	12	3570	7.45	20
H234838		1.74	0.056	1.6	7.62	14	560	0.5	<2	4.16	0.6	33	106	3160	7.19	10
H234839		0.99	0.110	0.5	7.96	<5	870	1.1	<2	2.61	<0.5	33	36	209	7.82	20
H234840		0.90	0.184	1.9	8.69	<5	860	2.0	<2	2.84	<0.5	24	29	1220	6.04	20
H234841		1.89	0.114	1.5	7.11	<5	760	1.0	<2	4.27	0.6	17	20	1080	6.84	10
H234842		0.81	0.364	1.9	7.40	<5	260	0.6	<2	2.47	0.7	38	6	904	10.50	10
H234843		0.85	0.779	2.4	2.86	14	60	<0.5	<2	1.25	2.0	82	6	66	31.3	10
H234844		1.66	1.080	48.5	7.07	29	100	1.5	<2	2.15	5.3	49	6	>10000	10.50	20
H234845		1.82	0.042	1.2	7.02	7	160	3.0	<2	2.94	1.1	30	7	610	8.36	10
H234846		1.20	0.026	<0.5	7.79	19	150	0.8	4	0.35	<0.5	21	10	75	7.95	20
H234847		0.66	0.002	<0.5	3.92	28	290	1.0	<2	20.9	<0.5	8	9	71	4.46	10
H234848		1.47	0.010	13.0	4.88	189	6660	1.2	<2	0.33	5.2	17	60	42	4.25	10
H234849		0.92	0.001	20.4	3.48	93	9330	1.0	3	0.30	25.5	29	47	35	1.91	10
H234850		0.08	2.35	3.6	7.09	6	730	0.9	3	1.86	0.8	15	48	>10000	5.77	10
H234851		0.92	0.432	5.0	6.34	37	3030	1.4	<2	6.80	<0.5	18	33	5750	4.08	20
H234852		1.33	0.089	8.3	7.25	266	950	0.9	<2	0.30	<0.5	19	23	336	3.26	10
H234853		1.46	2.96	36.5	5.27	77	320	1.5	<2	3.57	3.3	132	33	>10000	14.70	20
H234854		1.68	0.116	1.1	7.02	10	3320	1.1	<2	7.00	0.5	23	53	832	4.44	10
H234855		0.84	0.046	0.9	4.47	21	4660	1.8	<2	14.8	0.8	19	5	2090	6.97	20

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Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14119930**

Sample Description	Method Analyte Units LOR	ME-ICP61														
		K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %
H234816		4.46	10	0.78	1880	8	0.14	14	1780	34	1.28	206	19	374	<20	0.24
H234817		4.33	10	2.78	3500	<1	0.09	21	1840	26	1.38	19	16	554	<20	0.23
H234818		3.44	10	1.88	472	<1	0.15	11	960	5	3.86	6	22	80	<20	0.36
H234819		2.22	10	3.03	1200	<1	2.29	32	1470	5	0.08	<5	31	657	<20	0.38
H234820		1.84	10	2.97	1210	<1	2.29	39	1360	6	0.03	<5	28	856	<20	0.33
H234821		1.94	<10	3.55	1350	<1	2.85	48	1350	<2	0.05	<5	25	574	<20	0.34
H234822		0.09	10	2.11	3720	1	0.01	4	230	32	3.47	10	7	122	<20	0.12
H234823		1.52	20	0.60	1890	10	0.02	4	330	237	1.78	15	4	159	<20	0.14
H234824		2.59	10	2.10	1300	<1	3.35	8	2010	12	0.75	<5	24	617	<20	0.42
H234825		4.83	20	0.77	1760	1	0.09	4	1150	16	0.05	8	12	938	<20	0.34
H234826		2.20	100	0.27	1510	<1	0.03	6	6020	18	0.03	32	8	429	<20	0.17
H234827		3.43	140	1.50	2600	4	0.08	48	9300	44	0.11	25	10	594	<20	0.21
H234828		3.89	10	2.75	1340	<1	1.91	13	1850	22	0.31	<5	29	433	<20	0.41
H234829		2.23	<10	3.21	1610	<1	2.11	27	1570	9	0.10	8	30	820	<20	0.41
H234830		1.02	<10	1.91	418	37	1.66	9	530	11	0.82	<5	18	118	<20	0.30
H234831		2.32	10	2.58	1310	<1	2.16	15	1630	10	0.11	10	26	859	<20	0.42
H234832		2.30	20	2.69	10200	<1	0.17	34	2130	14	1.50	<5	36	326	<20	0.34
H234833		0.02	<10	0.01	46	<1	0.01	1	10	3	0.12	<5	<1	2	<20	<0.01
H234834		0.31	10	5.27	4320	39	0.55	32	540	14	1.71	<5	7	387	<20	0.17
H234835		5.31	10	0.19	1130	<1	0.60	13	660	23	0.01	50	13	130	<20	0.38
H234836		2.72	10	2.59	1440	<1	4.37	6	2010	8	1.60	<5	19	244	<20	0.55
H234837		4.58	10	1.90	956	<1	2.16	14	1630	8	6.24	10	24	481	<20	0.30
H234838		1.62	10	3.03	1080	<1	3.07	44	1280	3	4.14	7	32	660	<20	0.33
H234839		4.54	10	1.97	1970	<1	0.93	10	2110	11	1.81	<5	25	221	<20	0.38
H234840		4.99	<10	0.95	1990	<1	0.45	10	2320	19	2.36	<5	29	151	<20	0.46
H234841		3.06	10	1.85	3610	2	0.27	9	1520	12	2.70	6	22	264	<20	0.30
H234842		3.52	<10	1.27	1980	3	0.38	9	1660	8	4.99	<5	20	568	<20	0.32
H234843		0.82	10	0.86	856	3	0.10	16	440	385	>10.0	<5	13	26	<20	0.08
H234844		4.49	<10	0.78	3780	135	0.28	37	760	20	6.92	<5	5	194	<20	0.19
H234845		4.44	20	0.79	595	1	1.13	4	1290	11	4.39	<5	10	507	<20	0.35
H234846		3.32	10	2.25	812	1	0.08	7	2150	7	8.44	<5	31	81	<20	0.38
H234847		1.35	10	0.45	905	2	0.02	6	650	2	0.03	6	8	470	<20	0.21
H234848		3.98	10	0.11	125	45	0.10	30	2400	1140	0.15	43	10	246	<20	0.24
H234849		2.74	<10	0.11	272	15	0.04	25	1130	915	0.11	22	6	229	<20	0.12
H234850		1.40	10	1.01	718	317	2.05	22	620	14	2.29	<5	13	275	<20	0.32
H234851		5.32	20	0.24	1070	3	0.13	19	3080	28	0.35	8	18	1095	<20	0.49
H234852		4.58	10	0.04	75	4	0.11	9	1740	40	2.27	28	7	646	<20	0.38
H234853		3.99	70	1.25	1600	1	0.06	150	4640	17	4.08	12	13	536	20	0.24
H234854		5.42	10	1.32	1490	<1	0.12	18	2520	64	0.29	<5	21	1105	<20	0.33
H234855		3.28	50	1.13	3370	<1	0.04	13	3410	10	0.25	10	13	995	20	0.30

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CERTIFICATE OF ANALYSIS TR14119930

Sample Description	Method Analyte Units LOR	ME- ICP61	Cu- OC62	Zn- OC62				
		Ti ppm 10	U ppm 10	V ppm 1	W ppm 10	Zn ppm 2	Cu % 0.001	Zn % 0.001
H234816		<10	<10	117	10	2030		
H234817		<10	<10	130	<10	155		
H234818		<10	<10	236	<10	90		
H234819		<10	<10	273	<10	68		
H234820		<10	<10	228	10	60		
H234821		<10	<10	243	<10	86		
H234822		<10	<10	63	<10	1510		
H234823		<10	<10	48	<10	>10000		2.18
H234824		<10	<10	293	<10	102		
H234825		<10	<10	257	<10	103		
H234826		<10	<10	303	<10	54		
H234827		<10	<10	337	10	159	1.475	
H234828		<10	<10	307	<10	128		
H234829		<10	<10	282	10	81		
H234830		<10	<10	272	<10	74		
H234831		<10	<10	299	<10	74		
H234832		<10	<10	277	20	144		
H234833		<10	<10	2	<10	<2		
H234834		<10	<10	72	<10	210		
H234835		<10	<10	155	<10	89		
H234836		<10	<10	222	<10	120		
H234837		<10	<10	239	<10	63		
H234838		<10	<10	227	<10	54		
H234839		<10	<10	304	10	108		
H234840		<10	<10	338	20	69		
H234841		<10	<10	232	10	83		
H234842		<10	<10	225	10	80		
H234843		<10	<10	92	60	156		
H234844		<10	<10	129	10	249	2.37	
H234845		<10	<10	275	<10	48		
H234846		<10	<10	352	<10	115		
H234847		<10	<10	88	<10	41		
H234848		<10	<10	178	<10	1040		
H234849		<10	<10	62	<10	3070		
H234850		<10	<10	97	10	109	2.29	
H234851		<10	<10	241	10	50		
H234852		<10	<10	142	10	80		
H234853		<10	<10	256	10	418	4.17	
H234854		<10	<10	173	10	142		
H234855		<10	<10	310	10	140		

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*



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 1220, 20 TORONTO ST.  
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Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14119930**

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg	Au- ICP21 Au ppm	ME- ICP61 Ag ppm	ME- ICP61 Al %	ME- ICP61 As ppm	ME- ICP61 Ba ppm	ME- ICP61 Be ppm	ME- ICP61 Bi ppm	ME- ICP61 Ca %	ME- ICP61 Cd ppm	ME- ICP61 Co ppm	ME- ICP61 Cr ppm	ME- ICP61 Cu ppm	ME- ICP61 Fe %	ME- ICP61 Ga ppm
		0.02	0.001	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10
H234856		1.04	0.001	0.7	6.50	33	1480	1.0	3	4.28	0.6	25	89	71	5.60	10
H234857		0.88	0.549	1.0	3.22	517	410	<0.5	<2	4.93	0.8	3	4	2140	2.53	10
H234858		0.44	0.133	6.5	1.53	978	70	0.8	<2	5.52	1.2	115	66	1040	20.4	20
H234859		1.28	0.076	2.3	3.54	161	100	<0.5	2	0.40	<0.5	114	191	1200	24.3	10
H234860		1.17	0.006	<0.5	0.80	46	1880	0.5	4	1.82	<0.5	5	20	5	20.9	<10
H234861		1.49	0.003	<0.5	8.45	54	280	0.8	<2	1.28	5.5	13	61	10	5.35	20
H234862		0.88	0.488	5.5	6.10	186	100	0.7	18	0.07	<0.5	46	66	380	10.15	20
H234863		1.53	0.709	18.7	5.43	1320	140	0.6	33	0.43	5.8	421	72	1650	18.80	10
H234864		1.20	0.002	2.1	7.21	84	1980	0.7	<2	2.58	<0.5	4	2	211	6.72	10
H234865		0.94	0.001	<0.5	0.10	8	30	<0.5	<2	0.88	<0.5	2	41	7	0.49	<10
H234866		0.86	0.145	<0.5	9.00	12	110	0.5	<2	0.25	<0.5	42	16	257	5.45	20
H234867		1.06	0.017	<0.5	5.59	39	40	<0.5	2	0.84	<0.5	25	27	135	6.83	10

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*



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Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14119930**

Sample Description	Method Analyte Units LOR	ME- ICP61														
		K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %
		0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01
H234856		4.47	10	0.98	1950	1	0.08	29	2020	40	2.15	6	21	533	<20	0.29
H234857		1.45	10	1.85	1110	<1	0.05	<1	400	<2	0.16	306	4	113	<20	0.08
H234858		0.07	20	0.41	1800	452	0.02	221	3030	72	>10.0	17	5	82	<20	0.10
H234859		0.34	20	1.14	179	65	0.11	1815	2110	27	>10.0	11	8	11	<20	0.73
H234860		0.13	10	0.60	2640	1	0.01	22	300	5	0.11	5	1	85	<20	0.01
H234861		1.70	10	1.38	432	<1	2.63	20	1040	80	1.01	6	20	211	<20	0.48
H234862		1.48	10	1.26	256	<1	0.80	12	520	25	2.15	25	19	26	<20	0.33
H234863		0.54	10	1.09	591	12	2.07	111	400	561	>10.0	39	20	35	<20	0.27
H234864		4.14	10	0.37	4430	<1	0.63	<1	850	461	1.78	<5	5	122	<20	0.25
H234865		0.03	10	0.33	141	<1	0.01	2	20	2	0.02	<5	<1	11	<20	<0.01
H234866		1.64	<10	0.53	75	9	4.20	6	670	5	3.52	<5	18	167	<20	0.41
H234867		0.36	40	0.79	129	7	2.81	23	3780	10	4.65	7	26	61	<20	0.47

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Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14119930**

Sample Description	Method Analyte Units LOR	ME- ICP61	Cu- OC62	Zn- OC62				
		Ti	U	V	W	Zn	Cu	Zn
		ppm	ppm	ppm	ppm	ppm	%	%
		10	10	1	10	2	0.001	0.001
H234856		<10	<10	169	10	84		
H234857		<10	<10	32	<10	225		
H234858		<10	10	1350	<10	39		
H234859		10	<10	84	<10	28		
H234860		<10	<10	65	10	57		
H234861		<10	<10	168	<10	868		
H234862		<10	<10	139	<10	41		
H234863		<10	<10	161	10	1265		
H234864		<10	<10	73	<10	106		
H234865		<10	<10	2	<10	14		
H234866		<10	<10	199	<10	19		
H234867		<10	<10	153	<10	12		

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**CERTIFICATE OF ANALYSIS TR14119930**

	CERTIFICATE COMMENTS
	<b>ANALYTICAL COMMENTS</b>
Applies to Method:	NSS is non- sufficient sample. ALL METHODS
	<b>LABORATORY ADDRESSES</b>
Applies to Method:	Processed at ALS Terrace located at 2912 Molitor Street, Terrace, BC, Canada. CRU- 31                                      CRU- QC                                      LOG- 22                                      PUL- 31 PUL- QC                                      SPL- 21                                      WEI- 21
Applies to Method:	Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada. Au- ICP21                                      Cu- OG62                                      ME- ICP61                                      ME- OG62 Zn- OG62



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**CERTIFICATE TR14121735**

Project: Newmont Lake  
 P.O. No.: NL2014- 03  
 This report is for 33 Rock samples submitted to our lab in Terrace, BC, Canada on 10- AUG- 2014.  
 The following have access to data associated with this certificate:  

TOM DRIVAS FRANK VAN DE WATER	KEN KONKIN	THOMAS SKINNING
----------------------------------	------------	-----------------

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI- 21	Received Sample Weight
LOG- 22	Sample login - Rcd w/o BarCode
CRU- 31	Fine crushing - 70% < 2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85% < 75 um
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
Zn- OG62	Ore Grade Zn - Four Acid	VARIABLE
Au- ICP21	Au 30g FA ICP- AES Finish	ICP- AES
Au- GRA21	Au 30g FA- GRAV finish	WST- SIM
ME- ICP61	33 element four acid ICP- AES	ICP- AES
Ag- OG62	Ore Grade Ag - Four Acid	VARIABLE
ME- OG62	Ore Grade Elements - Four Acid	ICP- AES
Cu- OG62	Ore Grade Cu - Four Acid	VARIABLE

To: ROMIOS GOLD RESOURCES INC.  
 ATTN: FRANK VAN DE WATER  
 1220, 20 TORONTO ST.  
 TORONTO ON M5C 2B8

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

Signature:   
 Colin Ramshaw, Vancouver Laboratory Manager



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Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14121735**

Sample Description	Method Analyte Units LOR	WEI- 21 Recvd Wt. kg 0.02	ME- ICP61 Ag ppm 0.5	ME- ICP61 Al % 0.01	ME- ICP61 As ppm 5	ME- ICP61 Ba ppm 10	ME- ICP61 Be ppm 0.5	ME- ICP61 Bi ppm 2	ME- ICP61 Ca % 0.01	ME- ICP61 Cd ppm 0.5	ME- ICP61 Co ppm 1	ME- ICP61 Cr ppm 1	ME- ICP61 Cu ppm 1	ME- ICP61 Fe % 0.01	ME- ICP61 Ga ppm 10	ME- ICP61 K % 0.01
H234776		1.14	<0.5	8.20	114	1570	1.8	<2	3.30	<0.5	18	111	147	3.75	10	4.54
H234777		0.70	<0.5	7.55	62	520	0.7	5	7.05	<0.5	31	74	55	7.48	20	1.74
H234778		1.29	0.6	8.85	36	2050	1.8	<2	1.37	<0.5	18	112	208	3.66	10	5.40
H234779		1.77	0.8	7.09	103	170	2.2	3	1.41	<0.5	105	154	117	11.75	20	2.21
H234780		1.12	0.5	8.75	22	1730	1.9	2	1.68	<0.5	23	113	169	4.39	10	5.37
H234781		1.56	1.3	8.93	34	1540	2.0	2	2.02	1.3	17	78	218	4.58	20	4.21
H234782		0.93	<0.5	8.56	<5	390	1.5	<2	2.76	<0.5	15	44	44	5.66	20	1.48
H234783		1.85	<0.5	8.38	20	610	1.3	2	3.52	<0.5	30	49	57	6.64	20	1.86
H234784		1.82	2.0	8.04	55	1600	1.2	<2	3.89	5.8	13	5	534	4.20	20	3.89
H234785		0.95	<0.5	7.46	8	800	1.1	2	5.09	0.8	41	373	104	5.93	20	2.38
H234786		0.87	<0.5	9.00	38	1930	2.0	2	1.59	0.8	19	104	126	4.30	20	4.69
H234787		0.81	<0.5	7.04	240	280	2.4	2	0.04	<0.5	1	7	2	0.70	20	3.47
H234788		0.76	<0.5	9.00	345	1440	1.8	3	3.43	1.8	39	51	7	6.76	20	2.68
H234868		2.84	14.3	1.78	47	420	1.7	168	18.3	3.3	10	10	>10000	6.85	10	1.08
H234869		2.75	1.5	1.11	85	280	1.8	8	11.00	0.9	14	15	398	2.23	<10	1.09
H234870		0.08	<0.5	7.58	34	80	<0.5	2	2.04	<0.5	13	20	1760	4.30	20	1.08
H234871		3.95	>100	3.60	121	480	1.2	2060	9.50	4.1	67	9	>10000	11.05	20	2.41
H234872		3.29	8.3	7.23	13	2540	1.5	146	4.30	0.9	19	9	>10000	5.52	20	4.55
H234873		3.60	1.1	5.16	11	1710	1.6	7	13.65	0.6	9	7	1410	5.26	10	5.24
H234874		2.52	<0.5	6.06	22	1900	1.9	2	12.25	0.5	10	8	454	5.58	10	5.28
H234875		2.63	<0.5	2.27	27	340	1.4	<2	14.20	<0.5	4	14	50	7.16	20	1.54
H234876		2.59	<0.5	2.44	16	550	1.2	<2	11.10	0.5	3	13	63	5.52	10	1.98
H234877		2.77	<0.5	2.81	22	510	1.7	<2	18.5	1.0	10	12	67	7.43	10	1.92
H234878		3.92	<0.5	6.24	14	1640	2.0	<2	9.59	0.8	13	8	506	6.26	20	4.78
H234879		2.09	5.4	1.10	55	860	3.5	6	13.85	131.5	130	11	8250	2.56	10	0.95
H234880		2.69	1.5	0.94	33	200	1.1	<2	11.70	6.1	23	13	2150	1.94	<10	0.89
H234881		2.61	7.3	0.64	69	260	2.1	<2	13.00	50.3	62	10	5490	2.50	<10	0.57
H234882		1.77	6.2	1.15	59	1000	1.9	<2	17.9	23.2	39	8	1150	4.36	10	0.86
H234883		2.95	3.5	0.95	45	240	1.9	2	16.0	3.0	26	11	2520	2.90	10	0.88
H234884		2.36	<0.5	1.52	36	250	1.7	<2	15.3	1.0	17	10	549	2.34	10	1.67
H234885		2.14	<0.5	1.37	44	250	1.4	<2	11.85	0.8	11	17	221	3.62	10	1.55
H234886		2.23	0.5	1.39	36	270	1.5	<2	13.05	0.9	12	10	232	3.59	10	1.58
H234887		2.40	0.7	1.79	62	440	1.9	5	15.3	3.1	19	14	484	6.64	10	1.75

\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*



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Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14121735**

Sample Description	Method Analyte Units LOR	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	
		La ppm 10	Mg % 0.01	Mn ppm 5	Mo ppm 1	Na % 0.01	Ni ppm 1	P ppm 10	Pb ppm 2	S % 0.01	Sb ppm 5	Sc ppm 1	Sr ppm 1	Th ppm 20	Ti % 0.01	Ti ppm 10
H234776		10	1.78	1190	<1	2.24	70	3150	9	0.03	10	9	311	<20	0.47	10
H234777		10	3.80	1230	<1	1.84	36	1900	3	0.03	7	43	695	<20	0.94	10
H234778		<10	1.79	668	<1	2.38	72	2760	<2	0.04	11	10	253	<20	0.47	10
H234779		<10	3.39	705	<1	1.82	95	1740	8	7.09	9	24	210	<20	0.57	<10
H234780		10	2.53	856	<1	2.29	85	2950	5	0.22	6	10	427	<20	0.46	<10
H234781		10	2.60	733	<1	3.05	45	3090	9	0.41	<5	13	344	<20	0.53	10
H234782		10	3.88	997	<1	3.55	25	1750	2	0.18	9	20	400	<20	0.64	<10
H234783		10	3.80	1190	<1	3.26	39	1890	<2	0.65	6	28	376	<20	0.72	10
H234784		10	1.23	1180	<1	2.26	4	1800	79	0.45	11	13	448	<20	0.36	10
H234785		10	6.97	1680	<1	1.54	349	1640	4	<0.01	5	26	625	<20	0.52	<10
H234786		10	2.84	926	<1	2.73	74	2890	8	0.08	<5	10	506	<20	0.48	<10
H234787		10	0.07	259	<1	3.04	2	80	22	0.02	5	2	57	<20	0.03	10
H234788		10	4.13	2260	<1	3.01	38	2160	9	0.02	7	29	665	<20	0.78	<10
H234868		30	2.98	4450	10	0.12	6	1210	17	0.27	6	2	266	<20	0.09	10
H234869		20	2.48	5740	44	0.21	9	550	6	0.02	<5	1	162	<20	0.05	10
H234870		<10	2.02	450	39	1.75	10	560	10	0.85	<5	19	128	<20	0.30	<10
H234871		30	1.72	3690	16	0.15	48	1400	89	3.31	61	6	208	<20	0.18	10
H234872		20	1.04	1610	1	0.41	14	1310	20	0.10	20	6	790	<20	0.34	<10
H234873		20	0.64	2870	2	0.20	3	1080	19	0.03	21	9	565	<20	0.26	<10
H234874		30	0.91	2820	<1	0.37	7	1300	19	0.03	6	8	676	<20	0.28	<10
H234875		40	0.76	3760	5	0.06	2	1200	19	0.02	16	5	247	<20	0.12	<10
H234876		30	0.81	3450	2	0.06	2	810	16	0.02	9	9	255	<20	0.12	<10
H234877		40	1.24	3960	1	0.05	6	1560	17	0.02	14	6	395	<20	0.18	<10
H234878		20	1.40	2680	2	0.31	6	1040	22	0.05	7	7	756	<20	0.26	<10
H234879		30	4.33	4890	1	0.12	24	1520	27	0.86	8	3	319	<20	0.07	<10
H234880		20	1.22	3320	45	0.11	6	1320	7	0.21	9	4	230	<20	0.06	<10
H234881		20	3.13	6660	25	0.20	13	840	43	0.36	11	2	192	<20	0.04	<10
H234882		30	3.23	5310	17	0.26	16	1310	27	0.13	22	3	306	<20	0.08	10
H234883		20	2.77	4630	8	0.25	10	1080	29	0.16	12	2	265	<20	0.06	<10
H234884		20	2.52	6060	1	0.24	7	1660	10	0.06	11	2	338	<20	0.07	<10
H234885		30	2.04	4970	3	0.37	6	1800	6	0.03	10	2	248	<20	0.08	<10
H234886		30	2.10	5320	1	0.31	6	1540	5	0.02	16	2	215	<20	0.08	<10
H234887		40	2.71	5470	1	0.32	9	2130	4	0.03	15	3	215	<20	0.12	<10

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Project: Newmont Lake

CERTIFICATE OF ANALYSIS TR14121735

Sample Description	Method Analyte Units LOR	ME- ICP61	ME- ICP61	ME- ICP61	ME- ICP61	Ag- OG62	Cu- OG62	Zn- OG62	Au- ICP21	Au- CRA21
		U ppm 10	V ppm 1	W ppm 10	Zn ppm 2	Ag ppm 1	Cu % 0.001	Zn % 0.001	Au ppm 0.001	Au ppm 0.05
H234776		<10	128	<10	74				0.002	
H234777		<10	328	<10	77				0.001	
H234778		<10	201	<10	41				0.001	
H234779		<10	319	<10	52				0.257	
H234780		<10	186	<10	57				0.002	
H234781		<10	215	<10	210				0.006	
H234782		<10	214	<10	48				<0.001	
H234783		<10	241	<10	52				0.001	
H234784		<10	176	<10	577				0.011	
H234785		<10	208	10	435				<0.001	
H234786		<10	204	<10	195				0.001	
H234787		10	3	<10	40				0.004	
H234788		<10	305	<10	396				<0.001	
H234868		<10	137	<10	183		0.942		3.40	
H234869		<10	35	<10	121				0.311	
H234870		<10	280	<10	79				0.042	
H234871		<10	164	<10	325	171	9.11		>10.0	51.2
H234872		<10	188	<10	209		1.120		5.78	
H234873		<10	203	<10	71				0.279	
H234874		10	185	<10	148				0.022	
H234875		<10	192	<10	124				0.002	
H234876		<10	151	<10	120				0.005	
H234877		<10	214	<10	227				0.004	
H234878		<10	216	<10	219				0.077	
H234879		10	24	<10	>10000			1.580	0.090	
H234880		<10	38	<10	727				0.008	
H234881		<10	25	<10	6690				0.027	
H234882		<10	101	<10	2450				0.025	
H234883		10	66	<10	371				0.004	
H234884		<10	47	<10	143				0.003	
H234885		<10	88	<10	108				0.011	
H234886		<10	87	<10	140				0.031	
H234887		<10	153	<10	421				0.015	

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*



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Page: Appendix 1  
 Total # Appendix Pages: 1  
 Finalized Date: 21- AUG- 2014  
 Account: ROGORE

Project: Newmont Lake

**CERTIFICATE OF ANALYSIS TR14121735**

CERTIFICATE COMMENTS									
	<b>LABORATORY ADDRESSES</b>								
Applies to Method:	<p>Processed at ALS Terrace located at 2912 Molitor Street, Terrace, BC, Canada.</p> <table border="0"> <tr> <td>CRU- 31</td> <td>CRU- QC</td> <td>LOG- 22</td> <td>PUL- 31</td> </tr> <tr> <td>PUL- QC</td> <td>SPL- 21</td> <td>WEI- 21</td> <td></td> </tr> </table>	CRU- 31	CRU- QC	LOG- 22	PUL- 31	PUL- QC	SPL- 21	WEI- 21	
CRU- 31	CRU- QC	LOG- 22	PUL- 31						
PUL- QC	SPL- 21	WEI- 21							
Applies to Method:	<p>Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.</p> <table border="0"> <tr> <td>Ag- OG62</td> <td>Au- GRA21</td> <td>Au- ICP21</td> <td>Cu- OG62</td> </tr> <tr> <td>ME- ICP61</td> <td>ME- OG62</td> <td>Zn- OG62</td> <td></td> </tr> </table>	Ag- OG62	Au- GRA21	Au- ICP21	Cu- OG62	ME- ICP61	ME- OG62	Zn- OG62	
Ag- OG62	Au- GRA21	Au- ICP21	Cu- OG62						
ME- ICP61	ME- OG62	Zn- OG62							

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## **APPENDIX V**

### **Maps**





374750

374800

374850

374900

374950

375000

375050

375100

6303350

6303300

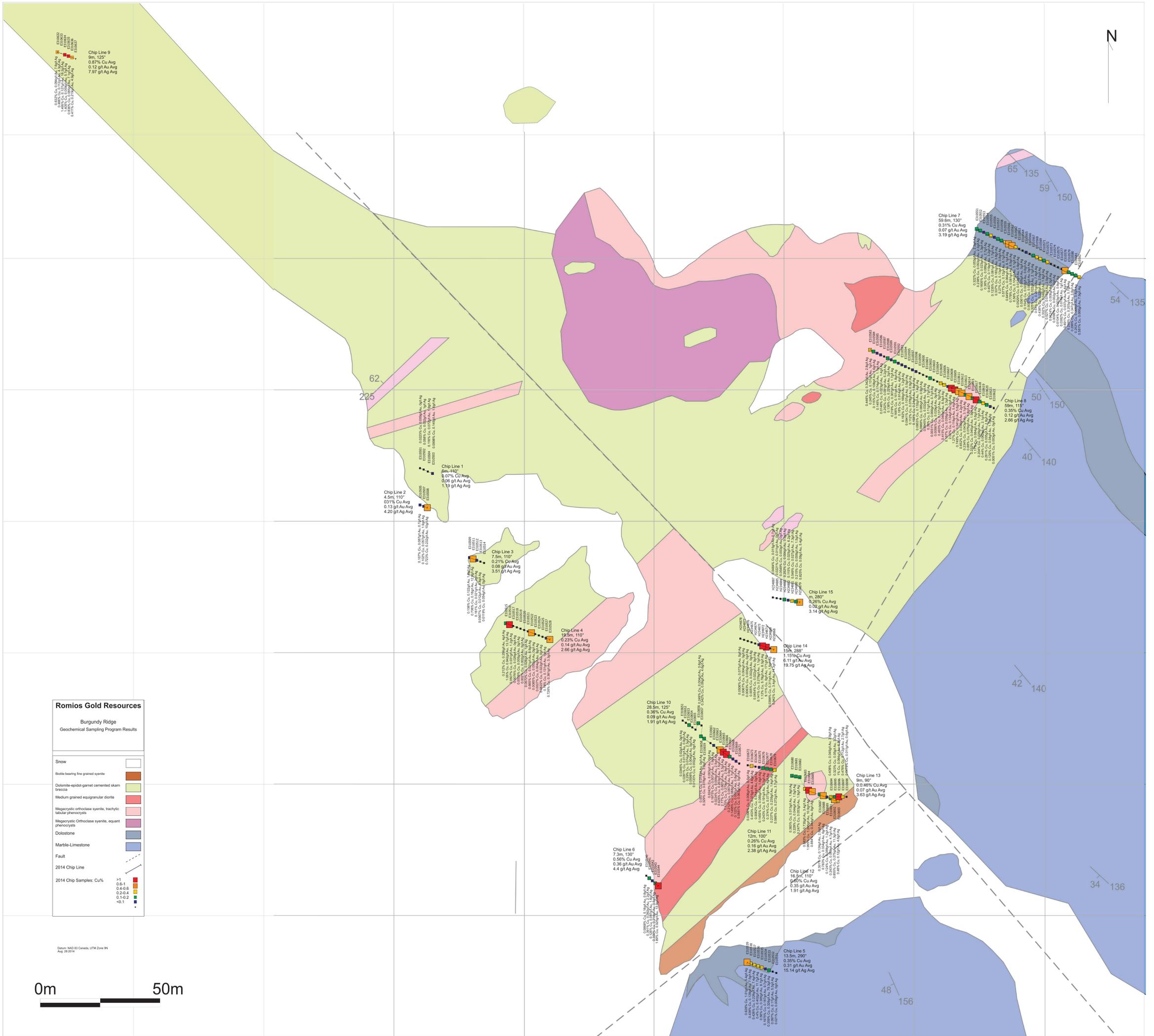
6303250

6303200

6303150

6303100

6303050



**Romios Gold Resources**

Burgundy Ridge  
Geochemical Sampling Program Results

**Snow**

- Basalt bearing fine grained syenite
- Dolomite-epidiot-garnet cemented skarn breccia
- Medium grained equigranular diorite
- Megacrystic orthoclase syenite, trachytic tabular phenocrysts
- Megacrystic Orthoclase syenite, equant phenocrysts
- Dolostone
- Marble-Limestone
- Fault
- 2014 Chip Line
- 2014 Chip Samples: Cu's

>1
0.5-1
0.4-0.6
0.2-0.4
0.1-0.2
<0.1

Datum: NAD 83 Canada LTM Zone 9N  
Aug. 28 2014



	<i>Length</i>	<i>Asimuth</i>	<i>Cu % Avg</i>	<i>Au g/t Avg</i>	<i>Ag g/t Avg</i>
<b>Chip Line 1</b>	6	110	0.07	0.06	1.19
<b>Chip Line 2</b>	4.5	110	0.31	0.13	4.20
<b>Chip Line 3</b>	7.5	110	0.21	0.08	3.51
<b>Chip Line 4</b>	19.5	110	0.23	0.14	2.66
<b>Chip Line 5</b>	13.5	290	0.35	0.31	15.14
<b>Chip Line 6</b>	7.3	130	0.56	0.36	4.40
<b>Chip Line 7</b>	59.6	115	0.31	0.07	3.19
<i>including</i>	6		0.64	0.09	6.45
<b>Chip Line 8</b>	59	115	0.35	0.12	2.66
<i>including</i>	22.5		0.66	0.07	4.71
<b>Chip Line 9</b>	9	125	0.87	0.12	7.97
<b>Chip Line 10</b>	28.5	125	0.36	0.09	1.91
<i>including</i>	4.5		1.52	0.38	5.23
<b>Chip Line 11</b>	12	100	0.26	0.16	2.37
<b>Chip Line 12</b>	16.5	110	0.60	0.35	4.96
<i>including</i>	4.5		1.15	0.77	7.97
<b>Chip Line 13</b>	9	90	0.46	0.07	3.63
<b>Chip Line 14</b>	15	288	1.15	6.11	19.75
<i>including</i>	3		5.12	28.49	89.65
<b>Chip Line 15</b>	12	280	0.26	0.02	3.14

---

**APPENDIX VI**

**Geophysics Report**

# **SUMMARY INTERPRETATION REPORT ON A HELICOPTER-BORNE Z-AXIS TIPPER ELECTROMAGNETIC (ZTEM) AND AEROMAGNETIC GEOPHYSICAL SURVEY**

**Newmont Lake Block  
Liard Mining Division, Northwestern British Columbia**

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**Survey flown September 2013  
Project OL1303978  
March, 2014**

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# SUMMARY INTERPRETATION REPORT ON A HELICOPTER-BORNE Z-AXIS, TIPPER ELECTROMAGNETIC (ZTEM) AND AEROMAGNETIC GEOPHYSICAL SURVEY

Newmont Lake Block  
Liard Mining Division, Northwestern British-Columbia

## Executive Summary

During to 2013 Geotech Ltd. carried out a helicopter-borne geophysical survey for Romios Gold Resources Inc. over the Newmont Lake Block, comprising parts of the Dirk and Newmont Lake properties that are situated in the Liard Mining Division of northwestern BC. The survey report described the procedures for data acquisition, processing, 2D inversion, final image presentation and the specifications for the digital data set. Additional 2D inversions were performed on all lines following the submission of the ZTEM survey report. This study represents a summary interpretation of the geophysical results over the Newmont Lake Block, in support of the 2D inversion work.

The Newmont Lake Block lies in the northwest-southeast trend of porphyry and vms deposits known as the Stikine Belt, with the Galore Creek alkalic porphyry copper-gold deposit and the nearby Copper Canyon copper-gold skarn deposit both lying 30km northwest, as well as the Eskay Creek vms deposit lying 30km further southeast. The property is underlain by favourable Stikine Terrane rocks and hosts numerous porphyry and skarn type Cu-Au-Ag occurrences, as well as a volcanogenic massive sulphide deposits, which were not the primary focus of the current study. The objectives of the ZTEM and aeromagnetic surveys were to define other possible hidden alkalic porphyry copper and related skarn-type deposits at depth.

A detailed interpretation of the ZTEM and aeromagnetic results was beyond the scale and scope of this study. However, a general plan-view comparison of the processed aeromagnetic and tipper EM and aeromagnetic data with the regional geology and the 2D inversion results have provided a useful visual cross-correlation for geologic mapping and targeting purposes. A cross-sectional analysis of the 2D inversion results was then presented for five representative north-south and east-west sections that cover most of the known mineral occurrences on the Newmont Lake Block.

Magnetic surveys have determined that Newmont Lake hosts relatively strong (>1000nT) magnetic field intensities that are consistent with magnetite-rich syenitic and diorite intrusive bodies and associated alkalic porphyry and related skarn type po-magnetite alteration. All the known porphyry and skarn mineral occurrences are found in magnetic highs that surround syenitic intrusions in two areas of the grid separated by a glacier. Vertical gradient and tilt-derivative analyses have further determined that a number of smaller, subcropping to buried magnetic bodies occur within the main magnetic syenite system and surrounding areas. More than eighteen (**18**) discrete magnetic anomalies (**M1-M11**) have been defined and more than half (**9**) appear to be unexplained geologically.

The ZTEM surveys have defined both conductive and resistive signatures that relate to bedrock geology on the property, to depths extending to >1-2km. The absence of powerlines and other man-made culture have ensured good quality ZTEM survey data. The results highlight a mix of conductive and, in particular, resistive NW-SE, NE-SW and NS strike trends. In general, unlike the magnetics which appear to define numerous small and moderate scale anomalies from skarns and magnetic alteration related to alkaline porphyry intrusions, the ZTEM resistivity variations over Newmont Lake Block are generally of a larger scale, with surprisingly few small features or narrow lineaments defined in any of the tipper images.

More than twelve (**12**) prominent resistivity highs (**R1-R9**) have been defined that roughly coincide with the regions of higher topography and therefore might represent more erosionally resistant k-altered porphyry centres or possibly zones of uplift from intrusive bodies at depth. Most also partially correlate with the >eighteen (**18**) magnetic anomalies (**M1-M11**) defined previously and therefore represent potential targets for porphyry-type magnetite-enriched potassic alteration, or po-Mag mineralized, silica-altered skarn mineralization or else barren magnetic rich intrusive phases. Elsewhere, when not magnetic, these might represent barren, non-porous resistive lithologies. Conversely, fewer than six (**6**) prominent resistivity lows (**Z1-Z4**) are defined and for the most part these are longer, lineament-like conductive zones that lack magnetic signatures. These conductive zones are either ascribed to porous or weakly mineralized fault zones or else shale or mudstone or porous lithologic units or, when smaller, possibly phyllic-propyllic alteration zones.

Two dimensional inversions have been applied to the ZTEM tipper data, converting the vertical field ratios to their equivalent resistivity-depth distribution. A total of 32 inversions were performed, with relatively average model-errors which indicate moderate 3-dimensionality due to the oblique NW to NE striking geology to our EW ZTEM flight lines. However good model fits and reasonable comparisons between the tipper data plans and 2D resistivity depth-slices, as well as agreement between EW versus NS oriented 2D cross-sectional results provide good confidence in the 2D inversion results and their geologic interpretation. However additional 3D inversions may be required at the follow-up stage.

2D ZTEM inversion results over the known porphyry and skarn occurrences (**72 Zone, Telena, Birthday Jim, Ridge, Ken, 2Bad & Mom's Peak**) shows that there is consistent agreement between these zones and horst-like, layered ZTEM resistivity signatures that feature: a) a 250-500m thick high resistivity surficial cap-rock, analogous to an alkalic lithocap or epithermal sinter cap (or alternatively barren lithologic cover rocks); lying above b) a 500m thick weakly conductive layer, resembling a weakly mineralized enrichment blanket or pyrite-rich phyllic alteration zone (or alternatively a barren porous unit), and c) a deeply buried (>1km) more resistive basement feature, suggesting either a k-altered core of the porphyry system or silica-altered and/or felsic intrusive. Occasionally, these horst-like structures are also flanked or surrounded by narrow, weakly conductive subvertical resistivity lows, resembling py-rich phyllic alteration aureoles or else steeply dipping barren faults. Shallow buried magnetic susceptibilities high always coincide with these resistivity features, and are consistent with porphyry type magnetite-rich potassic alteration or po-Mag skarn mineralization or alternatively magnetite rich intrusions. These combined magnetic high and layered resistivity high signatures are consistent with an alkalic porphyry model

and related skarns, and are similar to those obtained over the Mt Milligan alkalic Cu-Mo porphyry.

Resistivity-depth slices from the 3D resistivity volume obtained from the 2D ZTEM inversions confirm the presence and indicate the source-depth of the twelve (**12**) resistive (**R1-R9**) and six (**6**) conductive (**Z1-Z4**) features of significance that were previously identified in the raw tipper data. These were then more easily compared with the more than eighteen (**18**) discrete magnetic anomalies (**M1-M11**) whose shallow source-depths were enhanced using magnetic derivative analyses. Based on geophysical target model for alkaline porphyry deposits and related skarn-type bodies, at least fourteen (**14**) favourable resistivity high and magnetic high priority targets have been identified and are presented.

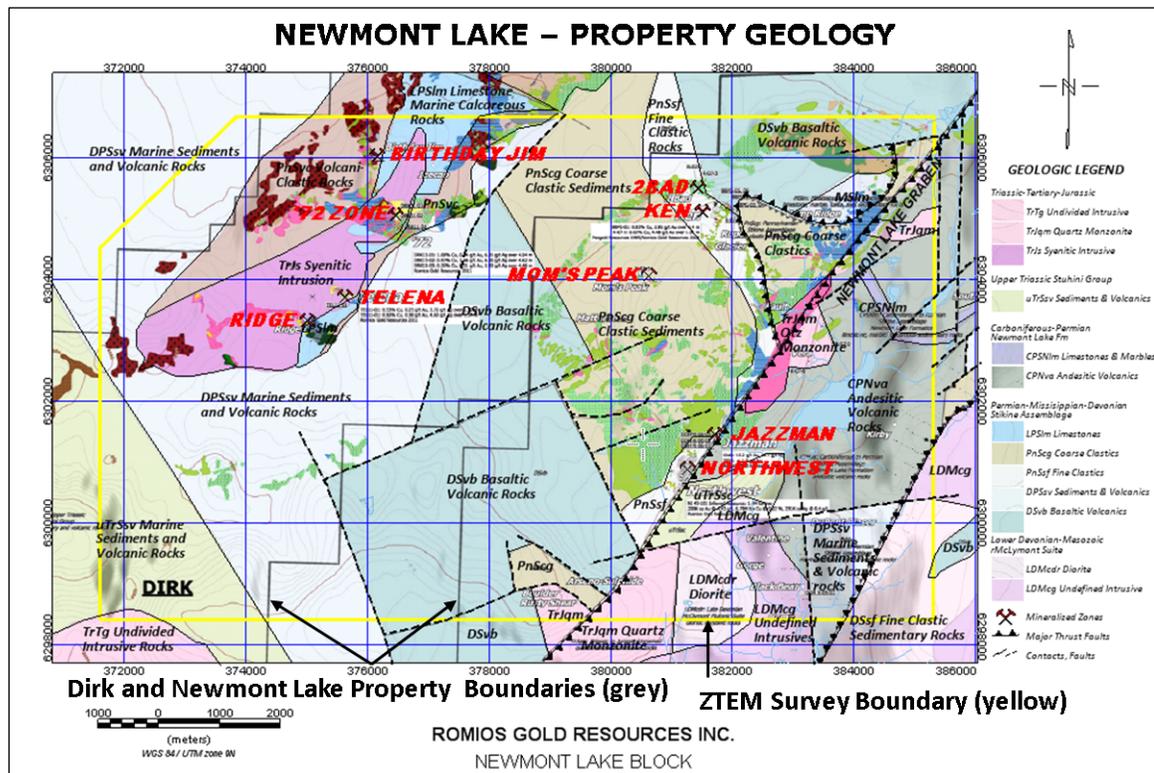
Based on the geophysical results obtained, a number of interesting resistive and conductive structures were identified across the property. The magnetic results also contain worthwhile information in support of exploration targets of interest. In fact the results appear to show a close correlation between the known mineral occurrences and magnetic highs on the edge of larger resistive anomalies (i.e., '72 Zone+Birthday Jim = **R1-M1**, Ridge+Telena=**R2-M2**, Mom's Peak+2Bad-Ken= **R5'-M3-M3'**). We therefore recommend that follow-up focus elsewhere on the edges of these large features (**M1-R1**, **R2-M2**, **R5'-M3-M3'**) as well as the edges of other resistive ZTEM and coincident magnetic anomalies on the Newmont Lake property, including zones **R1-M1'**, **R1-M1''**, **R2-M5**, **R3'-M11**, **R4-M4**, **R5'-M3**, **R5'-M3'**, **R5'-M3''**, **R6-M6'**, **R6'-M6**, **R7-M7**, **R8-M8**, and **R9-M9** that appear to be situated at shallow to moderate depth (<500m) for alkalic porphyry and skarn-type mineralization, prior to proceeding with the more conductive and partially magnetic targets (**Z2-M6**, **Z2-M4'**, **Z2'-M2**, **Z3-M8'** and **Z4-M10-M10'**) that are less consistent with the favoured geologic target model. No additional follow-up is recommended on the conductive or resistive targets without magnetic association (**Z1**, **Z3-Z3'**, **R3** and **R5**) that are most likely to be of barren structural, lithological or geomorphologic origin.

The scope of the present study has not allowed a full evaluation of the survey results, particularly with regards to reliability/accuracy of 2D ZTEM inversions due to the oblique 3D geology. If the program moves to a more advanced deep drill-testing stage, we would strongly recommend a more detailed interpretation of the available geophysical data, including additional 3D ZTEM inversion and fine-mesh 3D Magnetic inversion. Ground follow-up prior to drilling should include deep penetrating DC/IP induced polarization and resistivity, to identify chargeable disseminated-sulphide zones at depth. Magnetotelluric soundings can assist in validating/confirming the ZTEM source depths and also be jointly-inverted for improved resolution. Gravity measurements may prove useful in better characterizing the interpreted intrusive-like magnetic bodies, based on density contrasts.



alkaline bodies, varying between monzodiorite to monzonite to syenite. These intrusives are related to both copper and gold mineralization in the Stikine Terrane (Close and Larsen, 2013).

The **Newmont Lake Block** surficial geology (**Figure 2**) consists mainly Stikine Assemblage marine sediments and volcanics, basaltic volcanic rocks, coarse to fine grained clastic rocks and calcareous marine to limestone rocks in the central part of the survey area. These are intruded by monzonites and syenitic plutons in the northwest and east. Stuhini Group marine sediments and volcanic rocks lie in contact with the Stikine rocks to the southwest. The Stikine rocks are bounded to the east by the Newmont Lake Graben which is a 20 x 3km wide northeast trending Post Late Triassic structure. The graben contains limestone and marble carbonates, conglomerates and andesitic volcanics to the north, and McLymont Suite diorites, quartz-monzonites and other intrusives to the south. Monzonitic sills and plugs crop out near Newmont Lake. Stikine fine clastic sedimentary rocks occur southeast of the graben (after Close et al. (2012) from [www.romiosgoldresources.com](http://www.romiosgoldresources.com)).



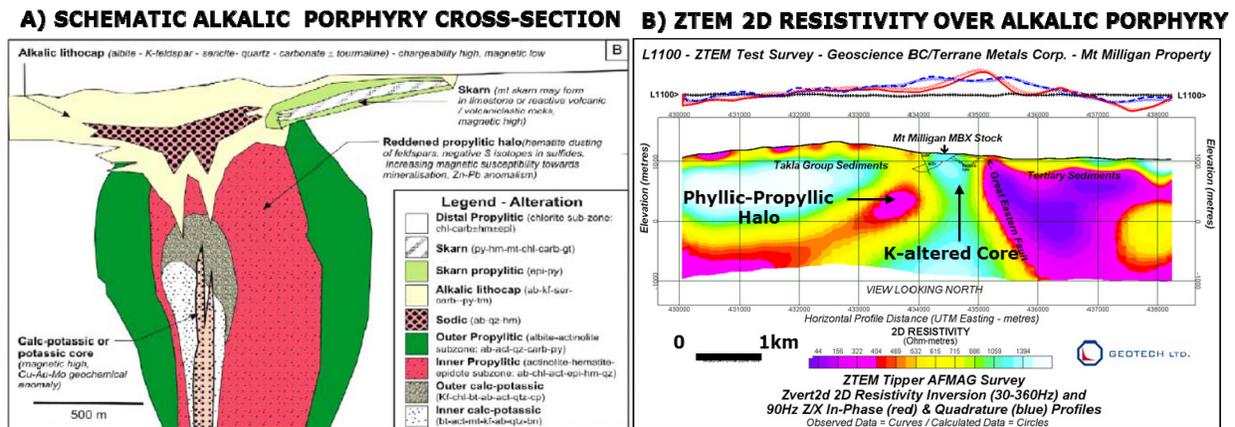
**Figure 2** – Newmont Lake Block geology and mineral occurrences, showing ZTEM survey boundary (after Close et al. (2012) from [www.romiosgoldresources.com](http://www.romiosgoldresources.com), 2014).

The **Newmont Lake Block** lies 30km southeast of the NovaGold-Teck **Galore Creek** alkalic porphyry copper-gold deposit and nearby **Copper Canyon** skarn copper-gold deposit, and also 30km northwest of the Barrick Gold **Eskey Creek** volcanogenic massive sulphide deposit that occur in the Stikine VMS belt and porphyry trend which extends between these two major deposit centres. Mineralized occurrences on the Newmont Lake Block include porphyry copper type silicified and potassic altered skarnitization in carbonate country rocks in contact with plutonic bodies, as well as volcanogenic massive sulphides (ref. [www.romiosgoldresources.com](http://www.romiosgoldresources.com)):

- a) **72 Zone** consists of bornite, covellite and trace chalcopyrite vein with low pyrite in silicified limestone within a syenitic intrusive complex and intrusive breccia.
- b) **Telena Zone** consists of fine stockwork veins of chalcopyrite in a syenitic intrusive suite of cross-cutting dykes and intrusive breccias.
- c) **Ridge** or **Burgundy Ridge** hosts high grade (up to 15% cp) copper-gold mineralization associated with cross-cutting porphyritic syenite dykes in silicified limestone (ref. Close and Larsen, 2012).
- d) **Ken Zone** is a porphyry-related skarn gold, copper, and silver zone within brecciated limestone. It is believed to extend to the south and west below snow cover, and to depth.
- e) **Northwest** and **Jazzman** consist of volcano-sedimentary bearing massive sulphide Cu-Au-Ag-Zn mineralized zones that lie immediately west of the McLymont Fault. The Northwest contains an NI 43-101 inferred resource of 1.406 million tonnes, containing 200,000 oz. Au, 6,790,000 lbs Cu, and 291,000 oz. Ag.

## 1.2 Geophysical Target Model

The priority target for the ZTEM and aeromagnetic surveys on the Newmont Lake Block is copper mineralization associated with alkalic porphyry systems due to the proximity of the claims to Galore Creek and related skarn-type mineralization at Copper Canyon. VMS style mineralization is also present on the property but is not specifically targeted in the current ZTEM survey (T. Drivas, Romios, pers. comm., 02-2014). In comparison to the substantially larger and lower grade calc-alkaline porphyry deposits, alkalic deposits tend to be high-grade and pipe-shaped with small alteration footprints of a few hundred square metres. Furthermore, intrusions associated with alkalic porphyry systems usually form clusters of small stocks, pipes, and/or dykes (Chadwick et al., 2007<sup>3</sup>). **Figure 3** presents a cross-section through a typical alkalic porphyry system and the ZTEM 2D resistivity cross-section over the Mt Milligan alkalic porphyry, as an example.



Felsic intrusions associated with alkalic porphyry copper deposits in the Western Cordillera

<sup>3</sup> Chadwick, P., D. Leslie, and C. Von Einseidel, 2007, Geophysical report on the 2007 Fugro Airborne Geophysical Survey, Liard Mining Division, an assessment report prepared for Romios Gold Resources (SOW 4144125, 4166130, 4166136), 207 p.

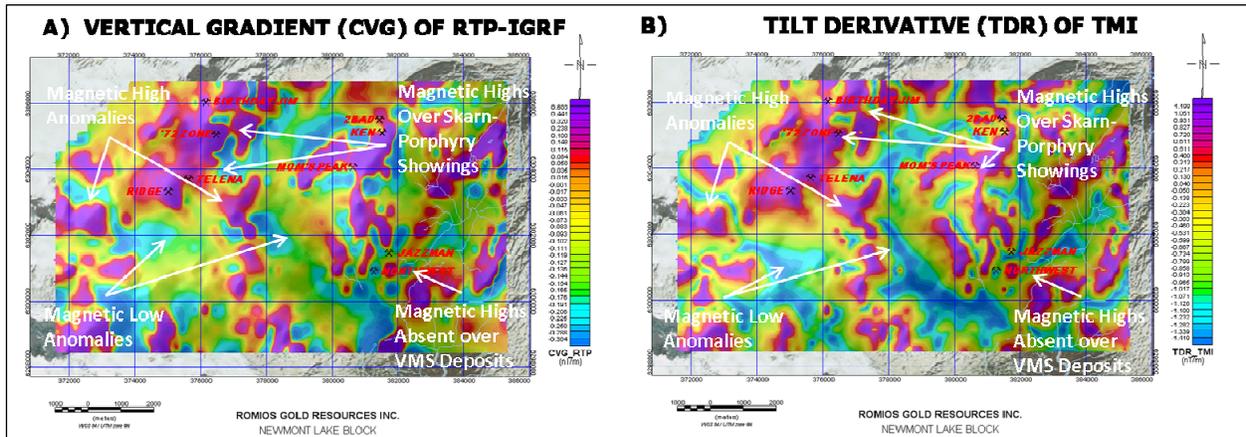




the other side of the glacier, a smaller, more complex shaped magnetic RTP high is also centred directly on the **2Bad**, **Ken** and **Mom's Peak** showings. The similarity between the RTP and TG anomalies suggest more dyke-like, shallow-buried intrusives – as also evidenced by the sporadic syenite outcrops in the vicinity. The third largest RTP anomaly occurs at the northern end of the Newmont Lake Graben (NLG) and coincides with a mapped NW-elongated quartz monzonite in contact with limestone units.

Similar, but smaller, NW-trending magnetic highs also occur further south in the NLG over mapped intrusives. Elsewhere the magnetic highs are generally of smaller area (<1-2km) and appear to subcrop, based on similar RTP and TG signatures. They either indicate hidden skarn mineralization or define more mafic rich volcanic units. Significantly, neither the **Jazzman** nor the **Northwest** zone VMS deposits hosts a significant magnetic high, possibly indicating an absence of magnetite or pyrrhotite sulphide mineralogy. Also notable are regions of weaker magnetic susceptibility that appear to coincide with the location of the glacier.

**Figure 6a** presents the calculated vertical gradient (CVG) image of the RTP that enhances the near-surface geologic signatures. Similar to the CVG, the Tilt Derivative in **Figure 6b** combines both the vertical derivative and the horizontal derivatives to enhance basement structures and mineral exploration targets. As shown, the CVG and TDR image both appear to enhance the similar NW-SE and NE-SW trends in the main survey area, following regional structures. Conversely, in the Newmont Lake graben, NNE-SSW trends are enhanced in the magnetic data.



**Figure 6** – ZTEM Magnetic survey: a) Calculated Vertical Gradient (CVG) and b) Tilt Derivative (TDR) of RTP, with both images highlighting magnetic highs over Newmont Lake geochemical anomalies and Tertiary volcanics further northeast, as well as magnetic lows.

### 2.1.1 Magnetic Anomaly Targeting

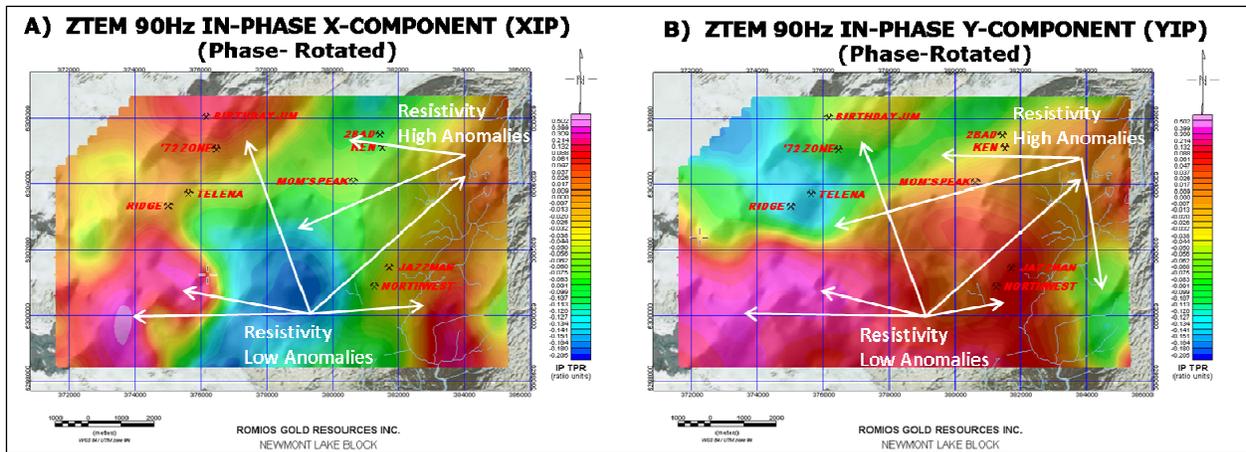
More than eighteen (18) magnetic anomalies are defined (**M1-M11**), many of which eight (8) either correspond to the known mineralized showings (**M1=72+Birthday-Jim**, **M2=Ridge**, **M3=Ken**) or mapped intrusives (**M7**, **M8-M8'**, **M9**, **M10**, **M10'**). The remaining nine (9) are not geologically explained and are interpreted as possible magnetite-rich volcanic units or intrusives, or else possible small porphyry bodies and associated Mag-rich skarn mineralized zones and po-Mag rich mineral occurrences (**M1'**, **M1''**, **M3'-M3''**, **M4-**

**M4', M5, M6-M6', M11).** The magnetic anomalies defined in **Figure 7** are described in **Table 1**:

**Table 1 - Magnetic anomalies at Newmont Lake Block**

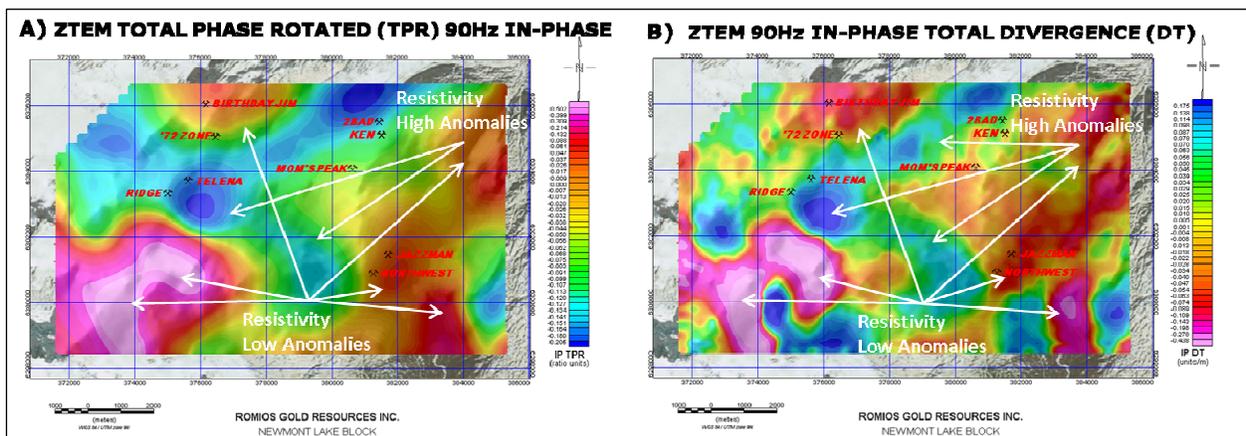
<b>Name</b>	<b>Description</b>
<b>M1</b>	Strong (~850nT), partly subcropping, large (2x1.5km) Mag high in northwestern survey area, in mapped syenite and limestones – geologically explained skarn, hosts <b>72 Zone</b> and <b>Birthday Jim Cu-Ag-Au</b> occurrences.
<b>M1'</b>	Mod-strong (~375nT), shallow buried, small (1x0.5km) Mag high at NW edge of coverage in mapped marine calcareous sediments and limestone – appears geologically unexplained near edge of glacier.
<b>M1''</b>	Mod-strong (~350nT), shallow buried, mod-small (1x1km) Mag high in NW survey area in mapped marine sediments and volcanoclastics – appears geologically unexplained near edge of glacier.
<b>M2</b>	Mod-strong (~450nT), partly subcropping, mod-small (1x1km) Mag high in northwestern survey area, in mapped syenite and limestones – geologically explained skarn, hosts <b>Burgundy Ridge</b> occurrence.
<b>M3</b>	Mod-strong (~525nT), shallow buried, large (2x1.7km) Mag high in east central survey area, in mapped coarse and fine clastic sediments – appears geologically explained magnetite alteration related to buried monzo-syenitic stock, hosts <b>Ken, 2Bad &amp; Mom's Peak porphyry</b> occurrence.
<b>M3'</b>	Mod-strong (~350nT), shallow buried, small (1x0.5km) Mag high in central survey area in mapped coarse clastics and basaltic volcanic rocks – appears geologically unexplained near edge of glacier.
<b>M3''</b>	Mod-strong (~400nT), shallow buried, small (0.5x1km) Mag high in central survey area in mapped coarse clastic sediments – appears geologically unexplained
<b>M4</b>	Mod-strong (~400nT), shallow buried, mod-small (0.8x1.6km) Mag high in western survey area lies in marine sediments and volcanic rocks, near syenite intrusion – appears geologically unexplained near edge of glacier.
<b>M4'</b>	Moderate (~200nT), shallow buried, small (0.5x0.5km) Mag high in western survey area in mapped volcanoclastics near syenite intrusion– appears geologically unexplained.
<b>M5</b>	Mod-strong (~350nT), shallow buried, small (0.7x1.2km) Mag high in central survey area in inferred basaltic volcanics but glacial covered – appears geologically unexplained.
<b>M6</b>	Mod-strong (~550nT), shallow buried, mod-large (>2x12km) Mag high in southwestern survey area in mapped marine sediments and volcanics – appears geologically unexplained.
<b>M6'</b>	Mod-strong (~350nT), shallow buried, small (>1.2x0.7km) Mag high in SW survey area in mapped marine sediment and volcanics – appears geologically unexplained.
<b>M7</b>	Mod-strong (~325nT), shallow buried, small (>1.3x1.0km) Mag high in south-central edge of coverage in mapped coarse clastics and quartz monzonite – appears geologically explained.
<b>M8</b>	Mod-strong (~300nT), shallow buried, small (>1.6x1.0km) Mag high in south-eastern edge of coverage in mapped diorite within NLG – appears geologically explained.
<b>M8'</b>	Moderate (~150nT), buried, small (>0.5x1 km) Mag high in southeastern survey area in mapped monzonite and coarse clastics within NLG – possibly geologically explained.
<b>M9</b>	Mod-strong (~350nT), buried, large (>2.0x0.5km), NE-trending Mag high in southeastern edge of coverage in mapped andesitic volcanics and intrusive at NLG contact – appears geologically explained.
<b>M10</b>	Mod-strong (~550nT), buried, large (>2.5x1.5km), NE-trending Mag high in northeastern edge of coverage in mapped monzonite and andesitic volcanics within NLG – appears geologically explained.
<b>M10'</b>	Mod-strong (~300-400nT), shallow buried, small (>0.5x0.5km), NE-trending Mag highs in northeastern survey area in mapped quartz-monzonite and andesitic volcanics within NLG – appears geologically explained.
<b>M11</b>	Moderate (~200nT), shallow buried, small (>0.7x0.5km), Mag high in northeastern edge of coverage in mapped basaltic volcanics – appears geologically unexplained.





**Figure 8** – ZTEM EM survey: a) Phase-rotated (PR) In-phase X-component (XIP = in-line/east-west) Tipper at 360Hz; and b) Phase-rotated In-phase Y-component (YIP = cross-line/north-south) Tipper at 360Hz, highlighting similar resistivity lows and highs in the ZTEM data.

The ZTEM Total Phase Rotated (TPR) and Total Divergence (DT) results over Newmont Lake Block in **Figure 9** are two types of images that both combine the X- and Y-component peak responses and, because of their rotational invariance, highlight all possible geoelectric strike trends (see Appendix B). As shown, the phase-rotated TPR image (**Fig. 9a**) is smoother and resolves broader resistivity features. In contrast, the DT derivative image (**Fig. 9b**) is sharper and resolves narrower, smaller features, but is also more sensitive to noise, becoming unstable when contrasts are weak or targets deep. The 90Hz frequency In-phase tipper images shown correspond to a moderate-deep skin depth penetration (approx. 500-1500m) and therefore interpreted to reflect the moderate-depth bedrock geology.



**Figure 9** – ZTEM EM survey: a) Total Phase Rotated (TPR) In-phase tipper at 90Hz; and b) Total Divergence (DT) of In-phase tipper at 360Hz, both highlighting similar resistivity features.

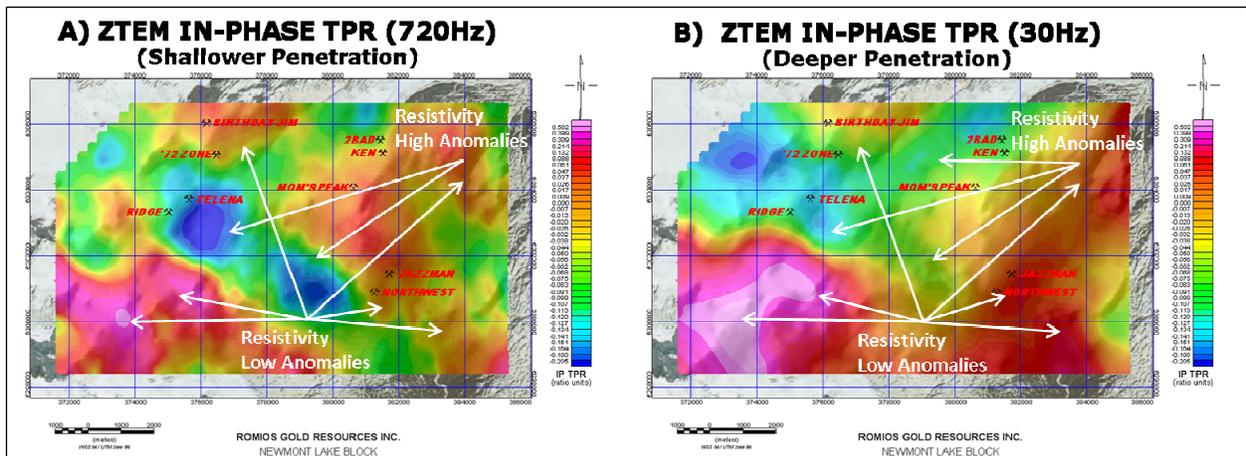
In both 90Hz images, a mix of NW-SE, NE-SW and NS conductive and resistive trends, in particular, is highlighted. Although many of which also correlate with magnetic anomalies that were previously defined, in general the ZTEM anomalies are fewer and much larger. This seems to imply that the ZTEM image is mapping larger scale litho-geologic features, whereas the magnetics are mapping smaller regions of skarn and magnetic alteration

relating to intrusives. These ZTEM conductive and resistive features are discussed in further detail, below.

The ZTEM TPR images at highest (720Hz) and lowest (30Hz) frequency over Newmont Lake Block in **Fig. 10** both highlight/compare the differences in the tipper responses at relative shallow and deep EM skin depth penetrations, respectively. For the most part, stronger resistivity lows are observed in the 30Hz TPR in comparison to 720Hz, which suggests that most ZTEM anomalies are due to more deeply buried bedrock geology. These include the major ZTEM conductive features to the southwest that are clearly better defined at lowest frequencies. The NW trending low resistivity feature that coincides with the NLG graben to the east is also stronger at low frequencies.

In general the weak correlation between topographic highs and high tippers values at higher frequencies is consistent with high background resistivities, particularly in the near-surface. On the other hand, the major resistive anomalies are also strongest at high frequencies, which suggest that these subcrop and do extend to great depth. For example the L-shaped resistivity high that follows the glacier weakens at low frequencies, which is consistent with its limited depth-extent.

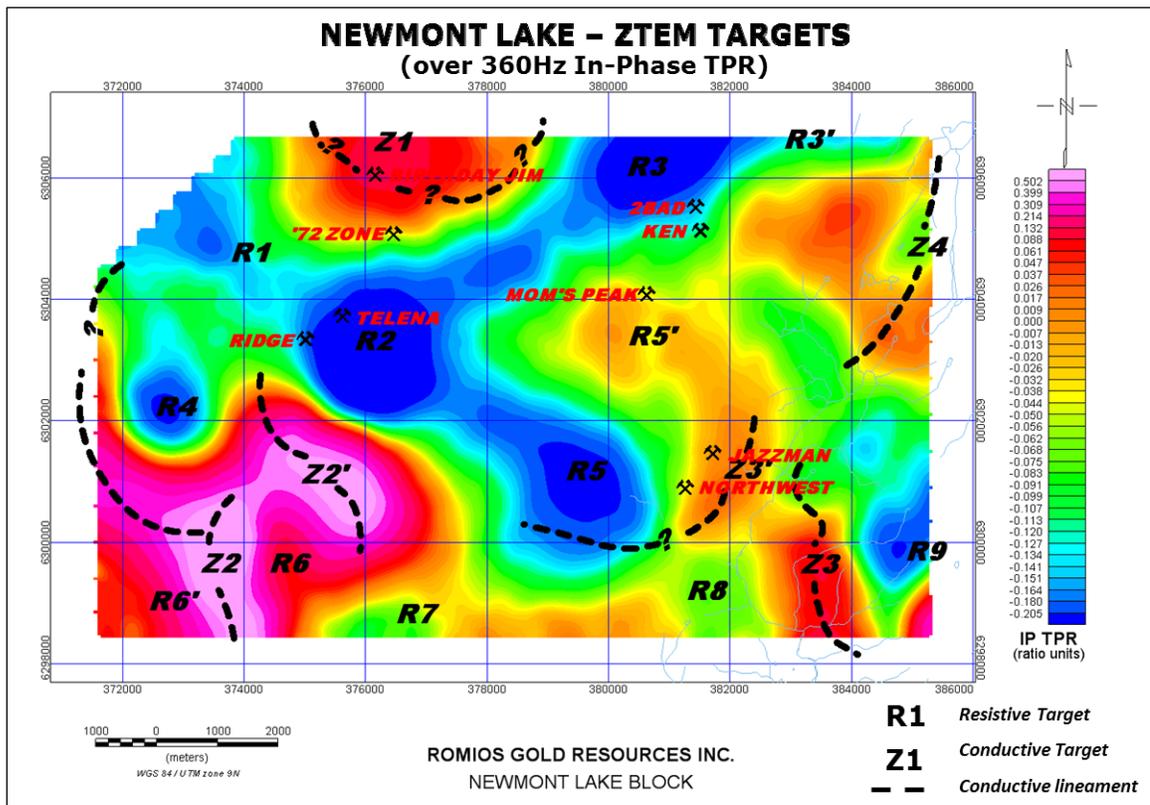
In general, unlike the magnetics, which appear to define numerous small and moderate scale anomalies due to skarns and magnetic alteration related to alkaline porphyry intrusions, the ZTEM resistivity variations over Newmont Lake Block are generally of a large scale, with surprisingly few small features or narrow lineaments defined in any of the multi-frequency images. This emphasizes the fact that the resistivity variations at Newmont Lake Block are controlled by large scale lithology rather than fault-fracture structures, which is more usually the case for ZTEM.



**Figure 10** – ZTEM EM survey: a) Total Phase Rotated (TPR) In-phase tipper at 720Hz; and b) In-phase TPR at 30Hz, highlighting differences at shallow and deeper EM skin depth penetrations, respectively.

## 2.2.1 ZTEM Anomaly Targeting

The Total Phase Rotated 360Hz In-phase image in **Figure 11** describes the resistivity distribution in the shallow to moderate depth bedrock geology at Newmont Lake. As shown, more than twelve (12) prominent resistivity highs (**R1-R9**) have also been identified that roughly coincide with the regions of higher topography and therefore might represent more erosionally resistant k-altered porphyry centers or possibly zones of uplift from intrusive bodies at depth. Most also partially correlate with the >eighteen (18) magnetic anomalies (**M1-M11** - see **Fig. 7**) defined previously and therefore represent potential targets for porphyry-type Magnetite-enriched potassic alteration, or po-Mag mineralized, silica altered skarn mineralization or else barren magnetic rich intrusive phases. Elsewhere, when not magnetic, these might represent barren, non-porous lithologies. Conversely, fewer than six (6) prominent resistivity lows (**Z1-Z4**) are defined and for the most part these are longer, lineament-like conductive zones that lack magnetic signatures. These conductive zones are either ascribed to porous or weakly mineralized fault zones or else shale or mudstone or porous lithologic units or, when smaller, possibly phyllic-propyllic alteration zones. The anomalies defined in **Figure 13** are described in **Table 2**:



**Figure 11** – ZTEM EM survey: Total Phase Rotated In-phase Tipper at 60Hz, with high resistivity anomalies (**R1-R10**) and low resistivity zones (**Z1-Z4**) and associated conductive lineaments, as shown.

**Table 2 - ZTEM anomalies at Newmont Lake Block**

Name	Description
<b>R1</b>	Large area (2x1.5km), NW trending, shallow buried and strengthens with depth, partially magnetic ( <b>M1-M4'</b> ) and strongly resistive zone in northwest corner of block. Geologically unexplained – partially underlain by marine sediments-volcanics. 2D inversions indicate that <b>R1</b> extends further eastward than indicated in TPR. <b>72 Zone</b> porphyry occurs on edges of <b>R1</b> .
<b>R2</b>	Large circular area (2.5x2.5km), shallow buried but gradually weakens with depth, partially magnetic ( <b>M1-M2-M5</b> ) and strongly resistive zone in west central area of block. Geologically unexplained – partially covered by glacier, partially underlain by marine sediments and volcanics in contact with syenitic intrusion. 2D inversions indicate that <b>R1</b> extends to greater depth (>1km) than indicated in TPR. <b>72 Zone</b> and <b>Telena</b> porphyries along edges of <b>R2</b> .
<b>R3</b>	Large circular area (>2x2km), shallow buried but gradually weakens with depth, weakly magnetic and strongly resistive zone at north-central edge of coverage. Geologically unexplained – partially covered by glacier, partially underlain by fine & coarse sediments. 2D inversions indicate that <b>R1</b> weakens with depth and becomes conductive – lowers priority.
<b>R3'</b>	Mod-large circular area (>1.5x1.5km), moderately buried and strengthens with depth, partially magnetic ( <b>M11</b> ) resistive zone at northeastern edge of coverage – poorly defined in TPR (likely due to topography). Geologically unexplained - underlain by basaltic volcanics. 2D inversions indicate that <b>R4</b> strengthens with depth - possibly affected by 3D distortion.
<b>R4</b>	Mod-large circular area (>1.5x2km), shallow buried but gradually weakens with depth, strongly magnetic ( <b>M4</b> ) resistive zone at western edge of coverage. Geologically partially explained - underlain by marine sediments and volcanics intruded by syenite. 2D inversions indicate that <b>R4</b> extends to greater depth than shown in TPR.
<b>R5</b>	Large elliptical area (>3x2km), SE trend, shallow buried but gradually weakens with depth, magnetic low and strongly resistive zone in central survey area. Geologically unexplained – partially covered by glacier, partially underlain by basaltic volcanics. 2D inversions indicate that <b>R5</b> extends to greater area (>3x3km) with depth but also becomes conductive – lowers priority.
<b>R5'</b>	Large area (>3.5x2.5km), shallow buried and strengthens with depth, partially strongly magnetic ( <b>M3-M3''</b> ) resistive zone in east-central survey area – poorly defined in TPR (likely due to topo effects). Geologically unexplained - underlain by coarse clastic sediments. 2D inversions indicate that <b>R5'</b> strengthens with depth. <b>Mom's Peak, 2Bad &amp; Ken</b> porphyries occur along edges of <b>R5'</b> .
<b>R6</b>	Mod-large circular area (>1.5x2km), shallow buried and strengthen with depth, strongly magnetic ( <b>M6'</b> ) resistive zone at SW edge of coverage. Geologically unexplained - underlain by marine sediments and volcanics. 2D inversions indicate that <b>R6</b> is NW-SE elongate than shown in TPR. Flanked by <b>Z2-Z2'</b> – suggests phyllic alteration halo surrounding K-altered <b>R6'</b> ?
<b>R6'</b>	Mod-large area (>1.5x2km), shallow buried and strengthen with depth, strongly magnetic ( <b>M6</b> ) resistive zone at SW edge of coverage. Geologically unexplained - underlain by marine sediments and volcanics. 2D inversions indicate that <b>R6'</b> is NE-SW elongate as shown in TPR. Flanked by <b>Z2</b> – possibly a fault-zone or phyllic alteration halo bordering K-altered <b>R6'</b> ?
<b>R7</b>	Mod-size semi-circular area (>1x2km), shallow buried and gradually weakens with depth, partially magnetic ( <b>M7</b> ) resistive zone at southern edge of coverage. Geologically unexplained - underlain by basaltic volcanics in contact with qtz-monzonite. 2D inversions indicate that <b>R4</b> is larger (>4x2km) than in TPR (possibly affected by topography) and strengthens with depth.
<b>R8</b>	Mod-small area (>1x2km), shallow buried and gradually weakens with depth, partially magnetic ( <b>M8</b> ) resistive zone at southeastern edge of coverage. Geologically partly explained - underlain by diorite and qtz monzonite in NLG graben. 2D inversions agree with TRP that <b>R4</b> is small and weakens depth (possibly effect of short 3D strike length).
<b>R9</b>	Mod-size area (>1.5x2km), NE-trending, shallow buried and gradually weakens with depth, partially magnetic ( <b>M9</b> ) resistive zone at southeastern edge of coverage. Geologically unexplained – mainly underlain by fine and coarse clastic sediments in contact NLG graben. 2D inversions indicate that <b>R4</b> strengthens with depth than shown in TPR.

**Table 2 - ZTEM anomalies at Newmont Lake Block (continued)**

Name	Description
<b>Z1</b>	Large semi-circular area (>4x1.5km), subcropping and depth-limited, mod-strongly magnetic (M1'') and weakly conductive body at north-central edge of coverage. Geologically unexplained - occurs in calcareous limestones and volcanoclastics on topographic high but not directly attributable to topo effects. Hosts Birthday Jim occurrence. Possibly phyllitization or propylitization from skarn or porphyry intrusive system.
<b>Z2</b>	Large area (>4x1.5km), NW trending, subcropping and strengthen with depth, partially mod-strongly magnetic (M6-M6') and relatively conductive zone in southwestern corner of survey area. Geologically unexplained but parallels NW contact between Tr and DP marine sediments and volcanics. 2D inversions indicate <b>Z2</b> is NS and has shorter (<2km) strike.
<b>Z2'</b>	Large area (4x1.5km), NW trending, subcropping and strengthens with depth, non-magnetic and relatively conductive zone in southwestern corner of survey area. Geologically unexplained but partially coincides with NW contact between DP volcanics-sediments and DS basaltic volcanics. 2D inversion indicate <b>Z2</b> is NS and has longer (>6km) strike length.
<b>Z3</b>	Large area (>2.5 x1km), NS-NNW trending, subcropping and strengthens with depth, partially magnetic (M8-M8') in southeastern corner of survey area. Geologically partially explained – coincides spatially with intrusive-sedimentary fault-contact in Newmont Lake Graben. 2D inversions indicate <b>Z3</b> is NS and has longer (>4km) strike length
<b>Z3'</b>	Mod-large (2.5x1.5km), NE trending, shallow buried and strengthens with depth, weak to non-magnetic and poorly conductive zone in southeastern area of block. Geologically unexplained – occurs in andesitic volcanics and monzonite, and coincides spatially with Newmont Lake Graben and Jazzman & Northwest vms occurrences (alteration halo?). <b>Z3'</b> is poorly resolved in 2D inversions (3D strike-length artifacts?).
<b>Z4</b>	Large area (3.5x2km), NE trending, shallow buried and strengthens with depth, partially strongly-magnetic (M10) and poorly conductive zone in northeastern area of block. Geologically partially explained – coincides with NE+NS faults in andesitic volcanics and coincides spatially with Newmont Lake Graben. 2D inversions suggest <b>Z3</b> & <b>Z4</b> are joined along NLG.

## 2.2.2 ZTEM 2D Inversion

ZTEM tipper data can be readily be converted to their equivalent resistivity-depth distribution using 2D-3D inversion (ref., Legault et al., 2009; Holtham and Oldenburg, 2008). Two-dimensional (2D) inversions of the ZTEM data have been calculated using Geotech's Av2dtopo proprietary software that also accounts for topography and bird-altitude effects (see Sec. 4.4.7 in Survey Report). Inversions were performed on the 30-720Hz in-line X-component (Tzx) data for all the east-west survey lines. Several north-south inversion sections were also prepared from the cross-line Y-component (Tzy) data that were sampled in the north-south direction. The inversion results are referenced according to DEM elevation and shown to approx. 2km depths vertically (see below).

Initial 2D inversion model tests were carried out on several EW survey lines across the region to determine the most appropriate half-space resistivity start model, based on model-error misfits (ref., Holtham and Oldenburg, 2010). Based on these tests, a homogeneous half-space apriori model of 1000 ohm-m was selected for the inversions, which is a value that is consistent with the Newmont Lake clastic, volcanic and felsic intrusive geology. These apriori test results are presented in Appendix C.

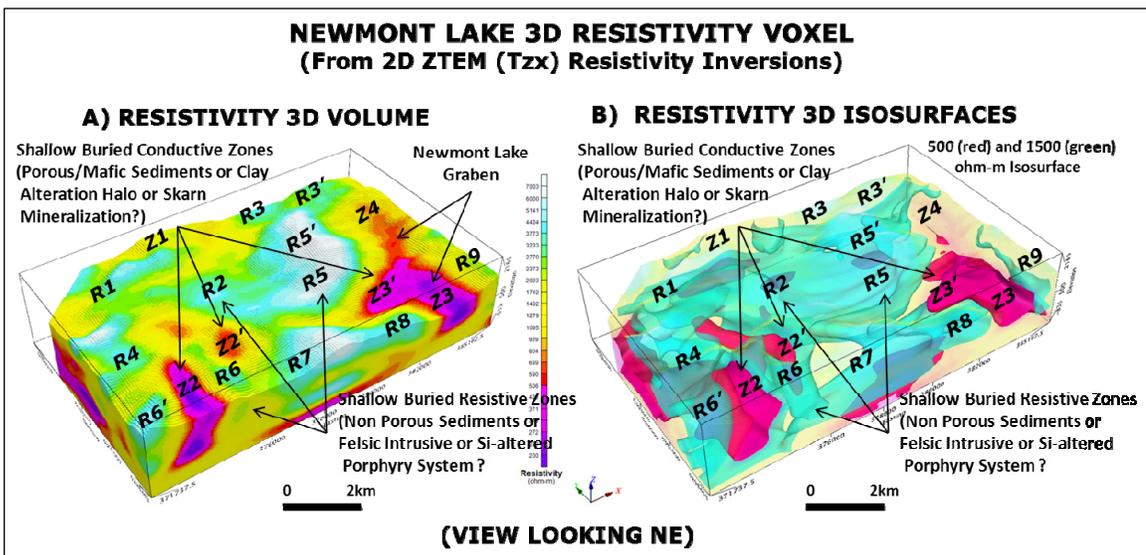
A total of 32 inversions were performed, with model-data error fits in the 0.7-3.0 range, which is approximately average and indicates moderate 3-dimensionality, likely from the oblique NW- and NE-striking geology relative to our east-west ZTEM survey lines. Nevertheless, the model-data fits appear to be good and comparisons between north-south and east oriented inversion produced reasonable results, and therefore provide good

confidence in the 2D inversion results. Additional testing and evaluation using 3D inversions may be required for accurate modeling at the follow-up stage.

### 2.2.3 ZTEM 3D Views and 2D Resistivity-Depth Slices

The 2D inversion of the ZTEM results better establish the location and source depth of anomalies identified in the raw tipper data. Individual ZTEM 2D inversion results can be combined into 3D resistivity voxel volumes, by gridding the geo-referenced 2D inversion database. **Figure 12** presents a 3D view of the ZTEM 2D inversion results, performed on every survey line for the in-line (Tzx) component. These 3D images can be viewed using the free downloadable Oasis Montaj viewer<sup>4</sup>. Resistivity-depth slices can also be extracted and the 2D inversion results viewed in plan.

As shown, the 3D resistivity volume in **Figure 12a** shows the location of the ZTEM resistive (**R1-R9**) and conductive (**Z1-Z4**) features that were previously identified in the raw tipper data and compares them with the surficial resistivity obtained from 2D inversion. As shown, most of the conductive and resistive features are shallow buried and strengthen with depth, as shown in **Figure 12b**. Some of the larger subcropping resistive bodies resemble expansive non-porous volcano-sedimentary units. Other smaller subcropping resistive bodies extend to depth and are bordered by lower resistivity rocks, resembling the potassic altered intrusive core and surrounding weak phyllic-propylitic alteration in the alkalic porphyry at Mt Milligan (**Fig. 3b**). Others occur below a thin resistive cap-rock at the surface resembling the alkalic lithocap shown in the porphyry model in **Figure 3a**. Some smaller, buried weakly conductive zones suggest skarn-type stringer or porphyry-style pyrite halo mineralization above the deeper porphyry signatures. All of these geologic features are further highlighted in the Isosurface view in **Figure 12b**, in particular the shallow major conductive zones (**Z2-Z2'** & **Z3-Z4**) that are interpreted to represent either porous or pelitic sedimentary units or possibly, porphyry style clay alteration zones.



**Figure 12** - 3D view of ZTEM 2D inversion results from Tzx (in-line component) for east-west flight lines: a) 3D resistivity volume, and b) 3D resistivity iso-surfaces, with conductive 100 ohm-m (red) and resistive 1000 ohm-m (blue) isosurfaces, and highlighting features of interest.

<sup>4</sup> <http://www.geosoft.com/support/downloads/viewers/oasis-montaj-viewer>

**Figure 13** presents resistivity-depth slices of the 2D inversion results for the in-line (Tzx) ZTEM data, from 100-1000m depths, with the location of anomalies of interest, both conductive (**Z1-Z4**) and resistive (**R1-R9**) previously identified in the TPR results. As shown, the differences in resistivity with depth are subtle, however some of the more prominent features at each depth are:

- A) 100-200m Depth: The 100m and 200m resistivity depth slices both highlight all the resistive and conductive features defined in the tipper PR-DT-TPR data images shown earlier, indicating that all of these either subcrop or else are shallow buried below the surface overburden layer. This includes the Newmont Lake Graben which is imaged as a broad, NE trending zone of low resistivity that was somewhat more poorly defined in the tipper data images. It is worthwhile noting that the known porphyry-copper-gold and-skarn type Cu-Ag occurrences to the west (**72, Telena, Ridge, Birthday Jim**) and to the east (**Ken; 2Bad, Mom's Peak**) all lie along the outer edges of the **R1-R2** and **R3-R5'** potassic-altered resistivity highs and surrounding phyllic altered, lower resistivity country rocks – not directly over the resistors – which is consistent with the alkalic porphyry copper deposit model. The large areas occupied by the **R5-R5'** and **R7** resistivity highs suggest that these are broad, stratigraphic-like units; whereas the smaller **R1-R2-R3-R3'-R4-R6-R6'-R8-R9** bodies are closer in size to the alkalic porphyry targets sought after. Finally, the close similarity between the 100 and 300m resistivity depth slices is an indication of the large initial depth of investigation (DOI) for the ZTEM system on Newmont Block – estimated at 300-900m minimum. On the other hand, the **NW** and **Jazzman** are not resolved as conductors in the ZTEM, also as a result of the large footprint of the system relative to their possibly small target size and low conductance.
- B) 500-700m Depth: The 500m depth slice shows similar aerial extents for the **R1-R9** porphyry-like bodies, as compared to the shallower depth-slices, but a significantly smaller size for the **R5'** resistive unit, indicating that the ZTEM has penetrated below a thick resistive layer – either a flat-lying non-porous stratigraphy, or possibly permafrost or else similar to the "lithocap" predicted in the alkalic porphyry model in **Figure 3**. Also noticeable is the prominent longer/more strike-extensive nature of both the major conductive (**Z2-Z2', Z3-Z4**) and resistive NS lineaments (**R2-R7, R1-R4**) that appear to extend across much of the property – more so than indicated in the previous PR-TPR-DT tipper data images. At 1km depths, among the smaller porphyry signatures, most are still visible except for **R1-R3-R8** – these might be further enhanced in 3D inversion analyses. The larger stratigraphic **R5-R5'** resistivity features are also no longer resolved.

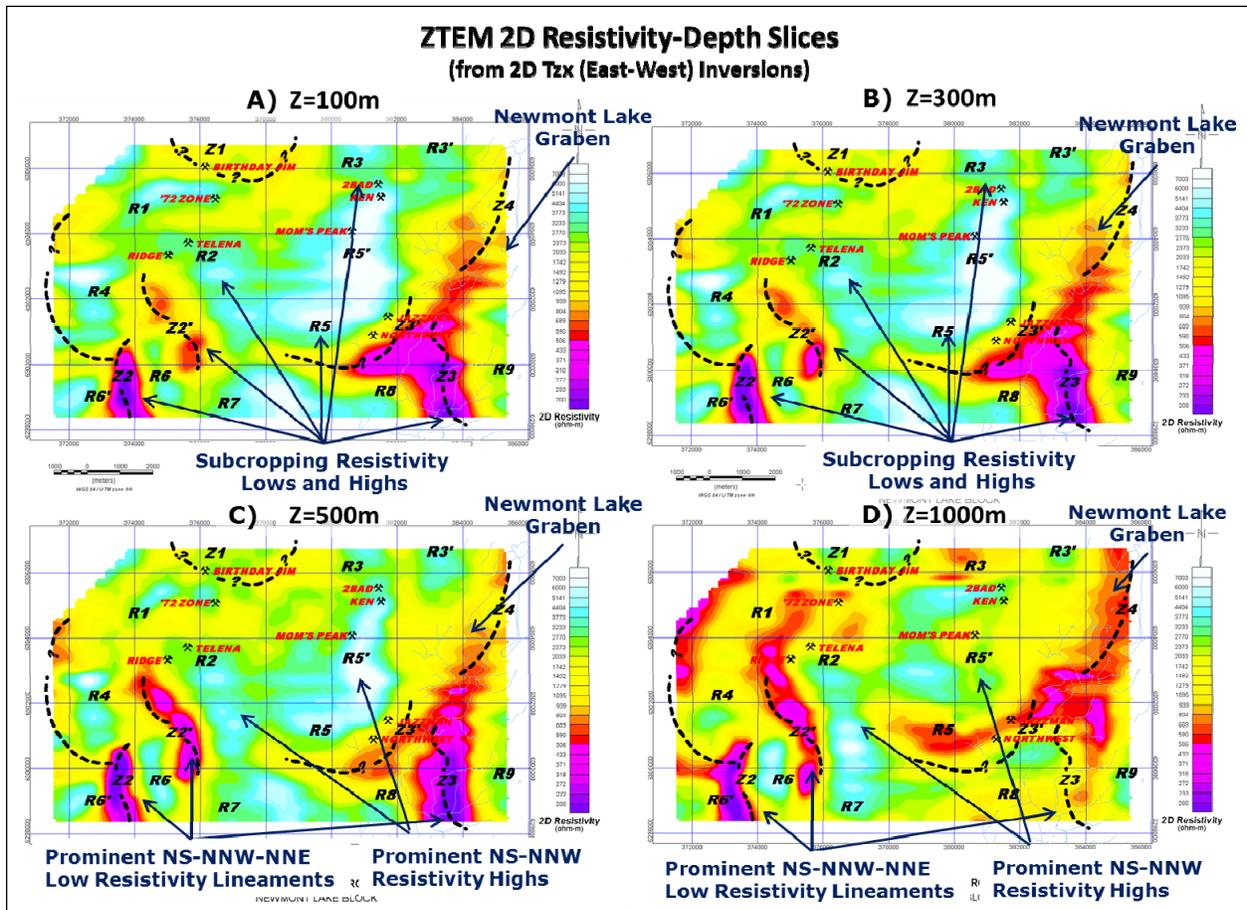
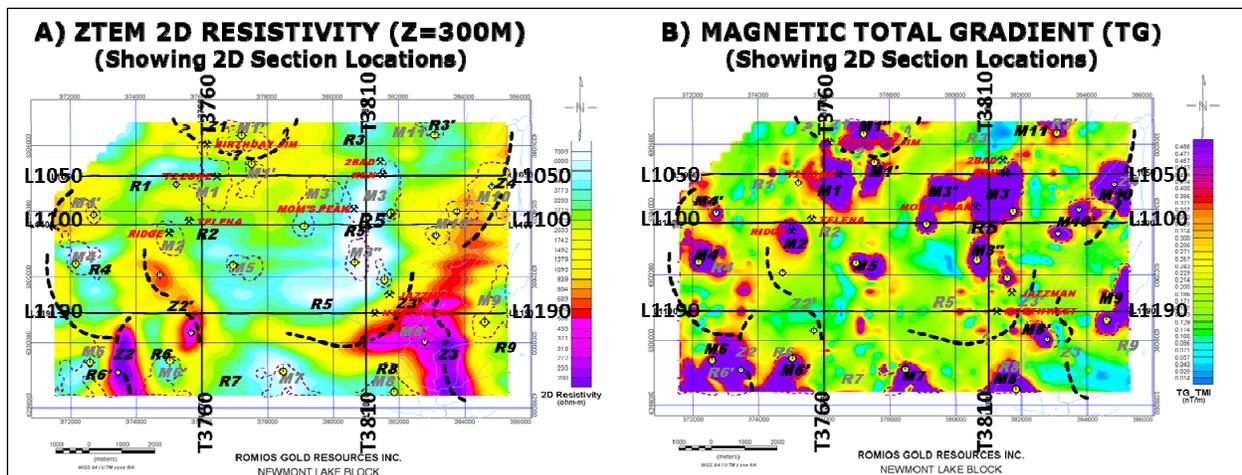


Figure 13 - 2D Resistivity-depth slices at 100-1000m from 2D inversions of in-line (Tzx) tipper component.

## 2.2.4 ZTEM 2D Resistivity-Depth Cross-sections

A detailed line-by-line interpretation of the ZTEM 2D inversion results is beyond the scale and scope of this study. However, focusing on the known mineral occurrences, key features identified in the plan view images are described using representative cross-sections that extend across the entire Newmont Lake Block. **Figure 14** presents ZTEM 2D inversion and magnetic derivative results as plan-view images, along with the location of selected 2D ZTEM inversion lines overlain, which are discussed in greater detail below.

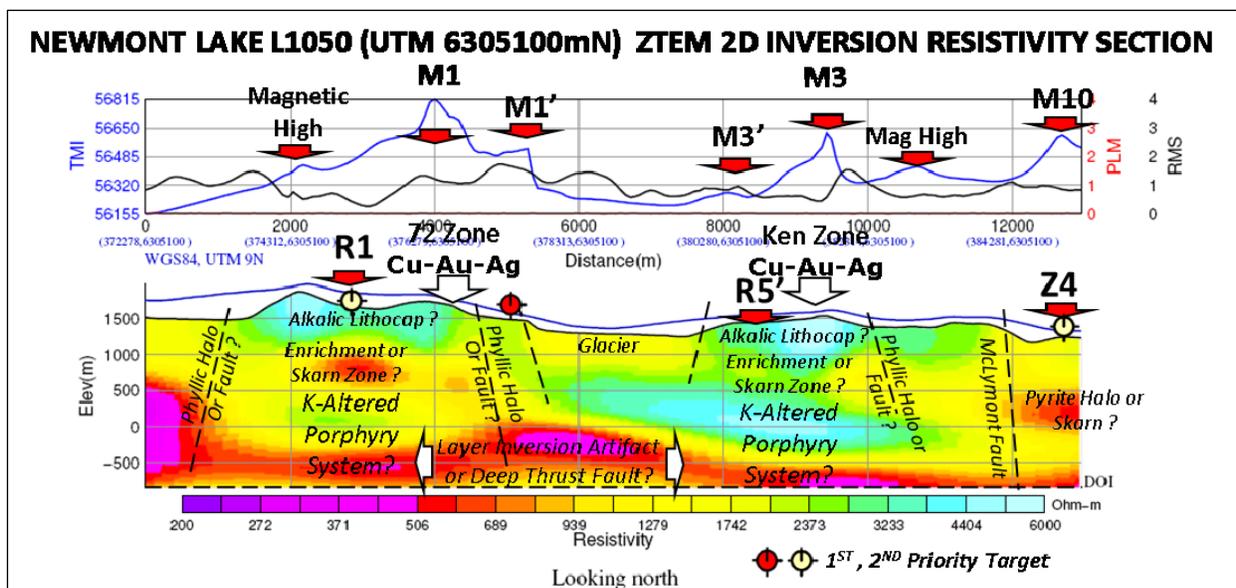


**Figure 14** – a) ZTEM 2D Resistivity Depth Slice (300m) and b) Magnetic Total Gradient (TG), highlighting ZTEM and Magnetic anomalies and 2D section locations discussed below.

#### 2.2.4.1 L1050 (UTM 6305100mN) – over 72 and Ken Zones:

2D ZTEM inversion results over several the key Cu-Au-Ag deposits found on the Newmont Lake Block are shown for the east-west survey profile **L1050** in **Figure 15**. In this section the **72 Zone** porphyry copper occurrence is identified by the white arrow near distance 4200mE and coincides with the anomalous magnetic high (**M1**). The **72 zone** appears to occur at the contact/transition between the **R1** high resistivity zone, interpreted to be a possible alkalic lithocap or else K-altered subcrop, and a partially buried resistivity low interpreted as a phyllic-propylitic halo or fault zone. Near distance 3000mE, a buried, weakly conductive horizon at ~500m depth, below **R1**, is interpreted to represent a possible enrichment or skarn zone or else a buried pyrite halo or barren porous unit, and is assigned a 2<sup>ND</sup> priority. A deep resistivity high at 1km depth below **R1** may represent a deeper K-altered porphyry system. The deeper, layer-like conductive zone at 1.5-2km depths is interpreted to be a false inversion artifact. The unexplained **M1'** magnetic high near distance 5000mE that is associated with a weak resistivity high is a favourable target for silicic-altered skarn mineralization and is assigned a 1<sup>ST</sup> priority.

The **Ken** porphyry-related skarn deposit is identified by the white arrow near distance 9200mE and coincides with an anomalous magnetic high (**M3**). The **Ken** zone coincides with a 500m thick, near-surface high resistivity layer (**R5'**) that is interpreted as a possible alkalic lithocap or else K-altered subcrop. Below the **R5'** lithocap feature, a weakly conductive and possibly magnetic (**M3'**) horizon at ~500m is interpreted to represent a possible enrichment or skarn zone or else a buried pyrite halo or barren porous unit. Further east, near distance 10,000mE, a slight increase in conductivity for this layer is interpreted as a possible phyllic halo or fault zone at 1km depths below **R5'**, near distance 8500mE, a wide-body resistive unit is interpreted as a possible k-altered porphyry system, or else represents a barren non-porous lithology. A magnetic high near distance 12.500mE coincides with a buried ZTEM resistivity low at 1km depth that is interpreted as a possible pyrite halo or skarn zone, within the Newmont Lake Graben, and is assigned a 2<sup>ND</sup> priority.

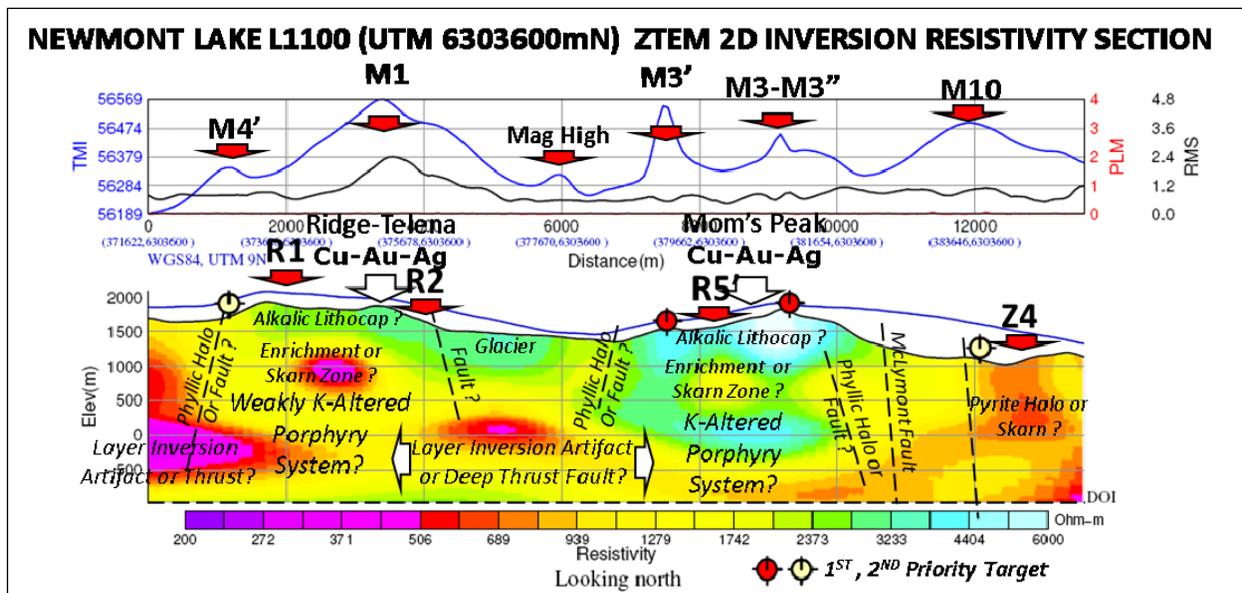


**Figure 15** – ZTEM 2D Inversion at Newmont Lake: East-west 2D resistivity section for L1050, with Magnetic TMI, PLM and RMS error profiles (above), showing geophysically interpreted bedrock features.

#### 2.2.4.2 L1110 (UTM 6303600mN) – over Burgundy Ridge-Telena and Mom’s Peak Zones

**Figure 16** presents the 2D ZTEM inversion results for the east-west survey profile **L1110** that crosses the **Burgundy Ridge** and **Telena** porphyry copper-gold occurrences that are identified by the white arrow near distance 3600mE. **Ridge-Telena** coincide with a prominent magnetic high (**M1**) and resistivity high (**R2**) surficial layer, resembling an alkalic lithocap or else a subcropping k-alteration zone. At 750m depths, near distance 2500mE, a buried low resistivity zone below **R1** is interpreted as a possible enrichment or skarn zone, or else a buried pyrite halo or barren porous unit. Further west, a magnetic high (**M4'**) near distance 1000mE is a favourable target for skarn mineralization and is assigned a 2<sup>nd</sup> priority. The 500-600m thick high resistivity surficial layer centred near 5000mE corresponds to the glacier.

The **Mom’s Peak** porphyry-related skarn deposit is identified by the white arrow near distance 9000mE and coincides with an anomalous magnetic high (**M3-3'**). **Mom’s Peak** corresponds with a >500m thick, near surface high resistivity layer (**R5'**) that is interpreted to represent either an alkalic lithocap or else K-altered subcrop or possibly permafrost. A buried low resistivity zone, at ~500m depth, may represent an enrichment or skarn zone or else a pyrite halo or barren porous unit. Below this, a deeper resistivity high feature, at 1km depths, is interpreted as a possibly k-altered porphyry system. Two buried, weak resistivity lows near distance 6500mE and 10,000mE may represent steeply dipping faults or else phyllic alteration halos. Two magnetic highs near distance 7500mE and 9500mE are favourable targets for silicic-altered skarn mineralization and are assigned a 1<sup>st</sup> priority. A deeper magnetic high near distance 12000mE, within the Newmont Lake Graben, correlates with a ZTEM resistivity low that extends to greater depth and may be a buried pyrite halo or skarn. It is assigned a 2<sup>nd</sup> priority.



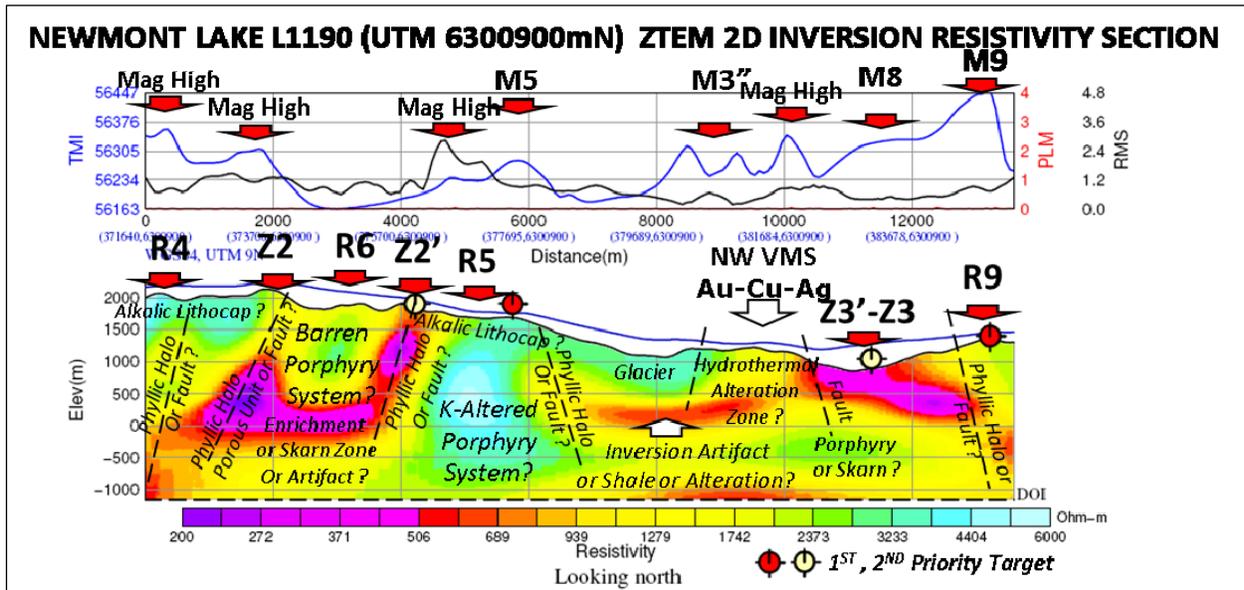
**Figure 16** – ZTEM 2D Inversion at Newmont Lake: East-west 2D resistivity section for L1100, with Magnetic TMI, PLM and RMS error profiles (above), showing geophysically interpreted bedrock features.

#### 2.2.4.3 L1190 (UTM 6300900mN) – over Northwest and Jazzman VMS Deposits

The final east-west survey profile for L1190 in the southern part of the property is presented in **Figure 17**. In this section the **Northwest Zone** gold-copper-silver volcanogenic massive sulphide deposit is identified by the white arrow near distance 9600mE and roughly coincides with the anomalous magnetic highs (**M3''**) that are centred off-line. Although the VMS is not resolved as a discrete conductivity high, the **NW** zone appears to occur within a broad region of low bedrock resistivity that suggests a possible hydrothermal alteration zone. The stronger surficial resistivity low that is centred further east between distance 10,000mE and 12,000mE coincides with the Newmont Lake Graben. The r500-600m thick resistive near-surface layer between distance 7000mE and 8000mE corresponds to the glacier. The unexplained **M8** magnetic high near distance 11500mE that is associated with the ZTEM resistivity lows (**Z3-Z3'**) is considered a favourable target for deeper porphyry or silicified skarn mineralization at ~500-750m depths and is assigned a 2<sup>ND</sup> priority. A magnetic high that corresponds to a resistivity high (**R9**) near distance 13,500mE is considered a favourable target for silicified skarn or k-altered porphyry mineralization and is assigned a 1<sup>ST</sup> priority.

A prominent resistivity high feature (**R5**) identified by the white arrow near distance 5500mE also coincides with an anomalous magnetic high (**M5**). The resistivity high extends from surface to below 3km depths and is flanked by two buried, dipping low resistivity zones near distance 4000mE (**Z2'**) and 6000mE. This feature closely resembles the Mt Milligan ZTEM 2D resistivity image shown in **Figure 3** and is assigned a 1<sup>st</sup> priority as a possible k-altered alkalic porphyry system. A slightly higher resistivity at the surface below **R5** also suggests a possible alkalic lithocap. High magnetism associated with the flanking conductive zone (**Z2'**) suggest possible enrichment or else strong phyllic alteration – it is assigned a 2<sup>ND</sup> priority. Another resistive feature (**R6**) centred at distance 3000mE that is also flanked by two prominent dipping lows at distance 2000mE (**Z2**) and (**Z3**). However, **R6** corresponds to weak magnetism that is inconsistent with an alkalic porphyry. 2km further south, **R6** becomes more magnetic and is a 1<sup>ST</sup> priority target. A prominent conductive layer at 1.5km

depth below **R6** might represent a zone of enrichment, a skarn horizon or a false 2D inversion artifact.



**Figure 17** – ZTEM 2D Inversion at Newmont Lake: East-west 2D resistivity section for L1190, with Magnetic TMI, PLM and RMS error profiles (above), showing geophysically interpreted bedrock features.

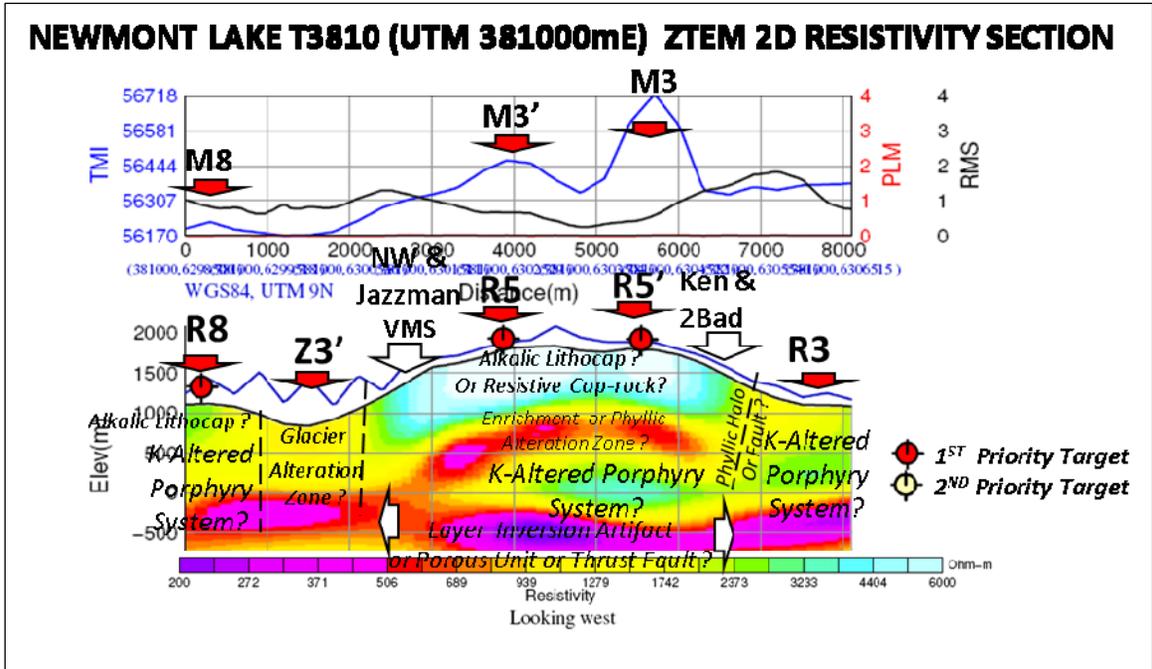
#### 2.2.4.4 T3760 (UTM 376000mE) – over Burgundy Ridge-Telena and 72 Zones

In an effort to analyse the north-south behaviour of Newmont Lake resistivity signatures, selected “pseudo-tie line” 2D inversion were created from the cross-line Y-component (T<sub>zy</sub>) data sampled in the north-south direction. **Figure 18** presents the 2D ZTEM inversion results for the north-south survey profile **T3760** that crosses over the **Burgundy Ridge-Telena** and **72 Zone** Cu-Au-Ag porphyry occurrences, identified by white arrows near distances 5200mN and 6800mN. The **Ridge** and **Telena** deposits appear to correspond to the contact between a buried weak resistivity low, interpreted to represent a possible phyllic halo or steep fault, and a prominent resistivity high (**R2**) that is centred near distance 4500mE. **R2** is interpreted to represent the buried K-altered porphyry system. The 200-300m thick lower resistivity surficial layer above it corresponds to the glacier. The conductive body **Z2'** that is centred south either near distance 2500mN either coincides with an unmapped a major fault porous unit, a shale-mudstone lithology or possibly a major clay-alteration. However, it is poorly resolved due to its NS strike along this cross-section – a 2<sup>ND</sup> priority is assigned to this zone. A deeper conductive layer at 2km depths could also be a false 2D inversion artifact from the subparalleling 3D geology.

The **72 Zone** is identified by the white arrow near distance 6800mN and coincides with a shallow buried, strong magnetic high signature (**M1**). **Zone 72** appears to correspond to a 500m thick surficial high resistivity feature (**R1**), either an alkalic lithocap or a subcropping k-altered cap rock. Below **R1**, a relatively conductive body that is also weakly magnetic lies at >500m depth, and could represent sulphide enrichment, or a skarn zone or else intense pyrite alteration. A second priority is assigned to this conductor.

In general these 2D inversion results using the north-south tie-line data are quite similar to those obtained over the east-west profiles, which further validates the geologic interpretation of the ZTEM survey results.





**Figure 19** – ZTEM 2D Inversion at Newmont Lake: North-south 2D resistivity section for T3810, with Magnetic TMI, PLM and RMS error profiles (above), showing geophysically interpreted bedrock features.

## 3. CONCLUSIONS AND RECOMMENDATIONS

### 3.1 Conclusions

A helicopter-borne ZTEM and aeromagnetic geophysical survey was completed for Romios Gold Resources Inc. on September 14-15, 2013 over their Newmont Lake Block, in the Liard Mining District, northwestern BC. The surveyed area was roughly 13.6 x 8.1 km and the total survey line coverage was 372 line kilometres (359 km were planned) along 300m spaced lines. The principal sensors included a Z-Axis Tipper electromagnetic (ZTEM) system and a caesium magnetometer. The geophysical results were presented in a survey logistics report, earlier in December, 2013. This report is a summary interpretation of the geophysical results in support of the 2D ZTEM inversions that were performed over the Newmont Lake survey block.

The Newmont Lake Block lies in the northwest-southeast trend of porphyry and VMS deposits known as the Stikine Belt, with the Galore Creek alkalic porphyry copper-gold deposit and the nearby Copper Canyon copper-gold skarn deposit both lying 30km northwest, as well as the Eskay Creek vms deposit lying 30km further southeast. The property is underlain by favourable Stikine Terrane rocks and hosts numerous porphyry and skarn type Cu-Au-Ag occurrences, as well as a volcanogenic massive sulphide deposits, which were not the primary focus of the current study. The objectives of the ZTEM and aeromagnetic surveys were to define other possible hidden alkalic porphyry copper and related skarn-type deposits at depth.

A detailed interpretation of the ZTEM and aeromagnetic results was beyond the scale and scope of the study. However, a general plan-view comparison of the processed aeromagnetic and tipper EM and aeromagnetic data with the regional geology and the 2D inversion results have provided a useful visual cross-correlation for geologic mapping and targeting purposes. A cross-sectional analysis of the 2D inversion results was then presented for five representative north-south and east-west sections that cover most of the known mineral occurrences on the Newmont Lake Block.

Magnetic surveys have determined that Newmont Lake hosts relatively strong (>1000nT) magnetic field intensities that are consistent with magnetite-rich syenitic and diorite intrusive bodies and associated alkalic porphyry and related skarn type po-magnetite alteration. All the known porphyry and skarn mineral occurrences are found in magnetic highs that surround syenitic intrusions in two areas of the grid separated by a glacier. Vertical gradient and tilt-derivative analyses have further determined that a number of smaller, subcropping to buried magnetic bodies occur within the main magnetic syenite system and surrounding areas. More than eighteen (18) discrete magnetic anomalies (**M1-M11**) have been defined and more than half (9) appear to be unexplained geologically.

The ZTEM surveys have defined both conductive and resistive signatures that relate to bedrock geology on the property, to depths extending to >1-2km. The absence of powerlines and other man-made culture have ensured good quality ZTEM survey data. The results highlight a mix of conductive and, in particular, resistive NW-SE, NE-SW and NS strike trends. In general, unlike the magnetics which appear to define numerous small and moderate scale anomalies from skarns and magnetic alteration related to alkaline porphyry intrusions, the ZTEM resistivity variations over Newmont Lake Block are generally of a larger scale, with surprisingly few small features or narrow lineaments defined in any of the

tipper images. More than twelve (**12**) prominent resistivity highs (**R1-R9** – see **Fig. 20**) have been defined, that roughly coincide with the regions of higher topography and therefore might represent more erosionally resistant k-altered porphyry centers or possibly zones of uplift from intrusive bodies at depth. Most also partially correlate with the >eighteen (**18**) magnetic anomalies (**M1-M11** - see **Fig. 20**) defined previously and therefore represent potential targets for porphyry-type magnetite-enriched potassic alteration, or po-Mag mineralized, silica-altered skarn mineralization or else barren magnetic rich intrusive phases. Elsewhere, when not magnetic, these might represent barren, non-porous resistive lithologies. Conversely, fewer than six (**6**) prominent resistivity lows (**Z1-Z4** – see **Fig. 20**) are defined and for the most part these are longer, lineament-like conductive zones that lack magnetic signatures. These conductive zones are either ascribed to porous or weakly mineralized fault zones or else shale or mudstone or porous lithologic units or, when smaller, possibly phyllic-propyllic alteration zones.

Two dimensional inversions have been applied to the ZTEM tipper data, converting the vertical field ratios to their equivalent resistivity-depth distribution. A total of 32 inversions were performed, with relatively average model-errors which indicate moderate 3-dimensionality due to the oblique NW to NE striking geology to our EW ZTEM flight lines. However good model fits and reasonable comparisons between the tipper data plans and 2D resistivity depth-slices, as well as agreement between EW versus NS oriented 2D cross-sectional results provide good confidence in the 2D inversion results and their geologic interpretation. However additional 3D inversions may be required at the follow-up stage.

2D ZTEM inversion results over the known porphyry and skarn occurrences (**72 Zone, Telena, Birthday Jim, Ridge, Ken, 2Bad & Mom's Peak**) shows that there is consistent agreement between these zones and horst-like, layered ZTEM resistivity signatures that feature: a) a 250-500m thick high resistivity surficial cap-rock, analogous to an alkalic lithocap or epithermal sinter cap (or alternatively barren lithologic cover rocks); lying above b) a 500m thick weakly conductive layer, resembling a weakly mineralized enrichment blanket or pyrite-rich phyllic alteration zone (or alternatively a barren porous unit), and c) a deeply buried (>1km) more resistive basement feature, suggesting either a k-altered core of the porphyry system or silica-altered and/or felsic intrusive. Occasionally, these horst-like structures are also flanked or surrounded by narrow, weakly conductive subvertical resistivity lows, resembling py-rich phyllic alteration aureoles or else steeply dipping barren faults. Shallow buried magnetic susceptibilities high always coincide with these resistivity features, and are consistent with porphyry type magnetite-rich potassic alteration or po-Mag skarn mineralization or alternatively magnetite rich intrusions. These combined magnetic high and layered resistivity high signatures are consistent with an alkalic porphyry model and related skarns, and are similar to those obtained over the Mt Milligan alkalic Cu-Mo porphyry.

Resistivity-depth slices from the 3D resistivity volume obtained from the 2D ZTEM inversions confirm the presence and source-depth of the twelve (**12**) resistive (**R1-R9**) and six (**6**) conductive (**Z1-Z4**) features of significance that were previously identified in the raw tipper data. These were then more easily compared with the more than eighteen (**18**) discrete magnetic anomalies (**M1-M11**) whose shallow source-depths were enhanced using magnetic derivative analyses. Based on geophysical target model for alkaline porphyry deposits and related skarn-type bodies, at least fourteen (**14**) favourable resistivity high and magnetic high priority targets have been identified and are presented in **Figure 20**.

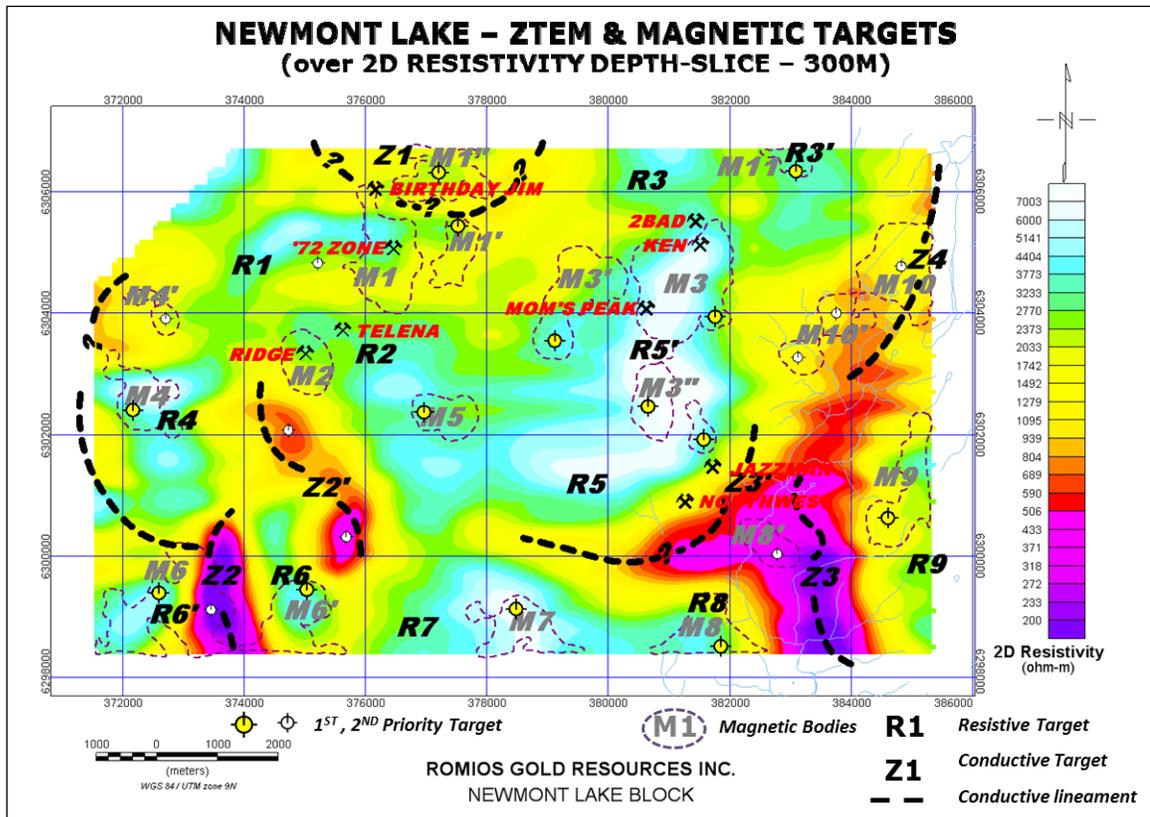


Figure 20 – ZTEM 2d resistivity depth slice (Z=300m), with targeted high resistivity anomalies (R1-R9), low resistivity zones (Z1-Z4) & associated lineaments, and magnetic susceptibility high features (M1-M11).

### 3.2 Recommendations

Based on the geophysical results obtained, a number of interesting resistive and conductive structures were identified across the property. The magnetic results also contain worthwhile information in support of exploration targets of interest. In fact the results appear to show a close correlation between the known mineral occurrences and magnetic highs on the edge of larger resistive anomalies (i.e., '72 Zone+Birthday Jim = R1-M1, Ridge+Telena=R2-M2, Mom's Peak+2Bad-Ken= R5'-M3-M3'). We therefore recommend that follow-up focus elsewhere on the edges of these large features (M1-R1, R2-M2, R5'-M3-M3') as well as the edges of other resistive ZTEM and coincident magnetic anomalies on the Newmont Lake property, including zones R1-M1', R1-M1'', R2-M5, R3'-M11, R4-M4, R5'-M3, R5'-M3'', R6-M6', R6'-M6, R7-M7, R8-M8, and R9-M9 that appear to be situated at shallow to moderate depth (<500m) for alkalic porphyry and skarn-type mineralization, prior to proceeding with the more conductive and partially magnetic targets (Z2-M6, Z2-M4', Z2'-M2, Z3-M8' and Z4-M10-M10') that are less consistent with the favoured geologic target model. No additional follow-up is recommended on the conductive or resistive targets without magnetic association (Z1, Z3-Z3', R3 and R5) that are most likely to be of barren structural, lithological or geomorphologic origin.

The scope of the present study has not allowed a full evaluation of the survey results, particularly with regards to reliability/accuracy of 2D ZTEM inversions due to the oblique 3D

geology. If the program moves to a more advanced deep drill-testing stage, we would strongly recommend a more detailed interpretation of the available geophysical data, including additional 3D ZTEM inversion and fine-mesh 3D Magnetic inversion. Ground follow-up prior to drilling should include deep penetrating DC/IP induced polarization and resistivity, to identify chargeable disseminated-sulphide zones at depth. Magnetotelluric soundings can assist in validating/confirming the ZTEM source depths and also be jointly-inverted for improved resolution. Gravity measurements may prove useful in better characterizing the interpreted intrusive-like magnetic bodies, based on density contrasts.

RESPECTFULLY SUBMITTED<sup>5</sup>,



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March, 2014

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<sup>5</sup> Final data processing of the EM and magnetic data were carried out from the office of Geotech Ltd. in Aurora, Ontario under the supervision of Geoffrey Plastow, Data Processing Manager. Supervision of 2D Inversions by Shengkai Zhao and the interpretation report were by Jean Legault, Chief Geophysicist (Interpretation).

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## APPENDIX A

### ZTEM THEORETICAL CONSIDERATIONS

A brief section on the theory behind the AFMAG technique is provided for completeness and a more comprehensive development of the theory can be found in standard texts. The natural EM field is normally horizontally polarized. Subsurface lateral variations of conductivity generate a vertical component, which is linearly related to the horizontal field. Although the fields look like random signals, they may be treated as the sum of sinusoids. At each frequency the field can be expressed as a complex number with magnitude and argument equal to the amplitude and phase of the sinusoid. The relation between the field components can then be expressed by a linear complex equation with two complex coefficients at any one frequency. These coefficients are dependent upon the subsurface and not upon the horizontal field present at any particular time and are appropriate parameters to measure (Vozoff, 1972).

$$H_z(f) = T_x(f) H_x(f) + T_y(f) H_y(f), \quad (1)$$

Where

$H_x(f)$ ,  $H_y(f)$  and  $H_z(f)$  are x, y and z components of the field,

$T_x(f)$  and  $T_y(f)$  are the “tipper” coefficients.

In the case of a horizontally homogeneous environment,  $T_x$  and  $T_y$  are equal to zero because  $H_z = 0$ . They show certain anomalies only by the presence of changes in subsurface conductivity in the horizontal direction. The real parts of the coefficients correspond to tangents of tilt angles measured with a controlled source. The complex tensor  $[T_x, T_y]$  known as the “tipper” defines the vertical response to horizontal fields in the x and y directions respectively.

$T_x$  and  $T_y$  are two unknown coefficients in one equation, and we therefore must combine two or more sets of measurements to solve them. To reduce effects of noise, multiple sets of measurements can be made, and the coefficients, which minimize the squared error in predicting the measured Z from X and Y, can be found. This leads to next formulas for estimating the coefficients.

$$T_x = ([H_z H_x^*] [H_y H_y^*] - [H_z H_y^*] [H_x H_x^*]) / ([H_x H_x^*] [H_y H_y^*] - [H_x H_y^*] [H_y H_x^*]), \quad (2)$$

and

$$T_y = ([H_z H_y^*] [H_x H_x^*] - [H_z H_x^*] [H_y H_y^*]) / ([H_x H_x^*] [H_y H_y^*] - [H_x H_y^*] [H_y H_x^*]). \quad (3)$$

Where

$[H_x H_y^*]$  (For example) denotes a sum of the product of  $H_x$  with the complex conjugate of  $H_y$ .

In practical processing algorithms, all numbers Hx, Hy and Hz can be obtained by applying the same digital band-pass filters to three incoming parallel data signals. FFT algorithms are also applicable. All sums like [HxHy\*] can be calculated on the basis of a discrete time interval in the range from 0.1 to 1 sec or on a sliding time base.

Using platform attitude data in the EM data processing can be done at different stages of the signal processing. The most obvious idea is to transform parallel data from local coordinates of the platform into absolute geographical coordinates before the main signal processing procedure. Unfortunately, the proper algorithms of attitude data obtained, often require some post-processing algorithms such as using post-calculated accelerations based on GPS data etc. That is why it is preferable to treat x-y-z coordinates in formulas above in the local coordinate system of the platform and to recalculate resulting local tilt angles into a geographical or global coordinate system later, during the data post processing.

In weak field conditions where the level of the signal is comparable with input noise levels in preamplifiers, the bias in the estimated values of Tx and Ty caused by noise in the horizontal signals become substantial and cannot be reduced by any averaging. This bias can be removed by the use of separate reference signals containing noise uncorrelated with noise in signals Hx and Hy. (Anav et al., 1976).

$$T_x = ([HzRx^*] [HyRy^*] - [HzRy^*] [HyRx^*]) / ([HxRx^*] [HyRy^*] - [HxRy^*] [HyRx^*]), \quad (4)$$

and

$$T_y = ([HzRy^*] [HxRx^*] - [HzRx^*] [HxRy^*]) / ([HxRx^*] [HyRy^*] - [HxRy^*] [HyRx^*]). \quad (5)$$

Where:

Rx is the reference field x component,  
Ry is the reference field y component.

An additional two electromagnetic sensors, providing these reference signals can be placed at some distance away from the main x, y and z sensors. Currently, though, no additional remote-reference processing is applied to ZTEM data.

## Numerical Modelling

In order to understand the airborne AFMAG responses to conductors for a variety of geological environments, EMIGMA™ modelling code from PetRos EiKon (Toronto, ON) was obtained to conduct the formulated model studies.

Below are some of the modelling results from their study.

Modelling assumption:

The assumptions for the modelling are that:

3 components of the magnetic field are measured and they are processed according to:

$$H_z(f) = T_x(f) H_x(f) + T_y(f) H_y(f)$$

The vector (Tx,Ty) is usually referred to as the 'tipper' vector and is determined in the frequency domain through processing. This is normally done by determining transfer functions from an extended time series.

For the modelling exercise, the 3 components of the magnetic vector (Hx,Hy,H<sub>z</sub>) are modelled twice for 2 orthogonal polarizations of a plane wave source field and then the tipper is calculated from a matrix calculation using the results of the 2 source polarizations' models. For the 2D forward modelling results, the tipper vectors are shown as a function of frequency

## Basic Model Responses

For the initial models, we assume a thin plate-like model. The model is perpendicular to the flight direction. Initially, we will assume very long strike directions. From this quasi-2D model, there are 2 basic responses. The so-called TE response and the so-called TM response.

For the initial models, we will assume the strike is in the y (North) directions and the flight is in the x (East) direction. Sensor heights are 30m above ground.

**TE Mode:** For the TE response, the electric field excitation flows along strike (current channelling) and the horizontal H field (H<sub>x</sub>) flows perpendicular to strike thus causing induction through Faraday's law. The H<sub>z</sub> response is generated both from channelling and induction.

**TM Mode:** For this response, the electric field excitation flows perpendicular to strike generating quasi-static charges on faces and the horizontal H field (H<sub>x</sub>) flows parallel to strike. Since, the XZ face is very small for this model, little current is induced. The charges on the faces have a small dipole moment due to the thinness of the model.

For the rest of the models unless otherwise noted, the parameters used are:

Strike Length: 1km

Depth Extent: 1km

Conductance: 100S

Depth to Top: 10m

Background: Thin-overburden (10m), Resistive Basement (1000 Ohm-m)

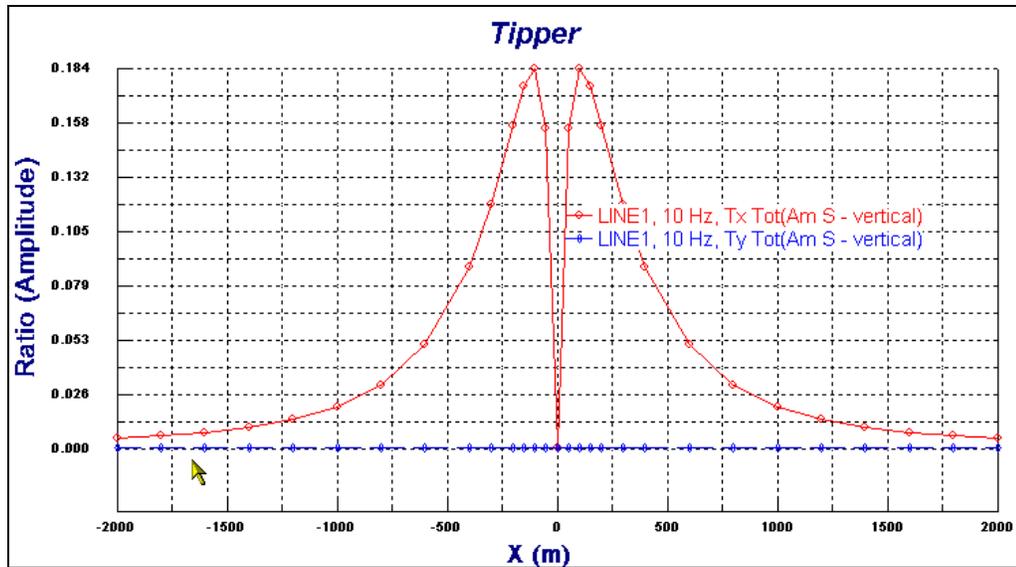


Figure A-1 – Calculated Tipper components at 10 Hz for above model parameters.

Figure A1 shows the Tipper (Tx,Ty) Amplitudes at 10Hz using a 10Ωm overburden. Note small Ty (i.e. quasi-TM response)

### Amplitude Response

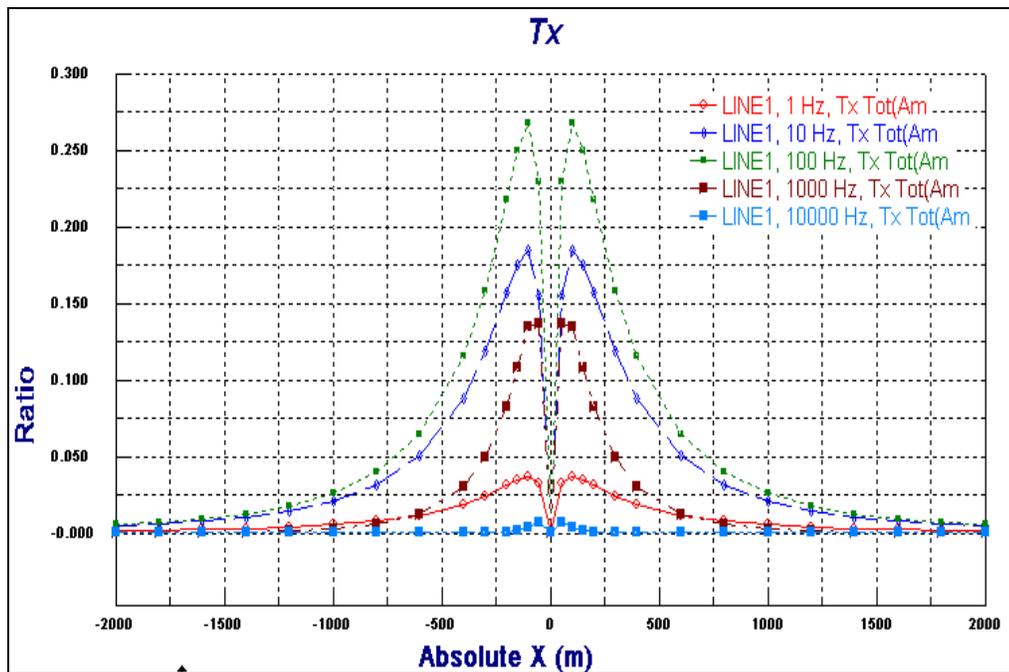
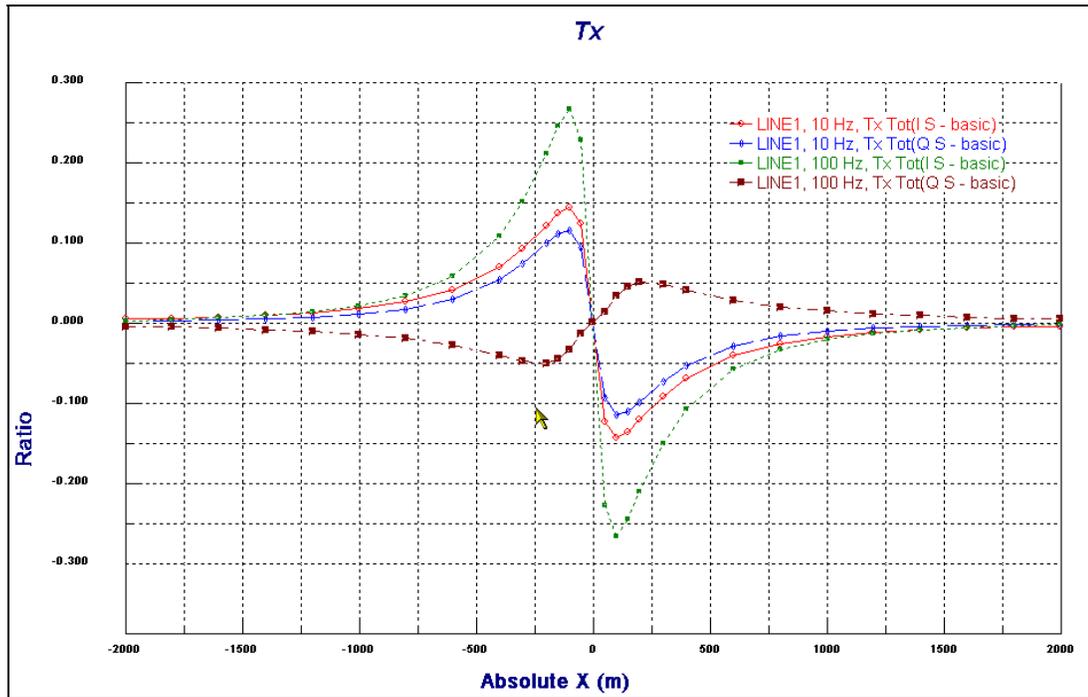


Figure A-2 – Calculated Tx component of the Tipper at various frequencies

The (Tx) response amplitude at 1,10,100,1000,10000Hz. Peak amplitude at 100Hz.

## In-Phase and Quadrature Response



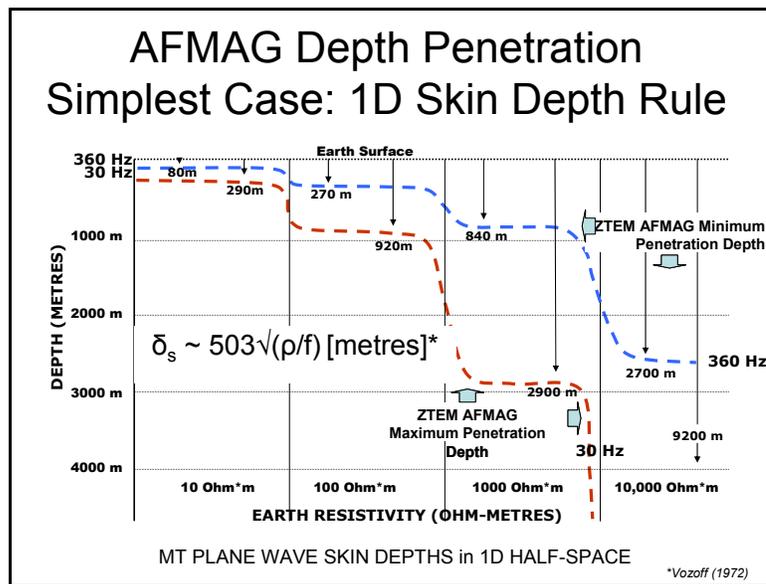
**Figure A-3** – Calculated In-phase and Quadrature of the Tx component at various frequencies

Figure A-3 shows the In-phase and Quadrature response at 10 and 100Hz. Note the crossovers in the In-phase and Quadrature, and the phase reversal in the Quadrature responses from low to high frequencies.

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Geotech Ltd.  
September, 2007

## AFMAG Source Fields and ZTEM method<sup>1</sup>

AFMAG uses naturally occurring audio frequency magnetic fields as the source of the primary field signal, and therefore requires no transmitter (Ward, 1959). The primary fields resemble those from VLF except that they are lower frequency (tens & hundreds of Hz versus tens of kHz) and are usually not as strongly directionally polarized (Labson et al., 1985). These EM fields used in AFMAG are derived from worldwide atmospheric thunderstorm activity, have the unique characteristic of being uniform, planar and horizontal, and also propagate vertically into the earth – to great depth, up to several km, as determined by the magnetotelluric (MT) skin depth (Vozoff, 1972), which is directly proportional to the ratio of the bedrock resistivity to the frequency (Figure A4).



**Figure A4:** MT Skin Depth Penetrations for ZTEM in 30-360Hz and 10-1000 ohm resistivity

At the frequencies used for ZTEM, the penetration depths likely range between approx. 600m to 2km in this region (approx. 1k ohm-m avg. resistivity assumed), according to the following equation for the Bostick skin depth  $\delta_B = 356 * \sqrt{(\rho / f)}$  metres (Bostick, 1977), which is considered appropriate as a rule of thumb equivalent depth estimate.

The other unique aspect of AFMAG fields is that they react to relative contrasts in the resistivity, and therefore do not depend on the absolute conductance, as measured using inductive EM systems, such as VTEM. Hence poorly, conductive targets, such as alteration zones and fault zones can be mapped, as well as higher conductance features, like graphitic units. Conversely, resistive targets can also be detected using AFMAG— provided they are of a sufficient size and contrast to produce a vertical field anomaly. Indeed resistors produce reversed anomalies relative to conductive features. Hence AFMAG can be effective as an all-round resistivity mapping tool, making it unique among airborne EM methods. A series of 2D synthetic models that illustrate these aspects have been created using the 2D

<sup>1</sup>From: Legault, J.M., Kumar, H., and Milicevic, B. (2009): ZTEM tipper AFMAG and 2D inversion results over an unconformity uranium target in northern Saskatchewan, Expanded Abstract submitted to Society of Exploration Geophysics SEG conference, Houston, Tx, Nov-2009, 5 pp.

forward MT modelling code of Wannamaker et al. (1987) and are presented in figures A5-A7.

The tipper from a single site contains information on the dimensionality of the subsurface (Pedersen, 1998), for example, in a horizontally stratified or 1D earth,  $T=0$  and as such  $H_z$  is absent. For a 2D earth with the y-axis along strike,  $T_y=0$  and  $H_z = T_x * H_x$ . In 3D earths, both  $T_x$  and  $T_y$  will be non-zero.  $H_z$  is therefore only present, as a secondary field, due to a lateral resistivity contrast, whereas the horizontal  $H_x$  and  $H_y$  fields are a mixture of secondary and primary fields (Stodt et al., 1981). But, as an approximation, as in the telluric-magnetotelluric method (T-MT; Hermance and Thayer, 1975) used by distributed MT acquisition systems, the horizontal fields are assumed to be practically uniform, which is particularly useful for rapid reconnaissance mapping purposes. By measuring the vertical magnetic field  $H_x$ , using a mobile receiver and the orthogonal horizontal  $H_x$  and  $H_y$  fields at a fixed base station reference site, ZTEM is a direct adaptation of this technique for airborne AFMAG surveying.

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Geotech Ltd.

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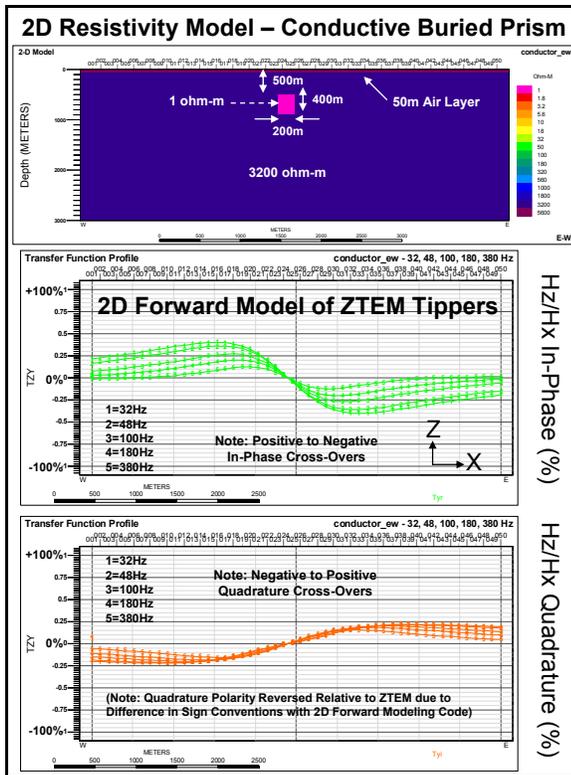


Figure A5: 2D synthetic forward model Tipper responses (Tzy) for conductive brick model.

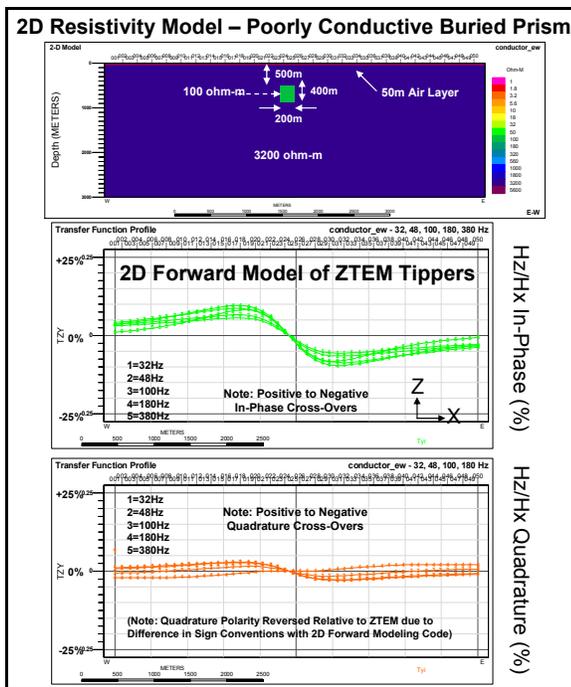


Figure A6: 2D synthetic forward model Tipper response (Tzx) for poorly conductive brick model.

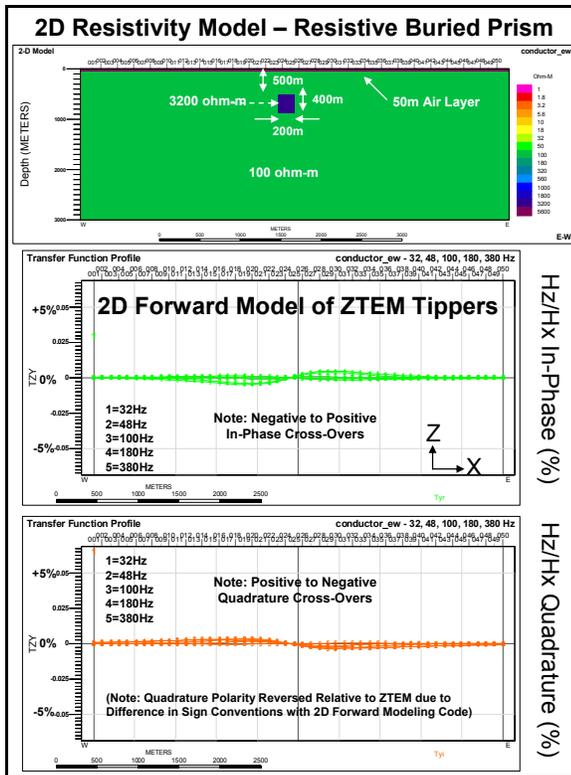


Figure A7: 2D synthetic forward model Tipper response (Tzx) for resistive brick model.

## APPENDIX B

### ZTEM (AIRBORNE AFMAG) TESTS OVER UNCONFORMITY URANIUM DEPOSITS<sup>7</sup>

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**Key Words:** ZTEM, AFMAG, electromagnetic, airborne, uranium, Athabasca.

#### INTRODUCTION

A series of demonstration tests were conducted using the ZTEM, airborne AFMAG system over deep targets in the Athabasca Basin of Saskatchewan, Canada. These tests were conducted in mid-2008 and were flown to test ZTEM's ability to detect large conductive targets at depth; deeper than conventional airborne EM methods. Data are presented over areas where the conductors are located 450-600 metres beneath the surface. As well, a case of ZTEM following the plunge of a conductor to over 800 metres depth is shown.

#### BACKGROUND

The ZTEM system is the latest implementation of an airborne AFMAG system first commercialized in late 2006. ZTEM uses a large, 8 metre diameter airborne air core coil, slung from a helicopter, to measure the vertical component of the AFMAG signal. Two 4 metre square coils are deployed on the ground to measure the horizontal field. The ZTEM system has flown successful demonstration surveys over porphyry copper deposits in the southwest USA (Zang et al., 2008).

ZTEM was tested in the Athabasca Basin in Canada in May of 2008 to determine its depth of investigation and to determine its suitability for mapping deep conductors in the crystalline basement. Over 30% of the world's U3O8 is mined in the Athabasca Basin from unconformity uranium deposits. Unconformity uranium deposits of the Athabasca Basin are often associated with conductors located in the crystalline basement. The search for economic uranium deposits is moving to areas of the basin which are deeper and beyond the detection limits of modern airborne instrumentation. This creates the requirement for a system which can detect conductivity past the detection limits of modern traditional EM systems. This was the motivation behind the field trials of the ZTEM system in the Athabasca Basin. Several areas where known deep conductors (450-600m+) were located were flown. Also, a test survey block in the northern part of the basin was able to trace a deep and plunging conductor to depths that no other airborne EM system has been able to achieve.

#### ATHABASCA BASIN GEOLOGY

The high-grade uranium deposits within the Athabasca Basin are associated with the unconformity between the essentially flat-lying Proterozoic Athabasca Group sandstones and the underlying Archean-Paleoproterozoic metamorphic and igneous basement rocks. The deposits occupy a range of positions from wholly basement-hosted to wholly sediment-hosted, at structurally favourable sites

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<sup>7</sup> Extended abstract submitted to 20<sup>TH</sup> ASEG International Geophysical Conference & Exhibition, Adelaide, AU, 22-26 Feb, 2009.

in the interface between the deeply weathered basement and overlying sediments of the Athabasca Basin (Ruzicka, 1997). The locations of These deposits are lithologically and structurally controlled by the sub-Athabasca unconformity and basement faults and fracture zones, which are localized in graphitic pelitic gneisses that may flank structurally competent Archean granitoid domes (Quirt, 1989).

In general, most of the known important deposits tend to occur within a few tens to a few hundred metres of the unconformity and within 500 m of the current ground surface. This may be more of a limitation of exploration techniques. There is no reason to believe that the distribution of the deposits is dependent on the modern day depth of burial.

Empirically, the geophysical exploration model for unconformity type uranium targets has been to search for large basement structures which postdate the sandstone deposition of the basement (Matthews et. al, 1997). All the deposits located so far are associated with fault structures associated with a graphitic conductive basement. An alteration zone of clay silicification and enrichment around the deposits probably leads to magnetite destruction causing the magnetic low observed around the deposits. The clay alteration should give rise to a resistivity low signature about the deposits. The low conductivity of the clay alteration makes it a difficult target for airborne EM if it is buried at significant depth.

## ZTEM INSTRUMENTATION AND PRESENTATION

ZTEM is an airborne AFMAG system introduced by Geotech Ltd. of Canada in early 2007 (Lo et al., 2008). In a ZTEM survey, a single vertical dipole air-core coil is flown over the survey area in a grid pattern similar to other airborne electromagnetic surveys. Two orthogonal, air-core, horizontal axis coils placed close to the survey site measures the horizontal EM fields for reference. A GPS array on the airborne coil monitors its attitude for post-flight corrections.

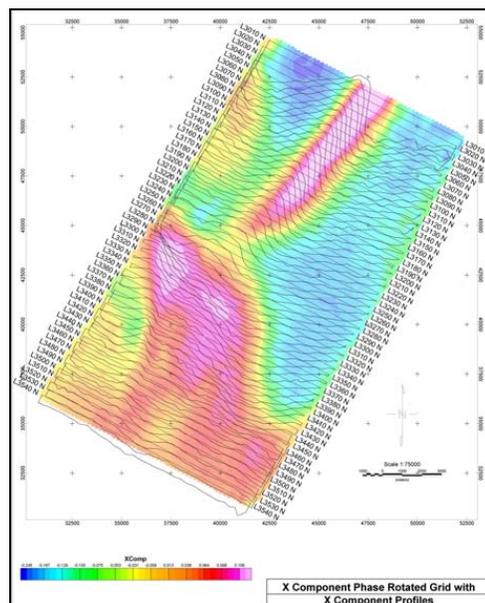


Figure 1 – Stacked profiles of the x-component Tipper over the gridded values of the phase rotated x-component data. Note that the cross-overs in the profiles are now peaks on the image.

As the source field is assumed to be far away, the excitation of the ground is more or less uniform. For large structures, the signal fall-off will be much slower than from a dipole source, such as those energized by traditional airborne systems. With the ZTEM system being less susceptible to terrain clearance, the planned ground clearance height is higher and the terrain drape is looser as compared to standard helicopter EM surveys.

The two Tippers obtained from the relationship between the vertical airborne coil and the two ground coils have a cross-over over a steeply dipping, plate-like body. The cross-overs can be made into local maxima via a 90 degree phase rotation which allows for easier interpretation of the gridded values. Figure 1 is an example of this transformation.

To present the data of both Tippers as one image, we calculate a parameter termed the DT which is the horizontal divergence of the two Tippers, much in the same manner as the “peaker” parameter in VLF (Pedersen, 1998). The DT is typically plotted with an inverted colour bar as it is negative over a steeply dipping thin body.

## ZTEM RESULTS – NORTHERN ATHABASCA BASIN

Figure 2 shows gridded values from a number of ZTEM lines over an area where the sedimentary cover is approximately 450-600 metres thick. A number of traditional EM systems have also been flown over this block. While they were able to detect conductors, the resolution of the conductive features is not nearly as detailed as the information provided by ZTEM.

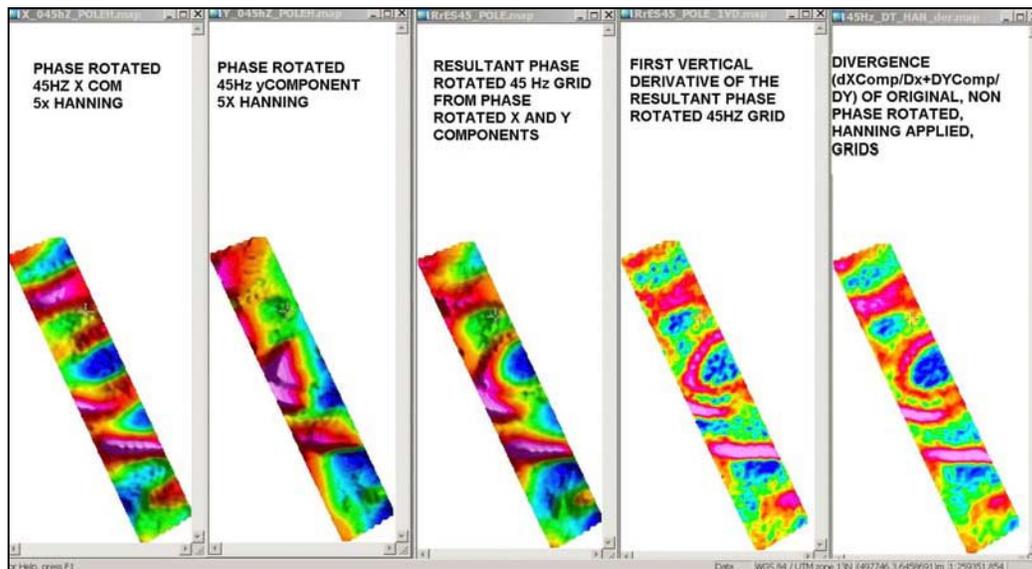


Figure 2 – ZTEM results over an area of 450-600 metre thick sedimentary cover, showing (From Left to Right): 1) Phase-rotated (PR) In-phase X tipper (XIP), 2) PR of YIP, 3) Total Phase-rotated (TPR) for XIP+YIP, 4) CVG of In-phase TPR, and 5) Divergence (DT) of In-phase Tipper (XIP+YIP) (right).

Figure 3, from another area, shows the data from one of the larger blocks that was flown. It is a 3D composite image of the DT at various frequencies plotted at the equivalent skin depth assuming a 1,000 ohm-m average resistivity.

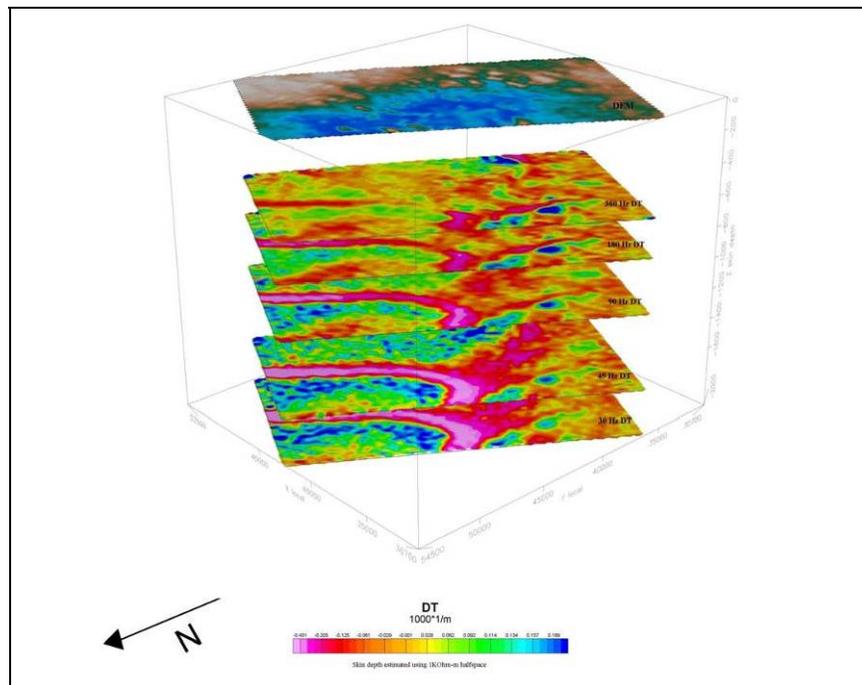


Figure 3 - Perspective view of In-phase DT's of different frequencies plotted according to the skin depth (using a 1,000 ohm-m Earth).

The data in Figure 3 come from a survey over the north rim of the Athabasca Basin. The sandstone cover is about 500m on the left hand side of the image, and progressively getting deeper to the right. It is about 700m in the middle part of the image and over 800 metres thick on the right middle portion where exploration drilling is concentrated. Starting in the middle left and trending to the right of the image, there is a known graphitic shear.

In the uppermost (600m) “depth slice”, Figure 3 shows a linear conductive feature that progressively weakens as one moves to the right until it is no longer seen. This is interpreted to be due to the graphitic shear conductor plunging deeper past the depth of investigation of the 360 Hz data. The lower frequencies penetrate more into the sedimentary cover that is deeper towards the right. DT's of decreasing frequency show the linear conductive feature extending more and more to the right. The feature also strengthens/sharpens into a synformal shape with lower frequencies. This fits with what the known geology of a plunging conductor at depth is doing.

At the nose of the fold, in the right third of the images, we also see another, broader anomalous zone that trends towards the back of the image. At this location, two radioactive springs are situated. These spring waters which are anomalously high in uranium and radon may reflect the upward migration of deep waters along faults, suggesting structural targets in areas where basalinal waters may have tapped a radioactive source. This broad DT trend might be the plunge of the fold axis that is aligned away from the front of the image. An anomaly along this trend, at the highest frequency, that steadily grows with each decreasing frequency can be seen. This might represent an alteration zone in the sandstone that is detected at the shallowest depth. By about the 90Hz DT depth slice or so, we are possibly in the deeper basement and into a basement graphitic unit.

## CONCLUSIONS

A number of successful ZTEM tests were conducted over the Athabasca Basin. The tests demonstrated that ZTEM can easily detect conductivity to 800 metres beneath relatively resistive sedimentary cover. Assuming a 1,000 ohm-metre resistivity, the skin depth of the 30 Hz data is approximately 2,000 metres. The 30 Hz data presented have good signal to noise ratios indicating a deep depth of exploration. The observation that ZTEM may be detecting the clay alteration above the crystalline basement is a significant advantage for exploration of unconformity uranium deposits.

More demonstration surveys are planned in the Athabasca Basin later this year. And more target types for testing are also planned.

## ACKNOWLEDGEMENTS

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**APPENDIX C**  
**ZTEM 2D INVERSION RESULTS**

(SEE DIGITAL ARCHIVE)