

MAYO LAKE MINERALS INC.  
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# Assessment Report

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On the

**Anderson Claim Group**

ML 1-367  
STP1-26

Describing an

**Airborne Geophysical Survey**

105M 10/11/14

Latitude 63.70742N, Longitude 135.22445E

In the

Mayo Mining District  
Yukon Territory

By

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## Introduction

The Anderson Claim Group (the “Property”) is owned 100% by Mayo Lake Minerals Inc. The Property is located northeast of Mayo (Figure 1) to the south of the Keno Hill District which has produced over 200 million ounces of silver from veins cutting Mississippian quartzite and schist. The Property lies in the northeastern portion of the Tintina Gold Belt, a loosely defined 2100 km long zone of gold and silver deposits extending across central Alaska and Yukon. Nearby deposits include Dublin Gulch (6.4Moz Au), Keno Hill (20.5Moz Ag), Red Mountain (1.3Moz Au) and Marge (Au, Ag, Cu, Pb, and Zn).

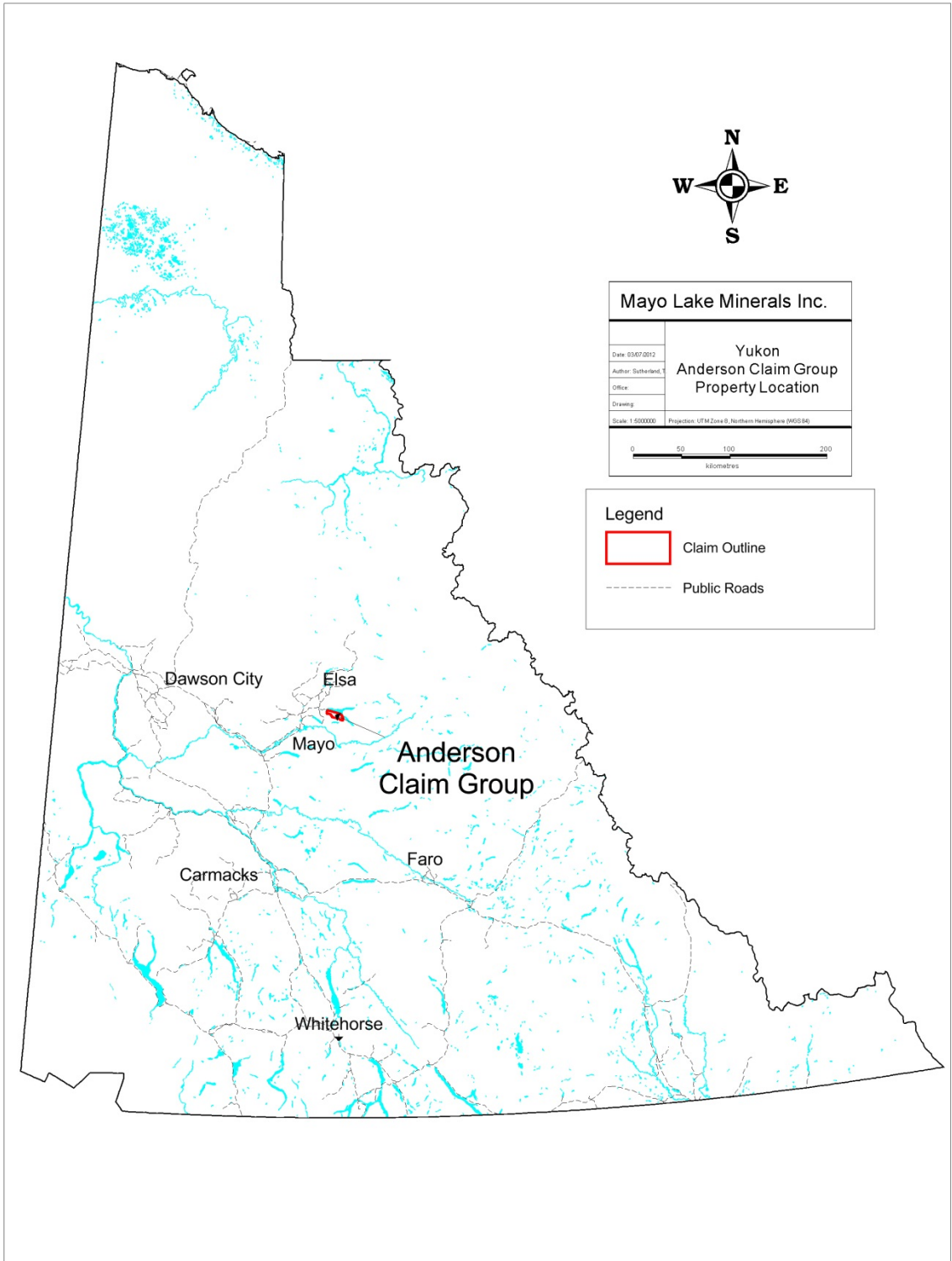
This report outlines the survey operations, data processing activities and interpretation related to an airborne geophysical survey flown between February 24, 2012 and March 02, 2012. The airborne geophysical survey was flown by Precision GeoSurveys Inc. for Mayo Lake Minerals Inc. and saw the acquisition of high resolution magnetic data.

## Location and Access

The Property consists of 392 contiguous claims located approximately 35 kilometers north east of Mayo, Yukon, Canada and spans NTS map sheets 105M 10/11/14. They are registered in the Mayo Mining district under the name of Mayo Lake Minerals Inc. The claims are listed in table 1 below with the location of the claims shown on **Figure 2**.

**Table 1** Claims comprising the Anderson Claim Group

Grant number	Claim Name	Map sheet	Group Name
YD92295-YD92298	ML295-ML298	105M 10/11/14	Anderson
YE31001-YE31200	ML1-ML200	105M 10/11/14	Anderson
YE31301-YE31366	ML301-ML366	105M 10/11/14	Anderson
YE31401-YE31489	ML201-ML289	105M 10/11/14	Anderson
YE45851-YE45876	STP1-STP26	105M 10/11/14	Anderson
YE31390-YE31394	ML290-ML294	105M 10/11/14	Anderson
YE31499-YE31500	ML299-ML300	105M 10/11/14	Anderson



**Figure 1** Anderson Property location

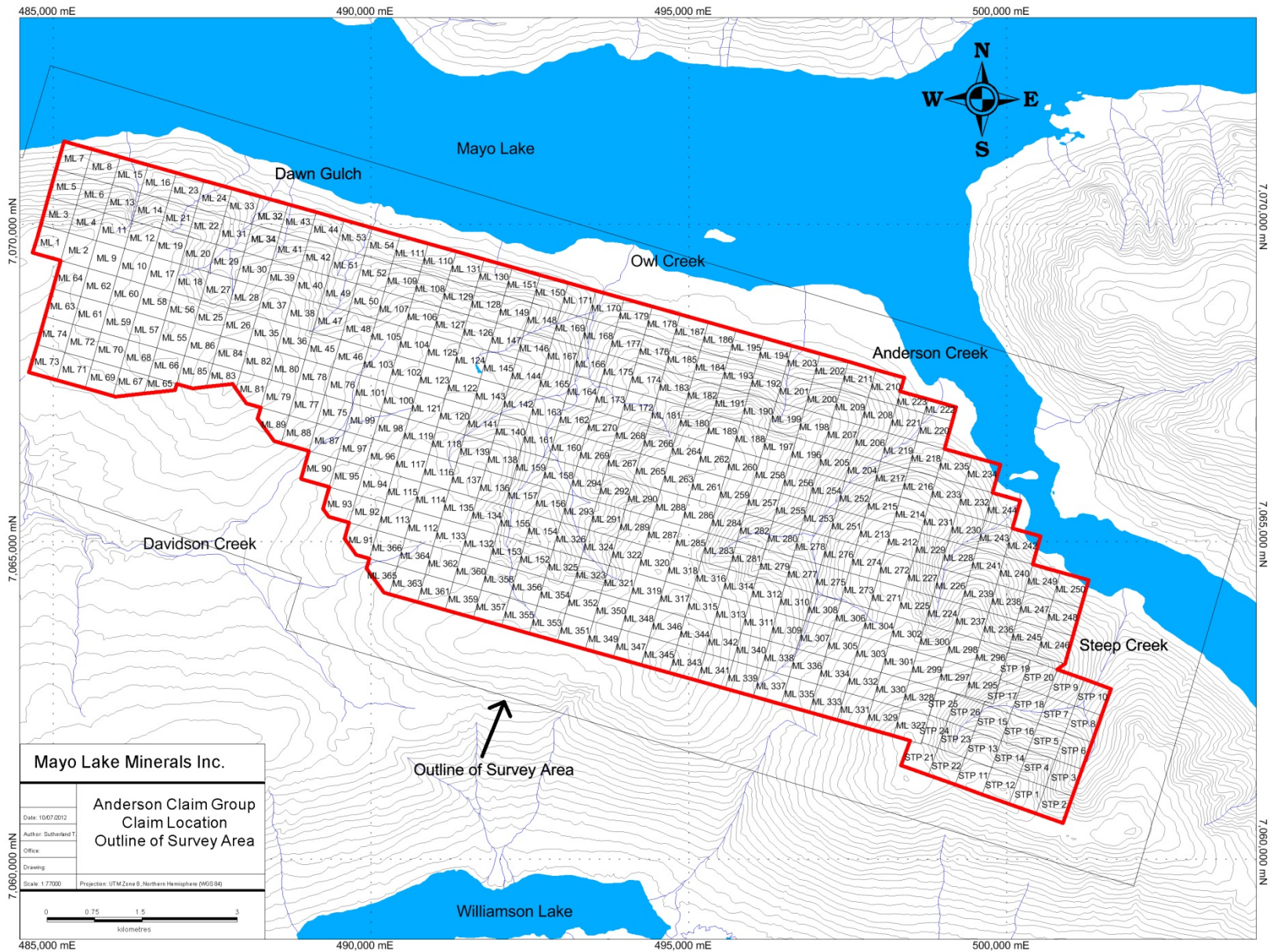
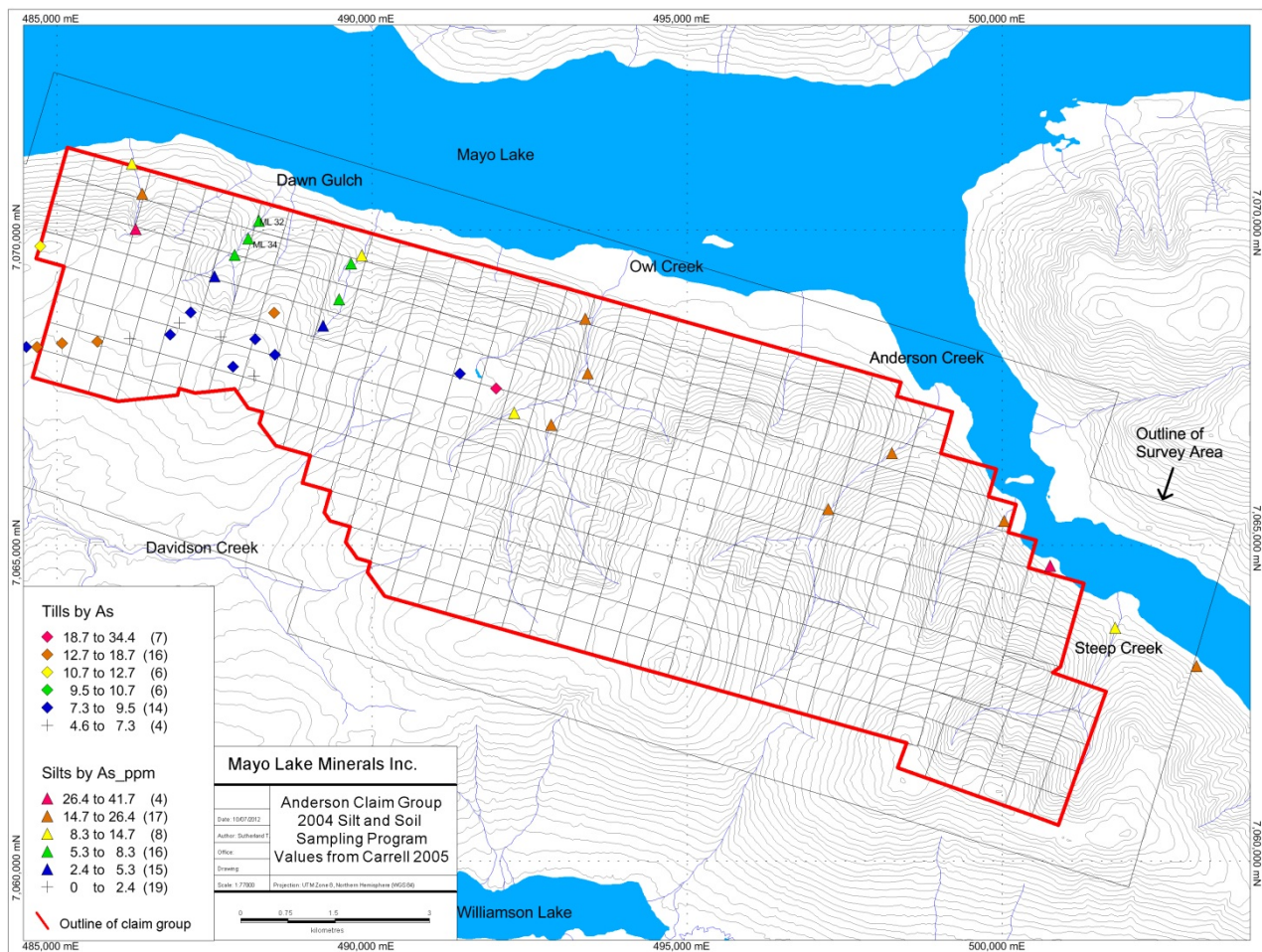


Figure 2 Location of survey relative to the Anderson claim group

Access is provided by a pre-existing, four-wheel drive road that follows Davidson Creek through the center of the claim group, and connects to a government-maintained, gravel highway (Silver Trail) 20 km west of the property. The Silver Trail connects with the Yukon's paved or chip-sealed highway network at Mayo (**Figure 1**)

## Previous Work

The majority of previous work appears to consist of placer mining and exploration focused on Anderson and Owl Creeks, most notable is a report by LeBarge 2002. Well documented exploration consists of regional government sampling programs or exploration conducted during 2004.



**Figure 3** Arsenic from till and silt from 2004 sampling program.

Project Keno Hill headed by Chris Gleeson of the Geologic Survey of Canada was completed in 19868. It covered creeks draining to the north of the property with a stream sediment, water, heavy minerals and litho geochemistry programs (Gleeson et al., 1965-1968, Gleeson & Boyle, 1972, <sup>1</sup>Gleeson, 1980, <sup>2</sup>Gleeson, 1980). This project was systematic for some elements and indicated the presence of several

anomalies in all media; however not all samples were assayed for all elements leaving the nature of the anomalies uncertain.

The Property was again stream sediment sampled by the Geologic Survey of Canada in 1987; however this survey provided insufficient coverage to make any sound interpretations regarding mineralization.

In 2004 Wade Carrell under the Yukon mining incentive program completed a till and stream sediment sampling around the western arm of Mayo Lake. This program overlaps the claims, but the incompleteness of coverage makes interpretation of anomalies difficult (**Figure 3**).

Interest in the area was prompted by productive placer operations along Anderson and Owl creek and anomalies in data from Operation Keno. A galena vein was noted in a placer cut along Davidson Creek though no samples appear to have been taken to date.

## **Geomorphology**

The Property extends from Dawn Gulch in the west across the highlands between of Mayo Lake and Williamson Lake to Steep creek in the east (**Figure 2**). The valleys, which these lakes occupy, are broad and U-shaped due to glacier ice being funneled down them from east to west during Pleistocene glaciations. Tributaries to the larger valleys are confined by moderate to steep slopes. Ridges generally have moderate slopes. Streams draining the property are all part of the Yukon River watershed.

The Property has been subjected to multiple glaciations. The youngest Pleistocene, McConnell Glaciation was confined to the trunk valleys occupied by Mayo Lake to the north and Janet and Williamson lakes to the south. These valleys were filled with fast flowing ice that scoured their bottoms and sides. The upper limit of the McConnell Glaciation is marked by lateral moraines and kame terraces along the sides of these trunk valleys. The broad upland forming the central part of claim group was covered by glacial ice during an older glaciation, the Reid Glaciation. Due to the elevation of the upland, the ice was probably cold-based and transport of rock and debris was minimal as is evidenced by landforms.

Outcrop is sparse on the property, rarely exceeding 5% in any area. Soil development is immature with Pleistocene glaciation having scoured some areas and deposited variable thicknesses of till on others.

Vegetation is predominantly black spruce with willow and alder understory. Lowlands and north facing slopes exhibit a thick cover of organic matter, moss and Labrador tea. Southern slopes are similarly vegetated but also include balsam and poplar groves. Permafrost is likely pervasive on north facing slopes but discontinuous on southern exposures.



## Regional Geology and Mineralization

The Property is located within the Selwyn Basin and lies within the Tintina Gold Belt. Simplified regional geology as shown on **Figure 4** depicts Upper Proterozoic to Lower Cambrian Hyland Group stratigraphy thrust over Paleozoic metasedimentary units of the Earn Group, locally Upper Schist, Keno Hill Quartzite and Lower Schist. All stratigraphic units have been intruded by the Mid-Cretaceous age Tombstone Plutonic Suite, which host several known gold deposits including Dublin Gulch.

Mapping in this region was done by D.C. Murphy and C.F. Roots who integrated numerous geological publications dating from 1920 to 1995. Their work resulted in a series of maps at 1:50,000 scale (Murphy, 1997) and a regional map at 1:250,000 scale (Roots, 1997).

The dominant structural features in the area are a series of thrusts, related to the Robert Service Thrust sheet. These thrusts are commonly difficult to distinguish from older thrusts due to the strong penetrative structural fabric related to the underlying Tombstone thrust sheet.

The Keno Hill silver vein camp has produced over two hundred million ounces of silver since 1921. Productive veins occur in the Keno Hill Quartzite and underlying Lower Schist. Although the faults with associated mineralization (“mineralized faults”) are believed to cut through the Robert Service Thrust and continue into the Hyland Group, no significant silver mineralization has been discovered above the thrust. Ore shoots within the veins typically consist of galena, sphalerite and tetrahedrite with siderite or quartz gangue. The mineralized faults trend northeast and dip steeply to the southeast with left lateral offsets ranging from a few metres to over a hundred metres (Boyle, 1965). Cross faults offsetting the vein faults trend perpendicular to them and dip 20° to 30° to the southwest.

Two major gold occurrences are located within 35 km of the Property. All are located in the upper plate of the Robert Service Thrust and are hosted by Hyland Group metasedimentary rocks. Sheeted veins related to the Tombstone Plutonic Suite contain most of the gold at Dublin Gulch and Gold Dome, formerly Scheelite Dome. The largest, most advanced project is Dublin Gulch which has completed a definitive feasibility study and hosts an open pit resource containing 6.3 million ounces of gold.

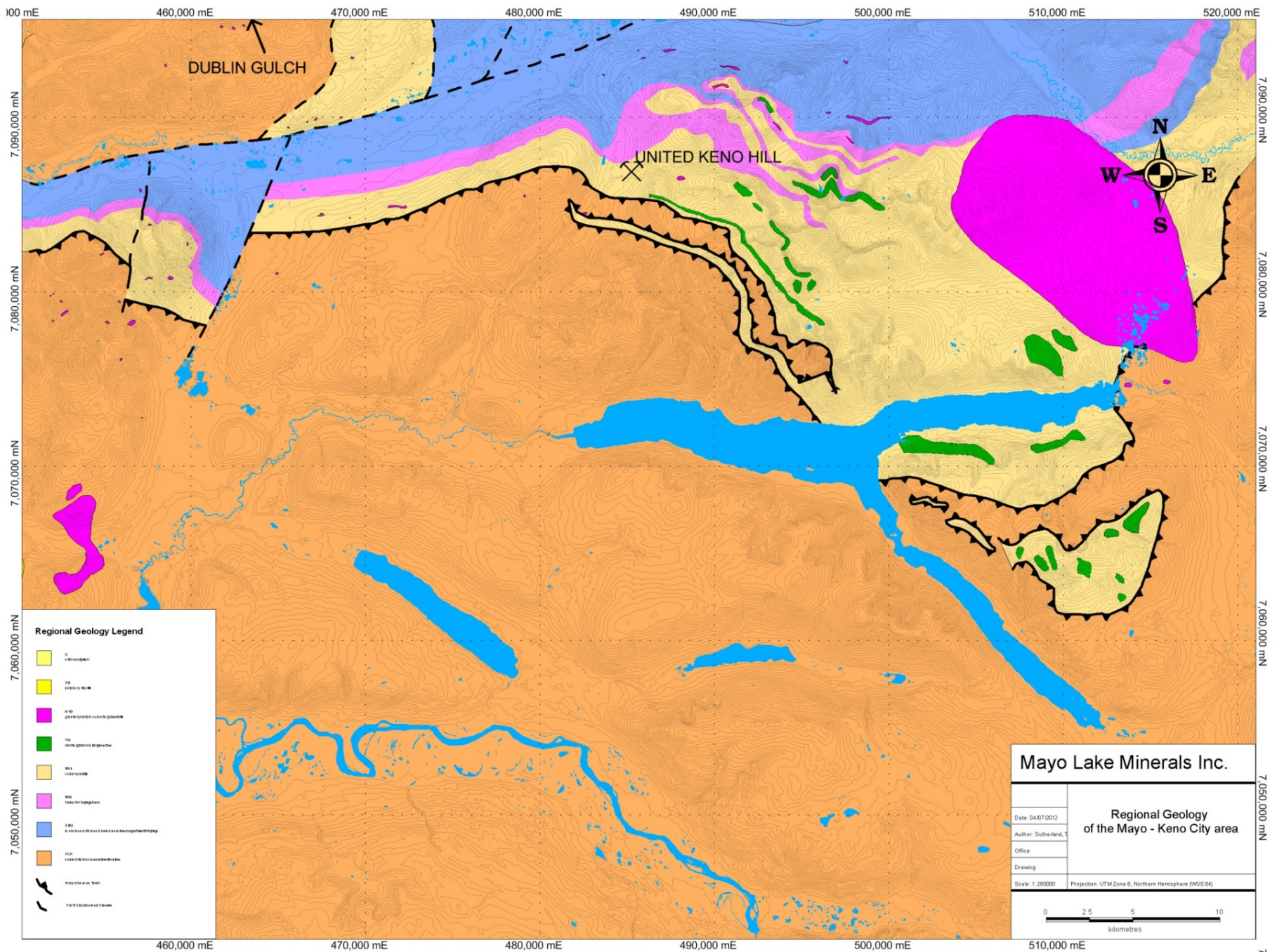
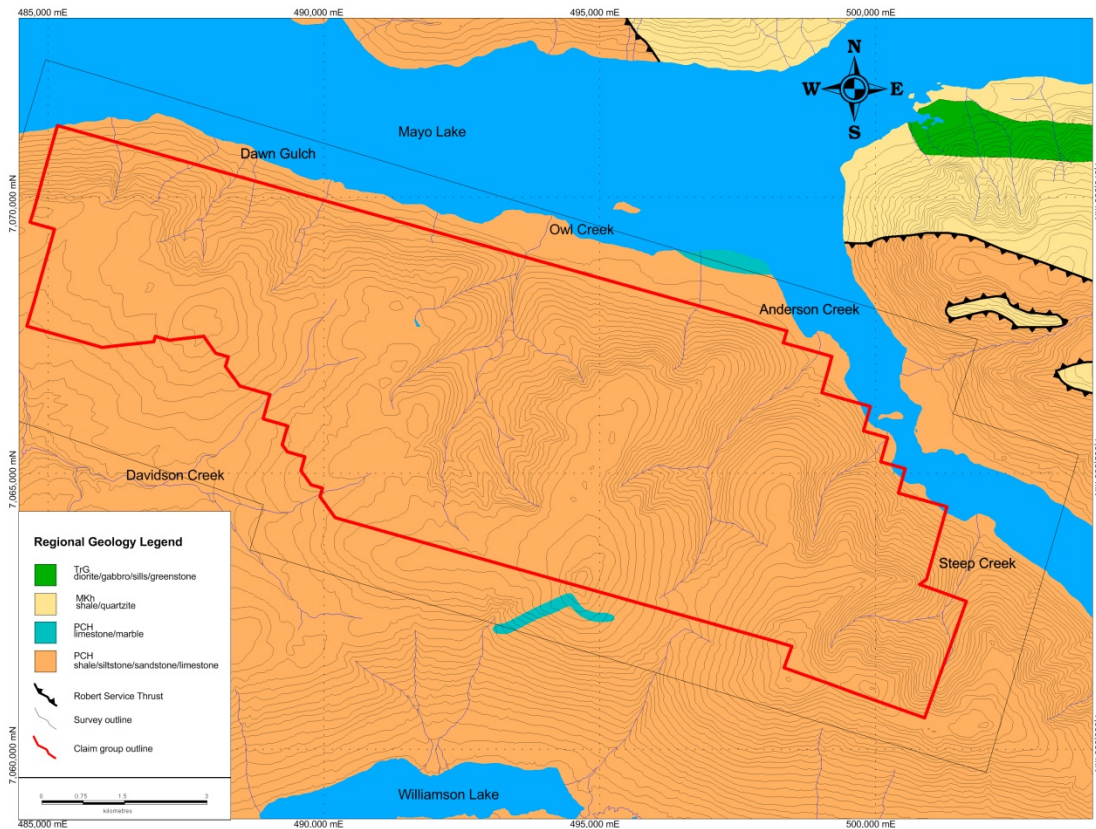


Figure 4 Regional Geology

## Property Geology

The Property's geology is shown on **Figure 5**. The Property is underlain by the Hyland Group metasediments south of the Robert service thrust. Most stratigraphy has bedding parallel to foliation, which strikes southeast (Roots, 1997) and dips between 45° and 70° to the west.



**Figure 5** Property Geology

## Stratigraphy

Hyland Group is locally mapped as the Yusezyu Formation consisting of turbiditic quartz sandstone and grit with rare limestone and Minor maroon argillite (Roots 1997).

## Intrusions

Cretaceous Tombstone Suite intrusions are described as buff to grey weathering dykes, sills and small plugs with aplitic or granitic textures. Some of these bodies are locally quartz and feldspar phyrlic and mineralized with disseminated arsenopyrite (Becker 2000). Although none are mapped in the area, observations of granodiorite boulders in Owl Creek are strongly suggestive of intrusions subcropping in the area.

Triassic metadiorite sills which may be present are dark green, foliated, fine to medium grained and weather in a blocky fashion. The main mineral assemblage consists of amphibole, chlorite and plagioclase. Sills are common in the Ern group but also known within in the Hyland group.

### **Structure**

The Robert Service Thrust marks the contact between the Hyland Group and the Ern group. This structure dips shallowly to the south. Local faults and shear zones dip steeply and are roughly north-northwest and east-northeast trending, respectively. Most of these structures appear to have small displacements. Small scale isoclinal folds are likely and Roots, 1997 interpreted a large scale overturned fold at the Robert Service Thrust north of the claims. The axis of these folds parallels foliation. Broad post-metamorphic folding is also present and is indicated by variable foliation dips. No large scale fold hinges have been mapped on the claims so the amplitude and frequency of local folds is not known.

### **Mineralization**

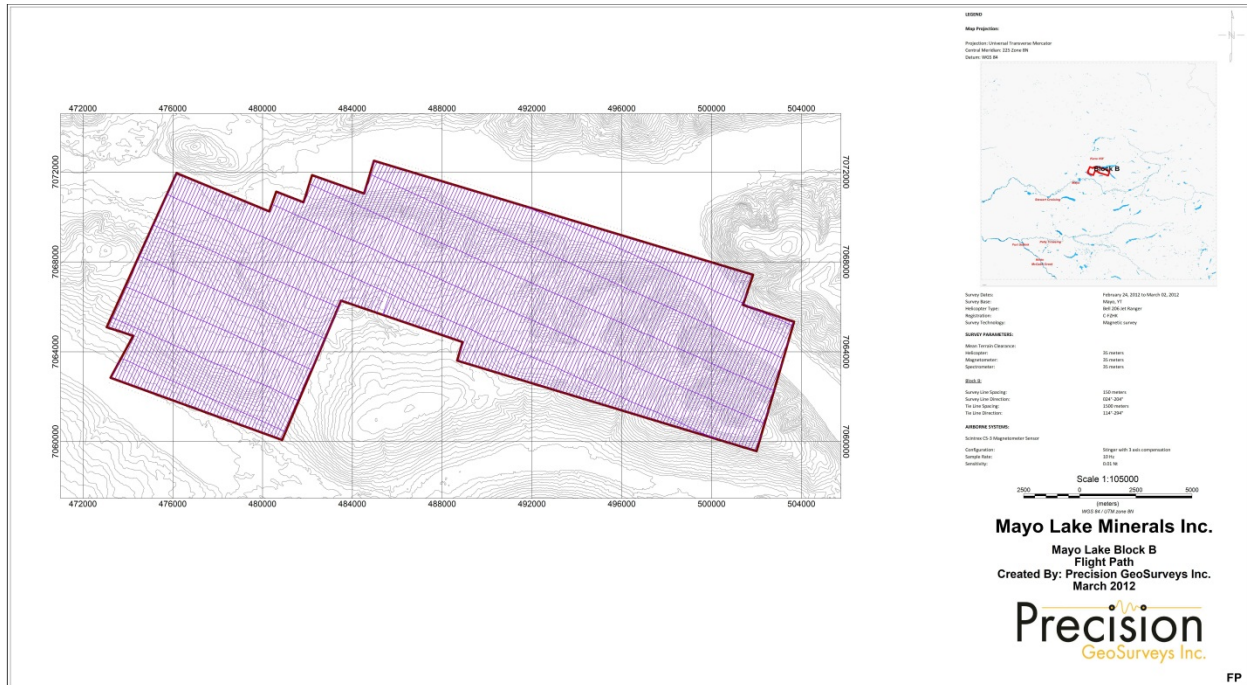
The Anderson Property is a prospective host to, a variety of gold deposit styles related to the complex Mesozoic and Cenozoic metamorphic, plutonic and volcanic history associated with the formation of the northern Canadian Cordilleran orogeny. The most attractive of these are:

- Polymetallic veins of the Keno Hill type that are typically high in silver, lead, and zinc and are related to the intrusion of the Tombstone Plutonic Suite.
- Reduced Intrusion Related gold ores related to post-orogenic, mid-Cretaceous plutons that intruded Selwyn Basin sedimentary rocks.
- Orogenic gold veins formed in response to two events. The oldest veins, Jurassic in age, formed after peak metamorphism of the Yukon-Tanana Terrane, and their erosion likely contributed to the Klondike placer deposits.
- Indications of Carlin type gold mineralization are present in the area (Lynch, 2006) though the local geology makes this type of mineralization questionable.

There is also good potential to host tungsten skarn similar to the Ray Gulch Tungsten Skarn, related to the intrusion of the Tombstone suite plutons.

## Geophysics

The Property was flown concurrently with the Davidson Claim Group, also owned by Mayo Lake Minerals Inc. Collectively these were designated Block B for the duration of the survey. The total block is approximately 7 km by 30 km, including a buffer zone of ~1km around the outside of the claims to prevent edge effect. The survey area in relation to the claims can be observed on Figure 2. A total of 1675 line kilometers of magnetic data were flown for this survey; this includes tie lines and survey lines. The survey lines were flown at 150 meter spacings, at a 024°/204° heading; the tie lines were flown at 1500 m spacings, at a heading of 114°/294° (**Figure 6**).



**Figure 6** Flight lines from Precision Geosurveys Inc. Combined Davidson and Anderson properties were designated Block B for the Duration of the survey. A larger Version Of this figure is also included in Appendix C

### Survey Specifications:

The geodetic system used for this survey is WGS 84 and the area is contained in zone 8N. The survey data acquisition specifications and coordinates for Block B are specified In **Tables 2&3**

**Table 2** Anderson Claim Group survey acquisition specifications

Survey block	Line Spacing m	Planned Survey Line km	Planned Tie Line km	Total Planned Line km	Total Actual Flown km	Survey Line Orientation	Nominal Survey Height m
B	150	1528	157	1685	1675	024°/204°	35

**Table 3** Mayo Lake Block B survey polygon coordinates using WGS 84 in zone 8N.

Longitude	Latitude	Easting	Northing
135.305131	63.77962968	484957.5	7072494
135.313891	63.76657112	484518.7	7071041
135.360983	63.77377515	482200.7	7071856
135.368528	63.76291498	481822.2	7070648
135.393158	63.76709489	480609.5	7071121
135.399514	63.75919786	480291.4	7070243
135.483348	63.77424291	476168.3	7071948
135.545235	63.71252851	473057.6	7065096
135.521292	63.70912599	474237.7	7064707
135.541368	63.69231426	473230.1	7062842
135.386571	63.66796241	480868.5	7060073
135.334188	63.72375339	483492.8	7066275
135.224451	63.7074172	488907	7064431
135.229389	63.70002346	488660.1	7063608
134.959655	63.66402456	501997	7059577
134.925681	63.71570365	503672.2	7065337
134.971719	63.72236108	501396.8	7066077
134.962674	63.73442954	501842.7	7067422

### **Magnetic Surveying:**

Magnetic surveying is probably the most common airborne survey to be conducted for both mineral and hydrocarbon exploration. The type of survey specifications, instrumentation, and interpretation procedures, depend on the objectives of the survey. Typically magnetic surveys are performed for:

- Geological Mapping, 1) to aid mapping of lithology, structure and alteration in both hard rock environments, 2) to map basement lithology, structure and alteration in sedimentary basins or 3) regional tectonic studies.
- Depth to Basement mapping for exploration in sedimentary basins or mineralization associated with the basement surface.

### **Survey Operations:**

Precision GeoSurveys flew the Property using a Bell 206 BIII Jet Ranger. The survey lines were flown at a nominal line spacing of one hundred and fifty (150) meters and the tie lines were flown at 1500 m spacing for the magnetometer. The average survey elevation was 32 meters vertically above ground for the Mayo Lake Block B. The experience of the pilot helped to ensure that the data quality objectives were met and that the safety of the flight crew was never compromised given the potential risks involved in airborne surveying.

The base of operations for this survey was in Mayo, YT, Canada. The Precision crew consisted of three members:

Ola Vaage - Pilot

Stian Vaage - Operator

Shawn Walker - On-site Geophysicist

The survey was started February 24, 2012 and completed March 02, 2012. The survey encountered several delays due to poor weather conditions and magnetic solar storms.

**Base Station Details:**

A magnetic base station is set up before every flight to ensure that diurnal activity is recorded during the survey flights. In this case, the base station was located in bushes north east of Janet Lake south of Anderson Claim Group (**Table 4**).

**Table 4** Base station details

Station Name	Easting/Northing	Longitude/Latitude	Datum/Projection
GEM 4	476735E 7061033N	135.470E 63.676N	WGS84, Zone 8N

Base station readings were reviewed at regular intervals to ensure that no data was collected during periods with high diurnal activity (greater than 5 nT per minute). The base station was installed at a magnetically noise-free area, away from metallic items such as steel objects, vehicles, or power lines. The magnetic variations recorded from the stationary base station are removed from the magnetic data recorded in flight to ensure that the anomalies seen are real and not due to solar activity.

**Equipment:**

For this survey, a magnetometer, base station, laser altimeter, and a data acquisition system were required to carry out the survey and collect quality, high resolution magnetic data. The survey magnetometer is carried in an approved “stinger” configuration to enhance flight safety and improve data quality in this mountainous terrain.

**AGIS:**

The Airborne Geophysical Information System, AGIS, is the main computer used in data recording, data synchronizing, displaying real-time QC data for the geophysical operator, and to generate navigation information for the pilot display system. The AGIS was manufactured by Pico Envirotec; therefore the system uses standardized Pico software and external sensors that are connected to the system via RS-232 serial communication cables. The AGIS data format is easily converted into Geosoft or ASCII file formats by a supplied conversion program called PEIView. Additional Pico software allows for post real time magnetic compensation and survey quality control procedures.

**Magnetometer:**

The magnetometer used by Precision GeoSurveys is a Scintrex cesium vapor CS-3 magnetometer. The system was housed in a front mounted “stinger”. The CS-3 is a high sensitivity/low noise magnetometer with automatic hemisphere switching and a wide voltage range, the static noise rating for the unit is +/- 0.01 nT. On the AGIS screen the operator can view the raw magnetic response, the magnetic fourth difference and the survey altitude for immediate QC of the magnetic data. The magnetic data is recorded at 10 Hz. A magnetic compensator is also used to remove noise created by the movement of the helicopter as it pitches, rolls and yaws within the Earth’s geomagnetic field.

**Base Station:**

For monitoring and recording of the Earth’s diurnal magnetic field variation, Precision GeoSurveys operates the GEM GSM-19T magnetometer base station continuously throughout the airborne data acquisition survey. The base station is mounted as close to the survey blocks, and in an area with low magnetic gradient, as possible to give accurate magnetic field data. It is also mounted in an area away from electric transmission power lines and moving ferrous objects, such as aircrafts and motor vehicles. The GEM GSM-19T magnetometer with GPS uses the proton precession technology sampling at a rate of 0.5 Hz. The GSM-19T has an accuracy of +/- 0.2 nT at 1 Hz. Base station data recorded in the solid-state memory of the base station, are downloaded onto a field laptop using GEMLink 5.0 software. Profile plots of the base station readings are generated and updated at the end of each survey day.

**Laser Altimeter:**

The pilot is provided with terrain guidance and clearance with an Acuity AccuRange AR3000 laser altimeter. This is attached at the aft end of the magnetometer boom. The AR3000 sensor is a time-of-flight sensor that measures distance by a rapidly modulated and collimated laser beam that creates a dot on the target surface. The maximum range of the laser altimeter is 300 m off of natural surfaces with 90% reflectance and 3 km off special reflectors. Within the sensor unit, reflected signal light is collected by the lens and focused onto a photodiode. Through serial communications and analog outputs, the distance data are transmitted and collected by the AGIS at 10 Hz.

**Data Acquisition Magnetometer Checks:**

At the start of the survey, airborne magnetometer system tests were conducted. The three tests conducted were the compensation flight test, heading error test, and the lag test.

**Compensation Flight Test:**

During aeromagnetic surveying, noise is introduced to the magnetic data by the aircraft itself. Movement in the aircraft (roll, pitch and yaw) and the permanent magnetization of the aircraft parts (engine and other ferric objects) are large contributing factors to this noise. To remove this noise a process called magnetic compensation is implemented. The magnetic compensation process starts with a test flight at the beginning of the survey where the aircraft flies in the four orthogonal headings required for the survey (024°/204° and 114°/294° in the case of this survey) at an altitude where there is no ground effect in the magnetic data. In each heading, three specified roll, pitch, and yaw maneuvers are performed by the pilot; these maneuvers provide the data that is required to calculate the necessary parameters for compensating the magnetic data.



**Lag Test:**

Followed by the compensation flight, a lag test is conducted. This is performed to determine the relationship between the time the digital reading was recorded by the instrument and the time for the position fix for fiducial of the reading was obtained by the GPS system. The test was flown in the four orthogonal headings over an identifiable magnetic anomaly (ie.Truck, Trailer, etc.) at survey speed and height. A lag of 5 fiducials (0.5 seconds) was determined from the lag test.

**Heading Error Test:**

To determine the magnetic heading effect a cloverleaf pattern flight test is conducted. The cloverleaf test is flown in the same heading as the survey and tie lines. For each direction, it must fly over a recognizable feature on the ground in order to estimate the heading error.

**Data Processing:**

After a survey flight all of the data is collected and several procedures are undertaken to ensure that the data meets a high standard of quality. All data was processed using Pico Envirotec software and Geosoft Oasis Montaj geophysical processing software.

**Magnetic Processing:**

Before any processing and editing of the raw magnetic data, the data obtained from the compensation flight test must first be applied to the raw magnetic data. A computer program called PEIComp is used to create a model from the compensation flight test for each survey to remove the noise induced by aircraft movement; this model is applied to each survey flight so the data can be further processed. Filtering is applied to the laser altimeter data to remove vegetation clutter and to show the actual ground clearance. To remove vegetation clutter a Rolling Statistic filter is applied to the laser altimeter data and a low pass filter is used to smooth out the laser altimeter profile to remove isolated noise. As a result, filtering the data will yield a more uniform surface in close conformance with the actual terrain. The processing of the magnetic data involved the correction for diurnal variations. The base station data collected is edited, plotted and merged into a Geosoft (.gdb) database daily. The airborne magnetic data is corrected for diurnal variations by subtracting the observed magnetic base station deviations. Following the diurnal correction was a lag correction. A lag correction of 0.5 seconds was applied to the total magnetic field data to compensate for the lag in the recording system as the magnetometer sensor flies 5.70 m ahead of the GPS antenna. Lastly, a heading correction was applied to the data. Some filtering of the magnetic data is also required. A Non Linear filter was used for spike removal. The 1D Non-Linear Filter is ideal for removing very short wavelength, but high amplitude features from data. It is often thought of as a noise spike-rejection filter, but it can also be effective for removing short wavelength geological features, such as signals from surficial features. The 1D Non-Linear Filter is used to locate and remove data that is recognized as noise. The algorithm is 'non- linear' because it looks at each data point and decides if that datum is noise or a valid signal. If the point is noise, it is simply removed and replaced by an estimate based on surrounding data points. Parts of the data that are not considered noise are not modified. The combination of a Non-Linear filter for noise removal and a low pass trend enhancement filter resulted in level data as indicated in the results section of this report. The low pass filter smoothes out the magnetic profile to remove isolated noise. The corrected magnetic data from the survey and tie lines was used to level the data all together. Two forms of levelling are applied

to the corrected data: conventional levelling and micro-levelling. There are two components to conventional levelling; the first involves statistical levelling of magnetic data to correct miss ties (intersection errors) followed by specific patterns or trends. For the second component, tie lines are brought to a common regional base value, using the mean value of the cross-level error. To obtain the best possible levelled data, individual corrections are edited at selected intersections. Lastly, micro-levelling is applied to the corrected conventional levelled data. This will remove any residual line-direction-related noise, and any low amplitude component of flight line noise, that still remains in the data after tie line levelling.

### Final Data Format

Abbreviations used in the GDB files are listed in **table 5**:

**Table 5** Mayo Lake Block B survey channel abbreviations

Channel	Units	Description
<b>X</b>	m	UTM Easting - WGS84 Zone8 North
<b>Y</b>	m	UTM Northing - WGS84 Zone 8 North
<b>Galt</b>	m	GPS height - WGS84 Zone 8 North
<b>DTM</b>	m	Digital Terrain Model
<b>Lalt</b>	m	Laser Altimeter readings
<b>GPStime</b>	Hours:min:secs	GPS time
<b>Basemag</b>	nT	Base station diurnal data
<b>Mag</b>	nT	Total Magnetic Intensity

The file format will be provided in two (2) formats, the first will be a .GDB file for use in Geosoft Oasis Montaj, the second text format will be a .XYZ file. A complete file, provided in each format will contain only magnetic data. Hard copies of the data collected and flight lines are included in appendix C.

A review of the total magnetic intensity maps and the calculated vertical gradient maps show numerous features that suggest faults, intrusions and alteration zones. The geophysical features indicate the presence of mainly intersecting WNW and NE faults. At some fault intersections, the plotted maps indicate the possibility of intrusions and/or alteration zones. The data requires further interpretation by an expert to better understand the precise nature and location of the above discussed features.

## Discussion and Conclusions

The Tintina Gold Belt, in which the Property lies, extends for more than 2000 km along the length of the North American Cordillera in Alaska and Yukon. It is comprised of gold and silver deposits that are spatial and temporal associated with Cretaceous age magmatism. In general, bismuth-tungsten-tellurium signatures characterize deposits hosted by granitoid rocks while those hosted by sedimentary rocks and dyke systems characteristically have arsenic-antimony signatures (Goldfarb, et al, 2000).

Significant differences in structural styles, levels of deposit emplacement, ore-fluid chemistry and gold grades suggest that the prospects represent a broad range of depositional environments.

Several features make deposits in the Tintina Gold Belt desirable exploration and mining targets. The deposits have good size potential, for example Dublin Gulch is reported to contain 6.3 million ounces gold at a grade of 0.62 g/t and Brewery Creek deposit is reported to contain 825,000 ounces gold at a grade of 1.36 g/t prior to production. The Fort Knox deposit is reported to contain 7 million ounces gold, at a grade of 0.9 g/t and POGO, an orogenic vein deposit, contains approximately 4 million ounces gold at a grade of 16 g/t.

The Property is most likely to host deposits related to the Tombstone Plutonic Suite. Mineralization would be late peripheral silver-lead-zinc veins (Keno Hill Type), or steeply dipping structurally controlled gold veins and stockworks (Reduced Intrusion Related Gold) within both intrusive and metasedimentary host rocks. If carbonate horizons are present they may react with mineralizing fluids and host either gold-arsenic-copper-bismuth-tungsten skarn or Carlin-type mineralization. The aeromagnetics reported on in this report have outlined structural, alteration and intrusive targets, which in combination with stream sediment and till metal and indicator anomalies and the location of placer deposits, can guide further exploration for gold and silver deposits.

Work is currently being undertaken by an independent geophysicist to provide greater interpolation of geophysical data. Further exploration should involve geochemical soil and stream sediment sampling to investigate potential structures alterations or intrusions defined by the airborne magnetics and to follow up Operation Keno anomalies. Prospecting and detailed mapping of the anomalies will also be required to define the extent of intrusions, alterations and potential mineralization.

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## **Appendix A**

### Statement of Expenditures

Cost per km: \$67.89

Number of Km: 974

Total Expenditure: \$66124.86

Number of Claims: 392

Expenditure per claim: \$168.67

This survey was completed as part of a larger geophysics program that covered five additional nearby claim blocks and one additional adjoining claim block. As a result many of the flight lines transect this claim group and the adjoining claim group. In total, on these two adjoining claim groups (Block B) 1675km of geophysical survey were flown at a rate of \$67.89 per km for a total of \$113715.75 for both claim groups together. This breakdown is based on the percentage of claims in the block from this claim group, 392 of a total 674 or 58.2% of the claims in the block.

## Appendix B

### Statement of Qualifications

Dr. V.N. Rampton, P.Eng.

Rampton Resources Group Inc.

P.O. Box 158, 3226 Carp Road

Carp, Ontario. K0A 1L0

Tel: (613) 836-2594; E-mail: [vrampton@rogers.com](mailto:vrampton@rogers.com)

I, V.N. Rampton, Ph.D., P.Eng., do hereby certify that

1. I am President of Rampton Resource Group Inc. and President and CEO of Mayo Lake Minerals Inc.
2. I graduated with a B.Sc. Eng. (Geology) from University of Manitoba in 1962 and with a Ph.D. (Geology) from University of Minnesota in 1969.
3. I am a member of the Professional Engineers of Ontario.
4. I have worked as a geologist for over 50 years, specifically in mineral exploration for the last 40 years, in Canada, Slovakia, Finland, Spain, Burkina Faso, Jamaica and the United States of America.
5. By reason of my education, affiliation with a professional organization (as defined in N.I. 43-101) and past relevant work experience, I fulfill the requirements of a "qualified person" for the purposes of N.I. 43-101.
6. By reason of my being CEO, President and a Director and my capital holdings in Mayo Lake Minerals Inc., I am not an "independent qualified person" for the purposes of N.I. 43-101.
7. I am a co-author and bare total responsibility for the preparation of the technical report titled "Assessment report on the Anderson Claim Group Geophysical Survey". The technical information contained within the report was collected for us by Precision Geosurveys Inc.

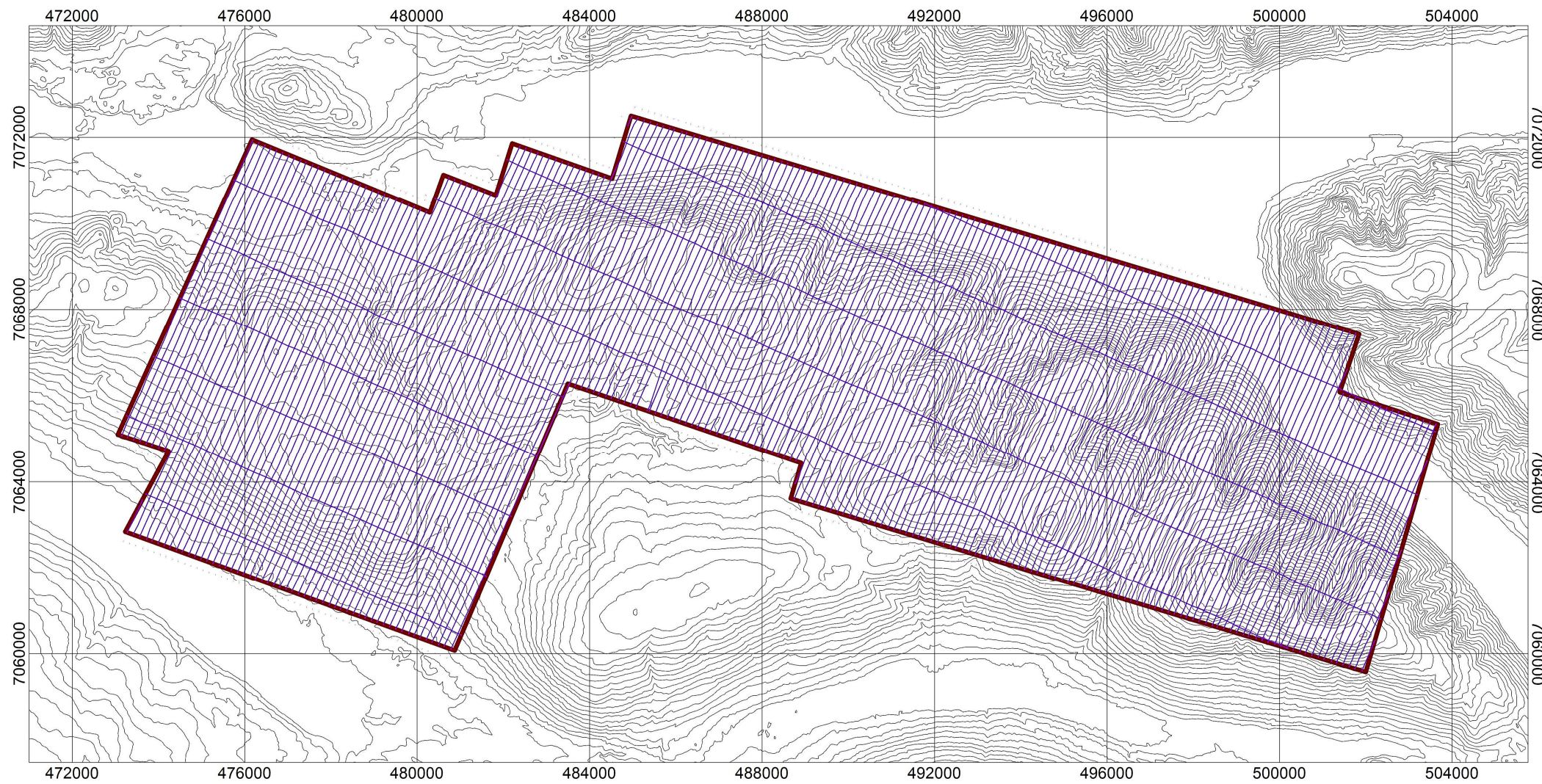
Dated the 13<sup>th</sup> day of August, 2012.



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Vernon Neil Rampton

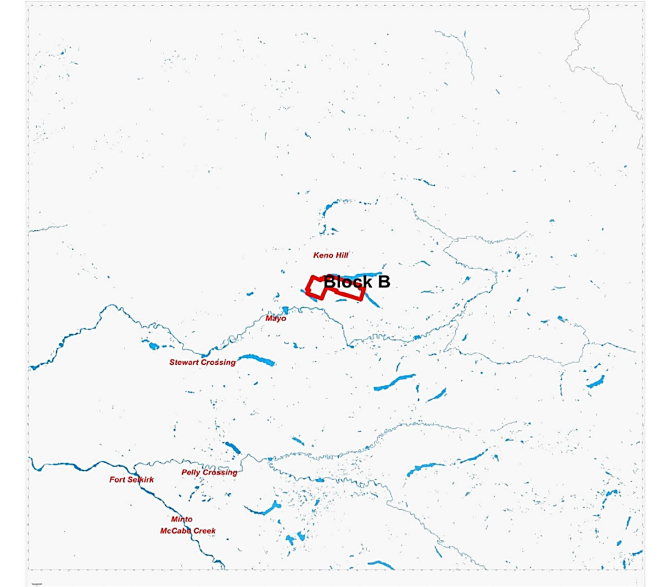
**Appendix C**  
Geophysical Data



**LEGEND**

**Map Projection:**

Projection: Universal Transverse Mercator  
 Central Meridian: 225 Zone 8N  
 Datum: WGS 84



Survey Dates:	February 24, 2012 to March 02, 2012
Survey Base:	Mayo, YT
Helicopter Type:	Bell 206 Jet Ranger
Registration:	C-FZHK
Survey Technology:	Magnetic survey

**SURVEY PARAMETERS:**

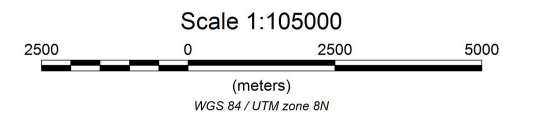
Mean Terrain Clearance:	35 meters
Helicopter:	35 meters
Magnetometer:	35 meters
Spectrometer:	35 meters

**Block B:**

Survey Line Spacing:	150 meters
Survey Line Direction:	024°-204°
Tie Line Spacing:	1500 meters
Tie Line Direction:	114°-294°

**AIRBORNE SYSTEMS:**

Scintrex CS-3 Magnetometer Sensor	
Configuration:	Stinger with 3 axis compensation
Sample Rate:	10 Hz
Sensitivity:	0.01 Nt



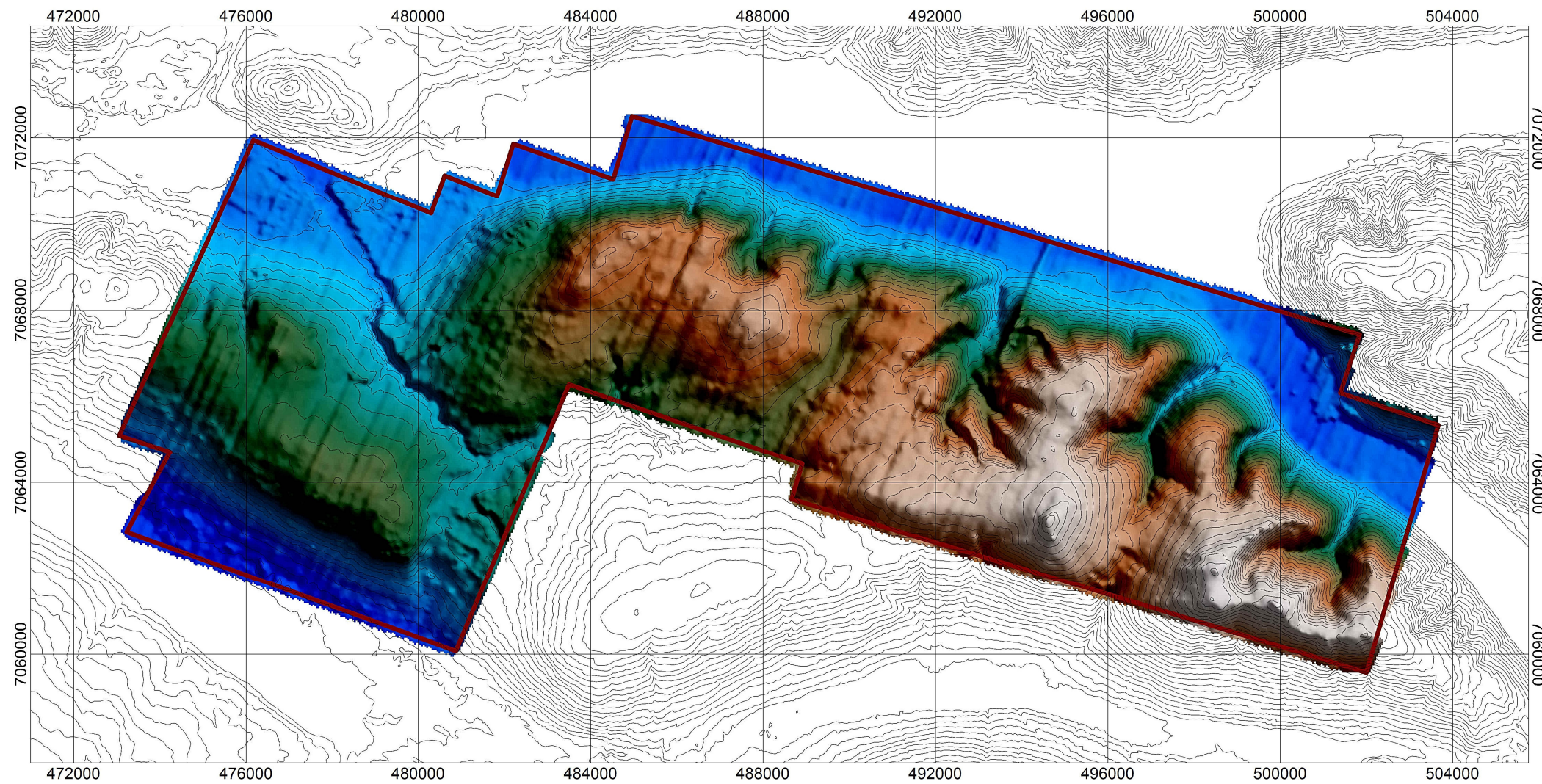
**Mayo Lake Minerals Inc.**

**Mayo Lake Block B  
 Flight Path**

**Created By: Precision GeoSurveys Inc.  
 March 2012**



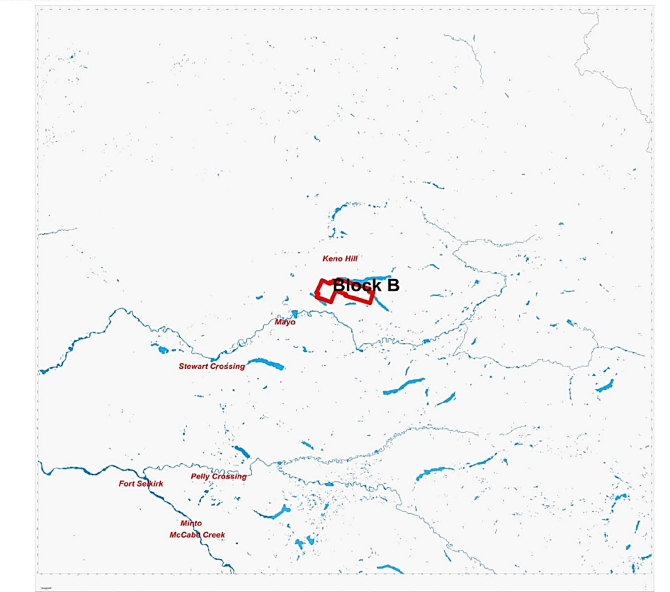




**LEGEND**

**Map Projection:**

Projection: Universal Transverse Mercator  
 Central Meridian: 225 Zone 8N  
 Datum: WGS 84



Survey Dates: February 24, 2012 to March 02, 2012  
 Survey Base: Mayo, VT  
 Helicopter Type: Bell 206 Jet Ranger  
 Registration: C-FZHK  
 Survey Technology: Magnetic survey

**SURVEY PARAMETERS:**

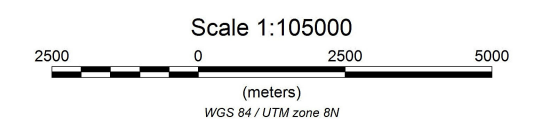
Mean Terrain Clearance: 35 meters  
 Helicopter: 35 meters  
 Magnetometer: 35 meters  
 Spectrometer: 35 meters

**Block B:**

Survey Line Spacing: 150 meters  
 Survey Line Direction: 024°-204°  
 Tie Line Spacing: 1500 meters  
 Tie Line Direction: 114°-294°

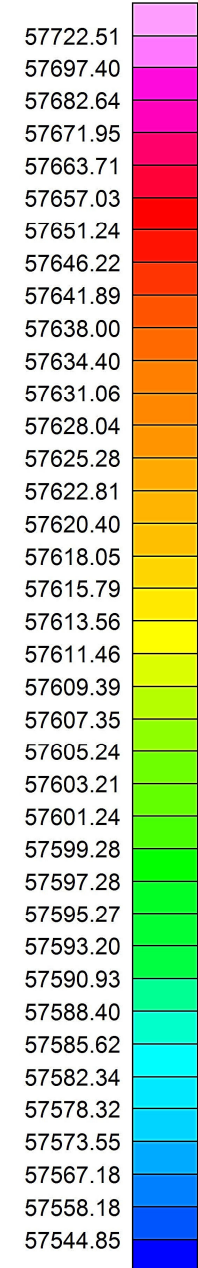
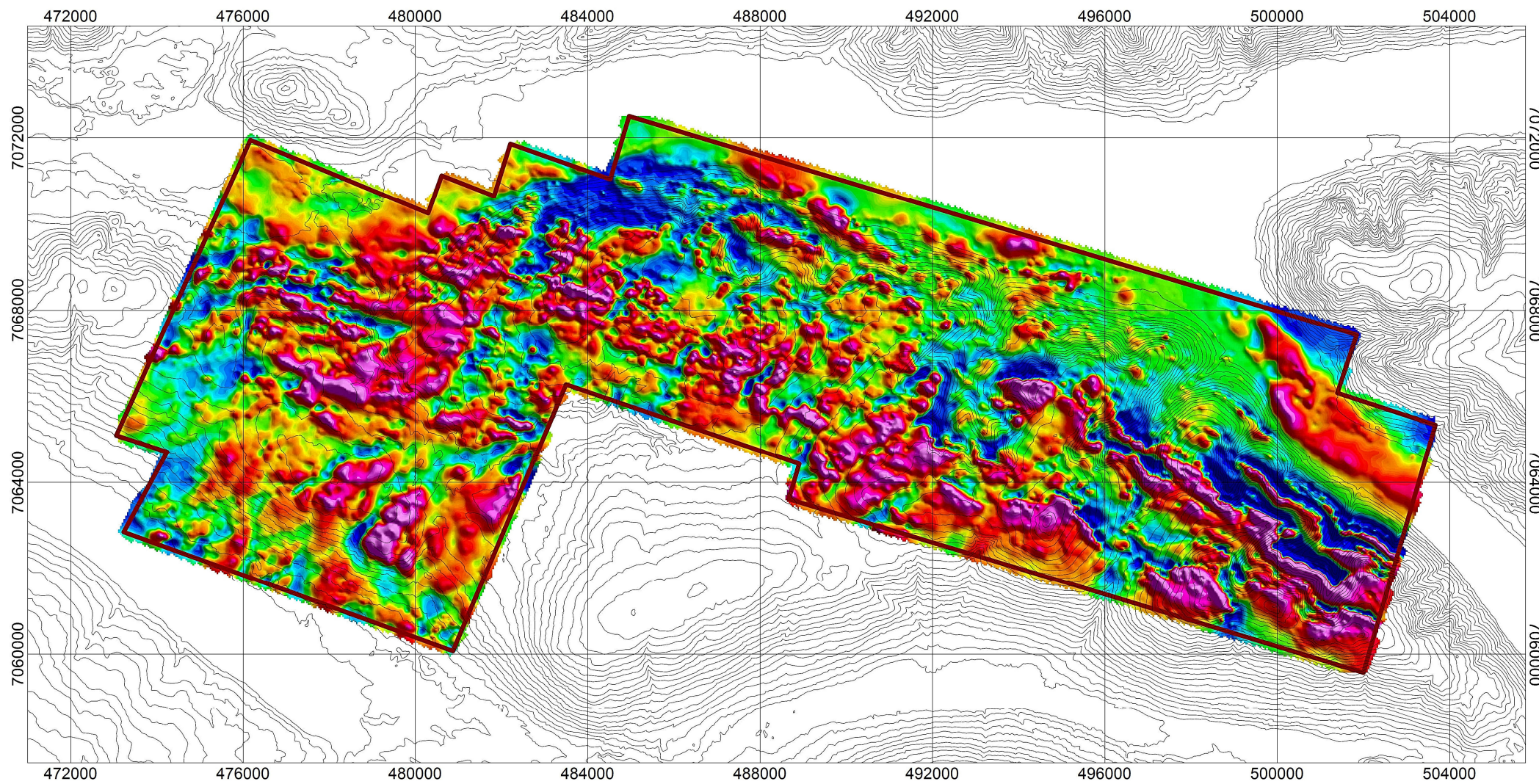
**AIRBORNE SYSTEMS:**

Scintrex CS-3 Magnetometer Sensor  
 Configuration: Stinger with 3 axis compensation  
 Sample Rate: 10 Hz  
 Sensitivity: 0.01 Nt



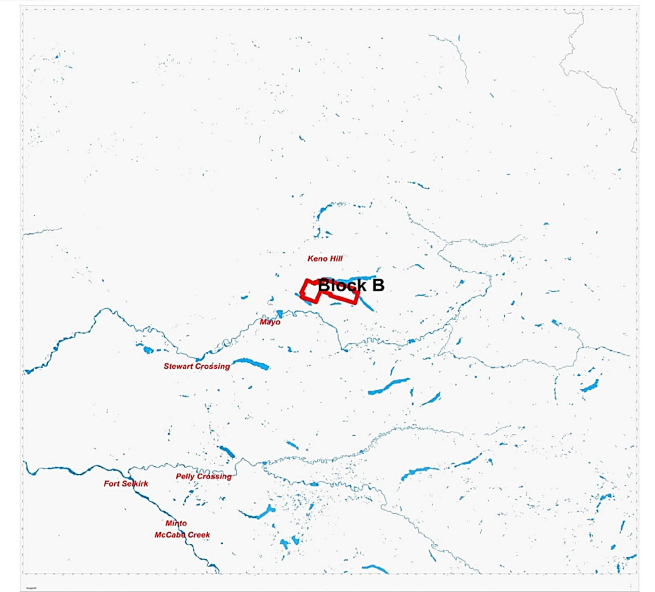
**Mayo Lake Minerals Inc.**  
 Mayo Lake Block B  
 Digital Terrain Model  
 Created By: Precision GeoSurveys Inc.  
 March 2012





TMI (nT)

**LEGEND**  
 Map Projection:  
 Projection: Universal Transverse Mercator  
 Central Meridian: 225 Zone 8N  
 Datum: WGS 84

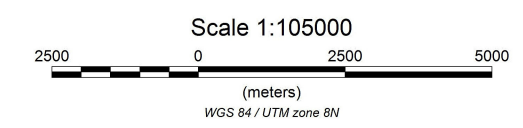


Survey Dates: February 24, 2012 to March 02, 2012  
 Survey Base: Mayo, VT  
 Helicopter Type: Bell 206 Jet Ranger  
 Registration: C-FZHK  
 Survey Technology: Magnetic survey

**SURVEY PARAMETERS:**  
 Mean Terrain Clearance: 35 meters  
 Helicopter: 35 meters  
 Magnetometer: 35 meters  
 Spectrometer: 35 meters

**Block B:**  
 Survey Line Spacing: 150 meters  
 Survey Line Direction: 024°-204°  
 Tie Line Spacing: 1500 meters  
 Tie Line Direction: 114°-294°

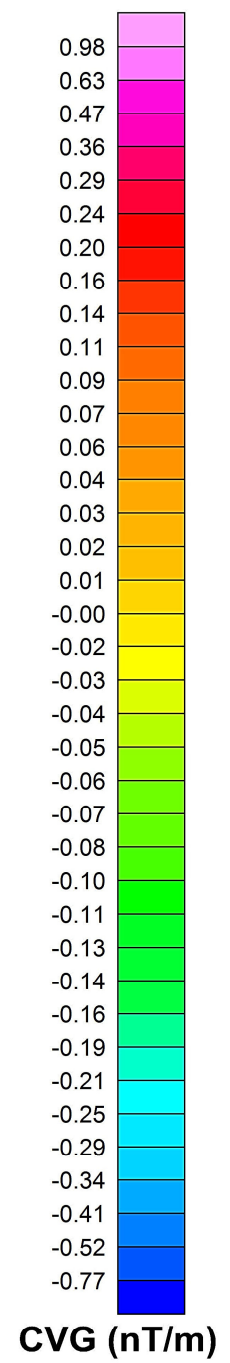
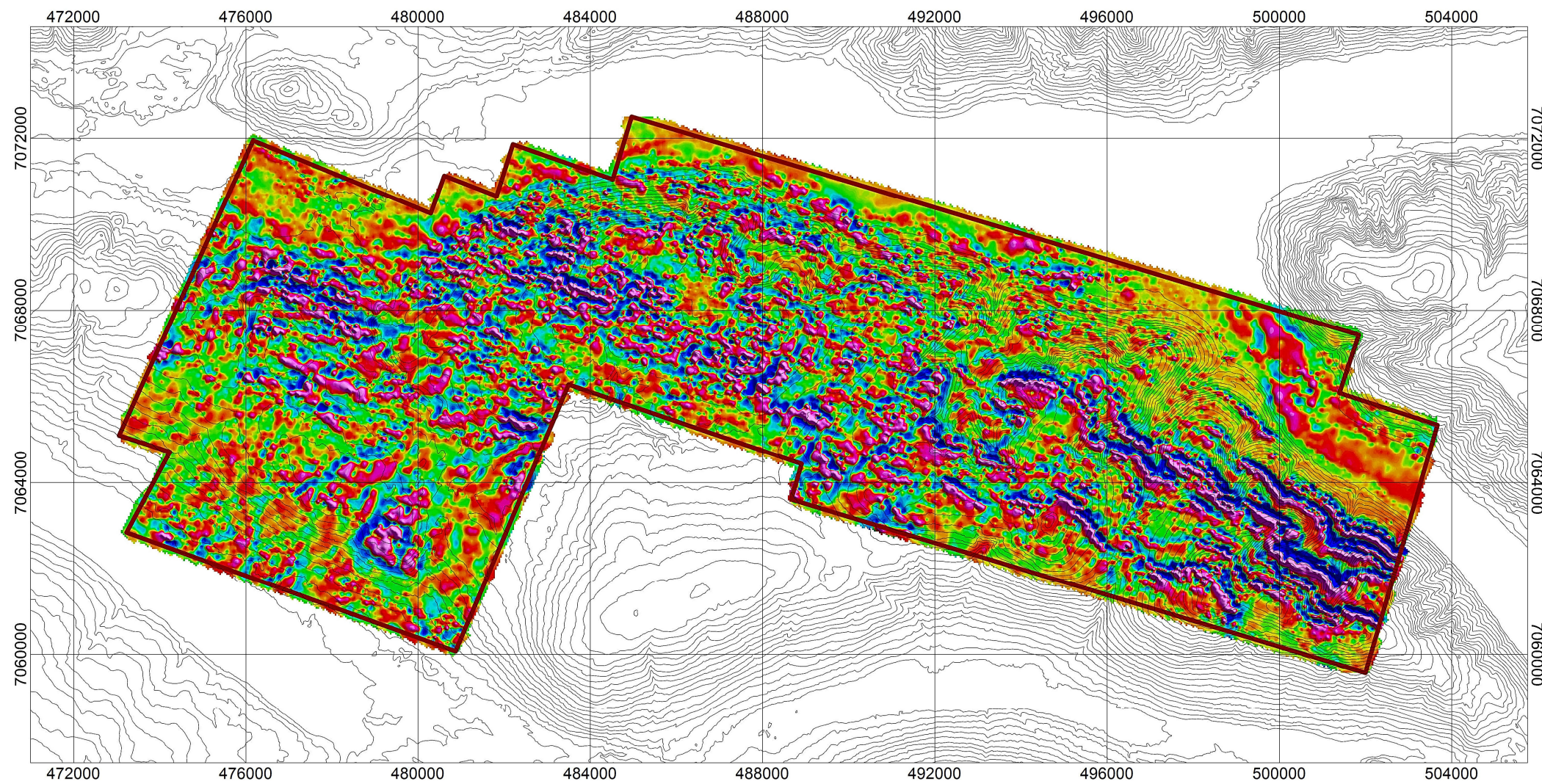
**AIRBORNE SYSTEMS:**  
 Scintrex CS-3 Magnetometer Sensor  
 Configuration: Stinger with 3 axis compensation  
 Sample Rate: 10 Hz  
 Sensitivity: 0.01 Nt



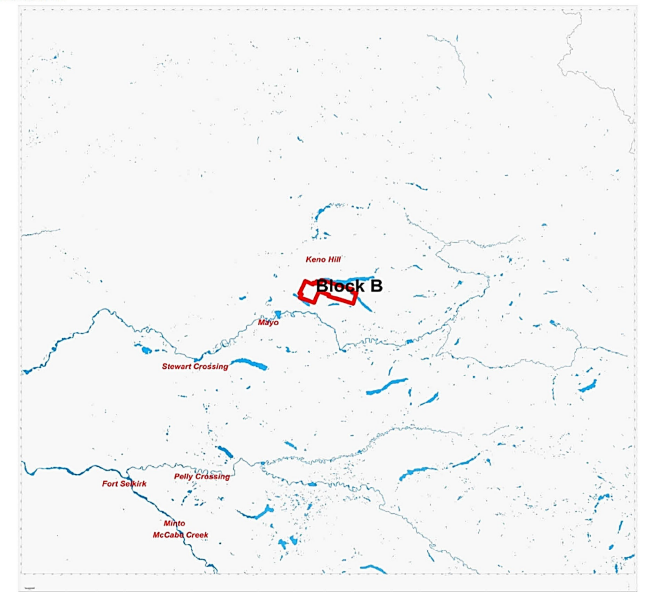
**Mayo Lake Minerals Inc.**  
 Mayo Lake Block B  
 Total Magnetic Intensity  
 Created By: Precision GeoSurveys Inc.  
 March 2012



TMI



**LEGEND**  
**Map Projection:**  
 Projection: Universal Transverse Mercator  
 Central Meridian: 225 Zone 8N  
 Datum: WGS 84

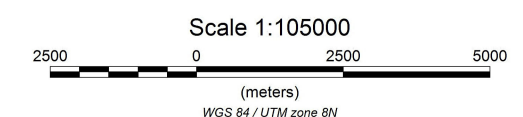


**Survey Dates:** February 24, 2012 to March 02, 2012  
**Survey Base:** Mayo, YT  
**Helicopter Type:** Bell 206 Jet Ranger  
**Registration:** C-FZHK  
**Survey Technology:** Magnetic survey

**SURVEY PARAMETERS:**  
**Mean Terrain Clearance:** 35 meters  
**Helicopter:** 35 meters  
**Magnetometer:** 35 meters  
**Spectrometer:** 35 meters

**Block B:**  
**Survey Line Spacing:** 150 meters  
**Survey Line Direction:** 024°-204°  
**Tie Line Spacing:** 1500 meters  
**Tie Line Direction:** 114°-294°

**AIRBORNE SYSTEMS:**  
**Scintrex CS-3 Magnetometer Sensor**  
**Configuration:** Stinger with 3 axis compensation  
**Sample Rate:** 10 Hz  
**Sensitivity:** 0.01 Nt



**Mayo Lake Minerals Inc.**  
**Mayo Lake Block B**  
**Calculated Vertical Gradient**  
**Created By: Precision GeoSurveys Inc.**  
**March 2012**

