

**REPORT ON A HELICOPTER-BORNE AEROTEM II/MAGNETIC
SURVEY OVER THE MOYIE LAKE AND MONROE LAKE GRIDS,
SE BRITISH COLUMBIA, EXECUTED BY AEROQUEST LIMITED
DURING MARCH 30 – APRIL 7, 2006 ON BEHALF OF
ST. EUGENE MINING CORPORATION LTD.**

**Claims covered: 503818, 505064, 507409, 505076, 505078, 505098,
505101, 505106, 510499 and 514019 (Moyie grid), 503798, 505849,
505850, 526517, 526518, 528868 and 528869 (Monroe grid).**

**Project centered at
115° 50' West Longitude and 49° 18' North Latitude
NTS 82G4/5
Fort Steele Mining Division**

by

**Jan Klein, M.Sc., P.Eng., P.Geo.
Consulting Geophysicist**

DELTA, BC

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SUMMARY:

Some 697 line kilometers of AeroTEM II Time Domain Electromagnetic and Magnetic data were collected over two grids in SE British Columbia in the search for St Eugene vein type mineralization. Several weak conductors that may be associated with this type of mineralization were detected. In several parts of the grids were strong responses from man-made features like power and pipe lines recorded.

It is recommended to correlate the EM-responses with known geology and drill information before ground follow up is decided.

Note:

Portions of this report are taken from a report prepared by the contractor Aeroquest Limited for St. Eugene Mining Corporation Limited.

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1. Grid location plan.
2. Schematic of the AeroTEM Transmitter and Receiver waveforms.
3. AeroTEM response over a thin vertical conductor.

The results of the survey are presented as follows:

Moyie Lake Grid Plates at a scale of 1:20,000 labeled 1 to 8 and Monroe Lake Grid Plates at a scale of 1:10,000 labeled 1a to 8a:

Plates 1, 1a: Survey grid and Claims.

Plates 2, 2a: Digital Terrain Image (or Digital Elevation Map) obtained by subtracting the radar altimeter data from the helicopter's GPS_Z data.

Plates 3, 3a: Magnetic data, linear contour interval.

Plates 4, 4a: Calculated 1st Vertical Derivative (gradient) of the magnetic data (VDR) as a shadow image.

Plates 5, 5a: Potential Field Tilt of the magnetic data (PFT) as a shadow image.

Plates 6, 6a: Aerotem II, ZOff-component Channels 0 to 10 profiles, 0-level along the flight lines.

Plates 7, 7a: Aerotem II, ZOff-component Channel 2 data as a shadow image together with conductor intercepts of features with conductivity greater than 0.1 Siemens.

Plates 8, 8a: Aerotem II, ZOff-component Channel 2 data together with conductor intercepts of features greater than 0.1 Siemens and interpreted conductor axes.

REPORT ON A HELICOPTER-BORNE AEROTEM II/MAGNETIC SURVEY OVER THE MOYIE LAKE AND MONROE LAKE GRIDS, SE BRITISH COLUMBIA, EXECUTED BY AEROQUEST LIMITED DURING MARCH 30 – APRIL 7, 2006 ON BEHALF OF ST. EUGENE MINING CORPORATION LTD.

INTRODUCTION:

A helicopter-borne AeroTEM II Time Domain Electromagnetic and Magnetic survey was executed over the Moyie Lake and Monroe Lake properties on behalf of St. Eugene Mining Corporation Ltd. during the period March 30 to April 7, 2006. The survey was performed by Aeroquest Limited of Milton ON. The objective of the survey was to map the electrical and magnetic properties of the rocks underlying the properties in the search of St. Eugene vein type mineralization. This report describes the survey and its results. Portions of the report are taken from an in-house report prepared by Aeroquest Ltd. for St. Eugene Mining Corporation Ltd.

LOCATION

The grids are located near Highway 3/95. The Moyie Lake grid straddles Lower Moyie Lake while the Monroe grid is located west of Upper Moyie Lake (see figure 1). The grids are positioned roughly 25 kms south of Cranbrook, BC. The mainline of CP-Rail passes through the Moyie Lake property along the eastern shore of Lower Moyie Lake. The terrain is mountainous and ranges from 900m in the valley to over 2100m at the mountain tops. The survey was conducted from the Cranbrook airport.

CLAIMS COVERED DURING THE SURVEY:

The following claims were covered during this survey:

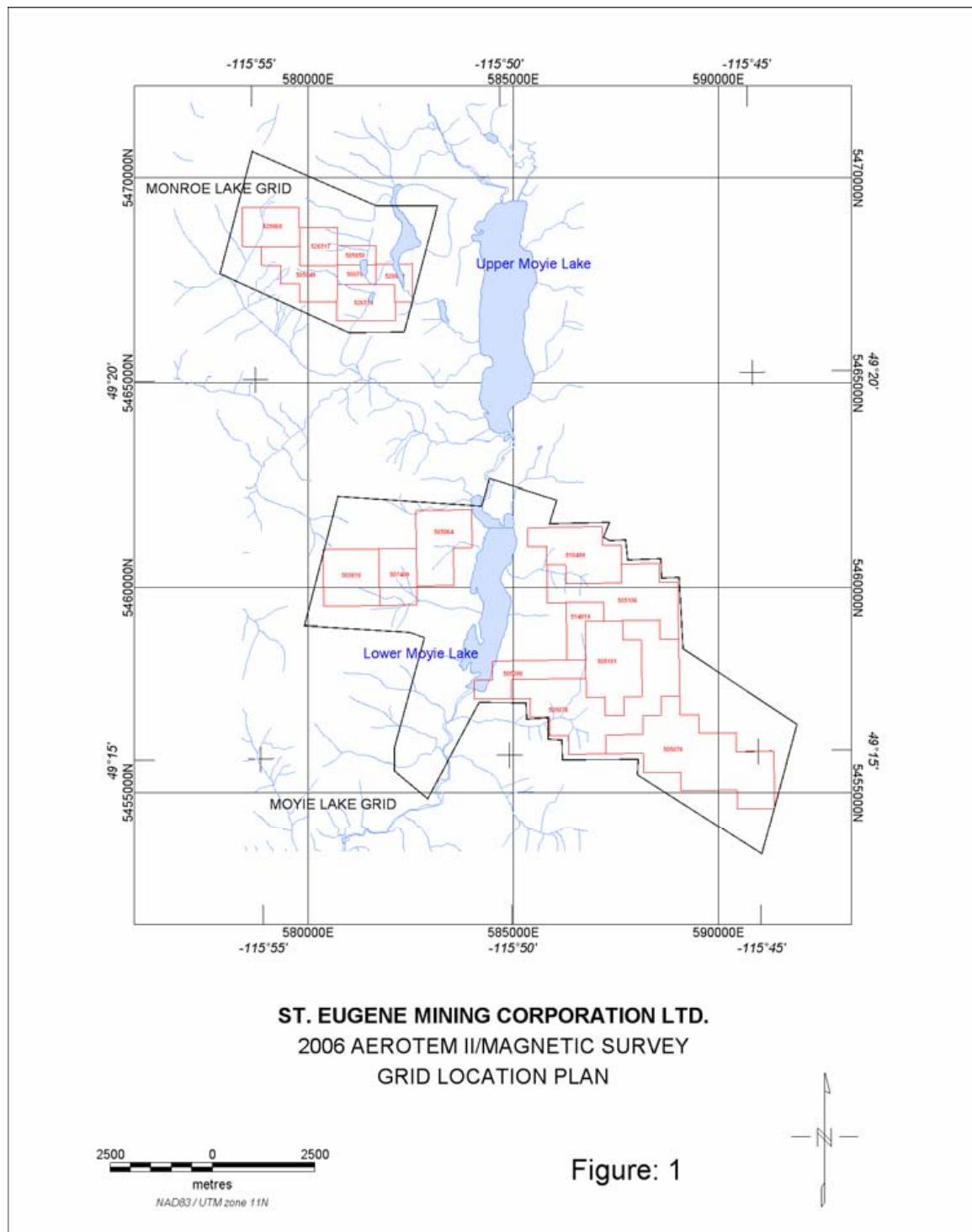
Moyie Lake property: 503818, 505064 and 507409 on the west side of Lower Moyie Lake and 505076, 505078, 505098, 505101, 505106, 510499 and 514019 to the east of the lake. These two blocks of claims are separated by Crown Grants most of the owned by St. Eugene Mining Corporation Ltd. The Crown Grant around the former St Eugene Mine is owned by Teck Cominco Ltd.

Monroe Lake property: 503798, 505849, 505850, 526517, 526518, 528868 and 528869.

The location of these claims is shown on the various maps accompanying this report.

LOCAL GEOLOGY and PREVIOUS WORK:

Most of the area is underlain by rocks of the Aldridge Formation which is part of the Belt-Purcell Supergroup of Proterozoic Age. These rocks straddle the Canadian-U.S.



border and are host to the SEDEX lead-zinc-silver Sullivan deposit near Kimberley and the silver-lead-zinc veins of the Coeur d'Alene area in the United States.

The Aldridge Formation (and the equivalent Pritchard Formation south of the border) is a thick sequence of fine-grained clastic rocks of turbidite affinity, and includes impure quartzites, siltstones and argillites.

The St. Eugene Mine is located in the center of the Moyie Lake Grid. The mine consisted of three separate deposits, located along a set of parallel-trending WNW fractures. These were called the Lakeshore, Moyie and St. Eugene deposits. Between the two WNW fractures just east of Lower Moyie Lake, within the Lakeshore deposit, a number of sulfide veins also occurred within cross-cutting structures called "Avenues". A significant portion of the sulfides mined were from these "Avenues".

The St. Eugene vein, one of a series of WNW striking veins and most of the Coeur d'Alene veins are virtually identical in strike and this similarity of geology strongly supports a common genesis to all of these veins in the basin. It has been suggested that the St Eugene deposits in Canada are similar to the Coeur d'Alene deposits in the United States.

The St. Eugene break, along which the vein occurs, crosses a north-plunging anticline which has Middle Aldridge Formation rocks in the core and overlying Creston Formation rocks on the periphery. Rocks of the Aldridge Formation are, as stated, of turbidite affinity; the Creston rocks are fine-grained shallow water rocks but both are fairly similar in general composition.

The Moyie Mining Camp is located near the small southern British Columbia community of Moyie. This town along the east shore of Lower Moyie Lake once boasted a population of 1,200 and was considered by the Canadian federal government the most important silver-lead mining centre in the country. Today, all that remains of the operation of the St. Eugene Mine, located just outside the western edge of the current village of Moyie, are the tailings and concrete foundations from several large buildings.

For more information see www.steugenemining.ca

SURVEY and CREW:

The survey was conducted along lines flown in a N15°E direction at 100m interval with perpendicular control lines 1000m apart. The nominal EM bird terrain clearance was due to the rugged terrain and locally tall trees in the 40-45m range. The magnetometer sensor was located ~17m above the EM bird along its tow rope. The equipment was installed in a Eurocopter (Aerospatiale) AS350B2 "A-Star" helicopter (Canadian registration C-FETQ) owned and operated by Bighorn Helicopters Ltd., Cranbrook, BC. A total of 545 line kilometers of data was collected over the Moyie Lake Grid and 152 line kilometers over the Monroe Lake grid.

The following Aeroquest personnel were involved in the project:

- Manager of Operations: Bert Simon
- Field Data Processor: Matt Pozza
- Field Operator: Marcus Watson
- Data Interpretation and Reporting: Matt Pozza and Marion Bishop

The field crew lodged in the Sandman Inn, Cranbrook, BC.

The survey pilot Greg Goodison was employed directly by the helicopter operator Bighorn Helicopters Ltd, Cranbrook, BC.

EQUIPMENT and DATA ACQUISITION:

AEROTEM II and ACQUISITION SYSTEMS:

The electromagnetic system is an **Aeroquest AeroTEM II** time domain towed-bird system. The transmitter dipole moment is 38.8 kNIA. The AeroTEM bird is towed 37 m (125 ft) below the helicopter. More technical details of the system may be found in Appendix 3 and at www.aeroquestsurveys.com.

The wave-form is triangular with a symmetric transmitter on-time pulse of 1.10 ms and a base frequency of 150 Hz. (See figure 2.) The current alternates polarity every on-time pulse. During every Tx on-off cycle (300 per second), 128 contiguous channels of raw x and z component (and a transmitter current monitor, itx) of the received waveform are measured. Each channel width is 26.04 microseconds starting at the beginning of the transmitter pulse. This 128 channel data is referred to as the raw streaming data. The AeroTEM system has two separate EM data recording streams, the conventional RMS DGR-33 and the AeroDAS system which records the full waveform.

The 128 channels of raw streaming data are recorded by the **AeroDAS Acquisition System** onto a removable hard drive. The streaming data are processed post-survey to yield 33 stacked and binned on-time and off-time channels at a 10 Hz sample rate. The timing of the final processed EM channels is described in the following table:

Channel:	Start Gate	End Gate	Start (us)	Stop (us)	Mid (us)	Width (us)
1 ON	25	25	651.0	677.0	664.0	26.0
2 ON	26	26	677.0	703.1	690.1	26.0
3 ON	27	27	703.1	729.1	716.1	26.0
4 ON	28	28	729.1	755.2	742.1	26.0
5 ON	29	29	755.2	781.2	768.2	26.0
6 ON	30	30	781.2	807.2	794.2	26.0
7 ON	31	31	807.2	833.3	820.3	26.0
8 ON	32	32	833.3	859.3	846.3	26.0
9 ON	33	33	859.3	885.4	872.3	26.0
10 ON	34	34	885.4	911.4	898.4	26.0

11 ON	35	35	911.4	937.4	924.4	26.0
12 ON	36	36	937.4	963.5	950.5	26.0
13 ON	37	37	963.5	989.5	976.5	26.0
14 ON	38	38	989.5	1015.6	1002.5	26.0
15 ON	39	39	1015.6	1041.6	1028.6	26.0
16 ON	40	40	1041.6	1067.6	1054.6	26.0
0 OFF	44	44	1145.8	1171.8	1158.8	26.0
1 OFF	45	45	1171.8	1197.8	1184.8	26.0
2 OFF	46	46	1197.8	1223.9	1210.9	26.0
3 OFF	47	47	1223.9	1249.9	1236.9	26.0
4 OFF	48	48	1249.9	1276.0	1262.9	26.0
5 OFF	49	49	1276.0	1302.0	1289.0	26.0
6 OFF	50	50	1302.0	1328.0	1315.0	26.0
7 OFF	51	51	1328.0	1354.1	1341.1	26.0
8 OFF	52	52	1354.1	1380.1	1367.1	26.0
9 OFF	53	53	1380.1	1406.2	1393.1	26.0
10 OFF	54	54	1406.2	1432.2	1419.2	26.0
11 OFF	55	55	1432.2	1458.2	1445.2	26.0
12 OFF	56	56	1458.2	1484.3	1471.3	26.0
13 OFF	57	60	1484.3	1588.4	1536.4	104.2
14 OFF	61	68	1588.4	1796.8	1692.6	208.3
15 OFF	69	84	1796.8	2213.4	2005.1	416.6
16 OFF	85	110	2213.4	2890.4	2551.9	677.0

In addition to the magnetic data, altimeter and position data, six channels of real time processed off-time data from the Z component and channel from the X component are recorded by the **RMS DGR-33 Acquisition System** at 10 samples per second and plotted real-time on an analogue chart recorder. These channels are derived by a binning, stacking and filtering procedure on the raw streaming data. The primary use of the RMS EM data is to provide for real-time quality control on board the aircraft.

The channel window timing of the RMS DGR-33 6 channel system is shown in the following below:

RMS Channel	Start time (microsec)	End time (microsec)	Width (microsec)	Streaming Channels
Z1, X1	1269.8	1322.8	52.9	48-50
Z2	1322.8	1455.0	132.2	50-54
Z3	1428.6	1587.3	158.7	54-59
Z4	1587.3	1746.0	158.7	60-65
Z5	1746.0	2063.5	317.5	66-77
Z6	2063.5	2698.4	634.9	78-101

MAGNETOMETERS:

The sensor of the **Geometrics G-823A Cesium Vapour Magnetometer** is installed in a two metre towed bird airfoil attached to the main tow line 17 metres above the EM bird. The sensitivity of the magnetometer is 0.001 nanoTesla at a 0.1 second sampling rate. The magnetic data is recorded at 10Hz by the RMS DGR-33.

The **base magnetometer was a GEM Systems GSM-19 Overhauser Magnetometer** with a built in GPS receiver and external GPS antenna. Data logging and UTC time synchronization was carried out within the magnetometer, with the GPS providing the timing signal. That data logging was configured to measure at 1.0 second intervals. Digital recording resolution was 0.001 nT. The sensor was placed on a tripod in an area

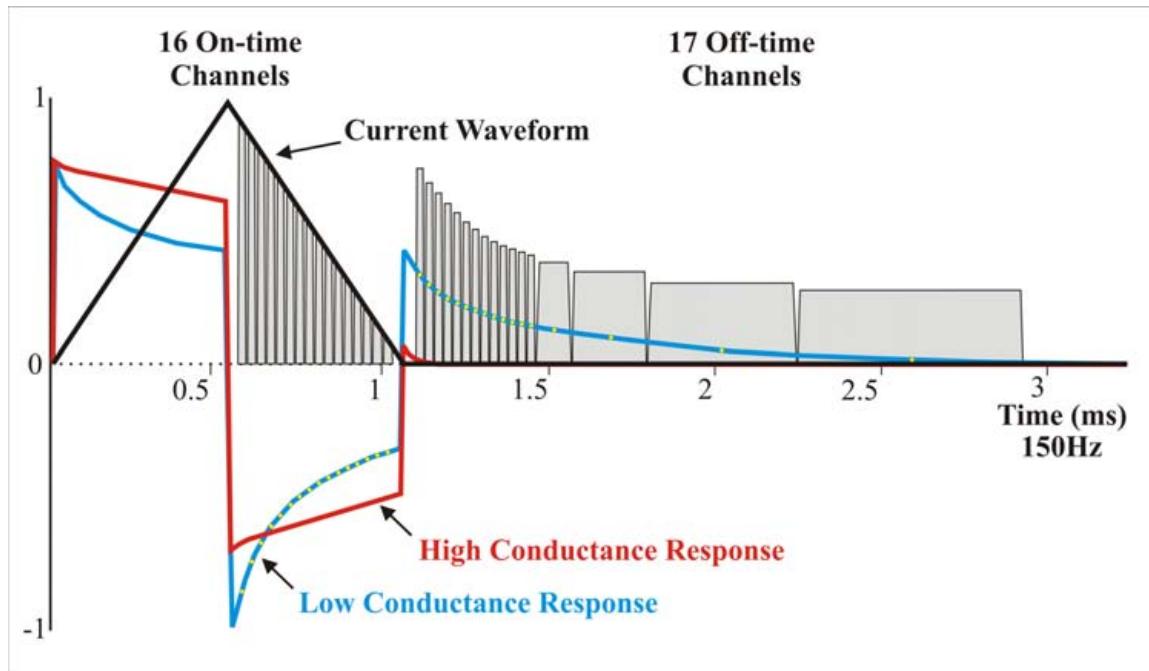


Figure 2: Schematic of the AeroTEM II Transmitter and Receiver waveform

free of cultural noise sources. A continuously updated display of the base station values was available for viewing and regularly monitored to ensure acceptable data quality and diurnal levels. This base station was set up in a gravel pit near the survey block ($115^{\circ} 50.121'$ West - $49^{\circ} 23.410'$ North).

RADAR ALTIMETER:

A **Terra TRA 3500/TRI-30 Radar Altimeter** is used to record terrain clearance. The antenna was mounted on the outside of the helicopter beneath the cockpit. The recorded data represents the height of the antenna, i.e. helicopter, above the ground. The Terra altimeter has an altitude accuracy of +/- 1.5 metres.

VIDEO TRACKING and RECORDING SYSTEM:

A **High Resolution Colour VHS/8mm Video Camera** is used to record the helicopter ground flight path along the survey lines. The video is digitally annotated with GPS position and time and can be used to verify ground positioning information and cultural causes of anomalous geophysical responses.

GPS NAVIGATION SYSTEM:

The navigation system consists of an **Ag-Nav Incorporated AG-NAV2 GPS Navigation System** comprising a PC-based acquisition system, navigation software, a deviation indicator in front of the aircraft pilot to direct the flight, a full screen display with controls in front of the operator, a Mid-Tech RX400p WAAS-enabled GPS receiver mounted on the instrument rack and an antenna mounted on the magnetometer bird. WAAS (Wide Area Augmentation System) consists of approximately 25 ground reference stations positioned across the United States that monitor GPS satellite data. Two master stations located on the east and west coasts, collect data from the reference stations and create a GPS correction message. This correction accounts for GPS satellite orbit and clock drift plus signal delays caused by the atmosphere and ionosphere. The corrected differential message is then broadcast through one of two geostationary satellites, or satellites with a fixed position over the equator. The corrected position has a published accuracy of less than 3 metres. A recent static ground test of the Mid-Tech WAAS GPS yielded a standard deviation in x and y of under 0.6 metres and for z under 1.5 metres over a two-hour period.

Survey co-ordinates are set up prior to the survey and the information is fed into the airborne navigation system. The co-ordinate system employed in the survey design was WGS84 [World] using the UTM zone 11N projection. The real-time differentially corrected GPS positional data was recorded by the RMS DGR-33 in geodetic coordinates (latitude and longitude using WGS84) at 0.2 second intervals.

DIGITAL ACQUISITION SYSTEM:

The AeroTEM received waveform sampled during on and off-time at 128 channels per decay, 300 times per second, was logged by the proprietary AeroDAS data acquisition system. The channel sampling commences at the start of the Tx cycle and the width of each channel is 26.04 microseconds. The streaming data was recorded on a removable hard-drive and was later backed-up onto DVD-ROM from the field-processing computer. The RMS Instruments DGR33A data acquisition system was used to collect and record the analogue data stream, i.e. the positional and secondary geophysical data, including processed 6 channels EM, magnetic, radar altimeter, GPS position, and time. The data was recorded on 128Mb capacity FlashCard. The RMS output was also directed to a thermal chart recorder.

FIELD QUALITY CONTROL and DATA PROCESSING:

On return of the pilot and operator to the base, usually after each flight, the AeroDAS streaming EM data and the RMS data are carried on removable hard drives and

FlashCards, respectively and transferred to the data processing work station. At the end of each survey day, the base station magnetometer data on FlashCard is retrieved from the base station unit.

Data verification and quality control includes a comparison of the acquired GPS data with the flight plan; verification and conversion of the RMS data to an ASCII format XYZ data file; verification of the base station magnetometer data and conversion to ASCII format XYZ data; and loading, processing and conversion of the steaming EM data from the removable hard drive. All data is then merged to an ASCII XYZ format file which is then imported to an Oasis database for further quality control and for the production of preliminary EM, magnetic contour, and flight path maps.

Survey lines which show excessive deviation from the intended flight path are reflown. Any line or portion of a line on which the data quality did not meet the contract specification was noted and reflown.

All in-field and post-field data processing was carried out using Aeroquest proprietary data processing software, and Geosoft Oasis Montaj software.

The position of the survey helicopter was directed by use of the Global Positioning System (GPS). Positions were updated five times per second (5Hz) and expressed as WGS84 latitude and longitude calculated from the raw pseudo range derived from the C/A code signal. The instantaneous GPS flight path, after conversion to UTM co-ordinates, is drawn using linear interpolation between the x/y positions. The terrain clearance was maintained with reference to the radar altimeter. The raw Digital Terrain Model (DTM) was derived by taking the GPS survey elevation and subtracting the radar altimeter terrain clearance values. The calculated topography elevation values are relative to WGS84 (GPS) altitude and are not tied in to surveyed geodetic heights.

Each flight included at least two high elevation 'background' checks. During the high elevation checks, an internal 5 second wide calibration pulse in all EM channels was generated in order to ensure that the gain of the system remained constant and within specifications.

The raw AeroTEM streaming data, sampled at a rate of 38,400 Hz (128 channels, 300 times per second) was reprocessed using a proprietary software algorithm developed and owned by Aeroquest Limited. Processing involves the compensation of the X and Z component data for the primary field waveform. Coefficients for this compensation for the system transient are determined and applied to the stream data. The stream data are then pre-filtered, stacked, binned to the 33 on and off-time channels and checked for the effectiveness of the compensation and stacking processes. The stacked data is then filtered, leveled and split up into the individual line segments. Further base level adjustments may be carried out at this stage.

The final field processing step was to merge the processed EM data with the other data sets into a Geosoft Montaj database file. The EM fiducial is used to synchronize the two datasets. The processed channels are labeled in the "streaming" database as Zon1 to Zon16, Zoff0 to Zoff16, Xon1 to Xon16, and Xoff0 to Xoff16.

The filtering of the stacked data is designed to remove or minimize high frequency noise that can not be sourced from the geology. Apparent bedrock EM anomalies were interpreted from positive peaks and troughs in the on-time Z channel responses correlated with X channel responses. The auto-picked anomalies were reviewed and edited by a geophysicist on a line by line basis to discriminate between thin and thick conductor types. Anomaly picks locations were migrated and removed as required. This process ensures the optimal representation of the conductor centers on the maps.

At each conductor pick, estimates of the off-time conductance have been generated based on a horizontal plate source model for those data points along the line where the response amplitude is sufficient to yield an acceptable estimate. Some of the EM anomaly picks do not display a tau value; this is due to the inability to properly define the decay of the conductor usually because of low signal amplitudes. Each anomaly pick is also given an identification letter label, unique to each flight line.

Prior to any leveling the magnetic data was subjected to a lag correction of -0.1 seconds and a spike removal filter. The filtered aeromagnetic data were then corrected for diurnal variations using the magnetic base station and the intersections of the tie lines. No corrections for the regional reference field (IGRF) were applied. The corrected profile data were interpolated on to a grid using a random grid technique with a grid cell size of 25 metres. The final leveled grid provided the basis for threading the presented contours which have a minimum contour interval of 5 nT (2nT for the Monroe Lake grid).

In order to enhance subtle magnetic trends a ‘tilt’ derivative product was calculated from the total magnetic intensity (TMI) grid. The Potential Field Tilt (PFT) of the TMI enhances low amplitude and small wavelength magnetic features which define shallow basement structures as well as potential mineral exploration targets. The PFT can be thought of as a combination of the first vertical derivative (also separately calculated and displayed =VDR) and the total horizontal derivative of the total magnetic intensity.

Mathematically, the PFT is defined as:

PFT = arctan (VDR/THDR), where VDR and THDR are first vertical and total horizontal derivatives, respectively, of the TMI.

$$VDR = dT/dz$$

$$THDR = \sqrt{ (dT/dx)^2 + (dT/dy)^2 }$$

Due to the nature of the arctan trigonometric function in the filter, all amplitudes are restricted to $+\pi/2$ and $-\pi/2$ radians. This gives the PFT the added advantage of acting like an automatic gain control (AGC) filter.

PRESENTATION OF DATA:

The results of this survey are presented on maps at a scale of 1:20,000 for the Moyie Lake Grid and 1:10,000 for the Monroe Lake Grid. The map projection is in NAD 83 Zone 11N. The maps are listed as Plate 1, 2, 3 etc. for the Moyie Lake Grid and Plate 1a, 2a, 3a etc. for the Monroe Lake Grid.

Plates 1, 1a: Survey grid and Claims.

Plates 2, 2a: Digital Terrain Image or Digital Elevation Map obtained by subtracting the radar altimeter data from the helicopter's GPS_Z data.

Plates 3, 3a: Magnetic data, linear contour interval.

Plates 4, 4a: Calculated 1st Vertical Derivative (gradient) of the magnetic data (VDR) as a shadow image.

Plates 5, 5a: Potential Field Tilt of the magnetic data (PFT) as a shadow image.

Plates 6, 6a: Aerotem II, ZOff-component Channels 0 to 10 profiles, 0-level along the flight lines.

Plates 7, 7a: Aerotem II, ZOff-component Channel 2 data as a shadow image together with conductor intercepts of features with conductivity greater than 0.1 Siemens.

Plates 8, 8a: Aerotem II, ZOff-component Channel 2 data together with conductor intercepts of features greater than 0.1 Siemens and interpreted conductor axes.

INTERPRETATION:

MAGNETIC DATA:

The magnetic data provide a high resolution map of the distribution of the magnetic mineral content of the areas of the two survey grids. This data can be used to interpret the location of geological contacts and other structural features such as faults and zones of magnetic alteration. The sources for anomalous magnetic responses are generally thought to be predominantly magnetite because of the relative abundance and strength of response (high magnetic susceptibility) of magnetite over other magnetic minerals such as pyrrhotite. Pyrrhotite is in rocks of the Aldridge Formation of the non-magnetic type so will not be a source of the magnetic anomalies in this area.

MOYIE LAKE GRID:

The magnetic data ranges from lows of approximately 56,050 nT to a high of 56,725 nT with an average background of 56,300 nT. The local magnetic field is dominated by a magnetic unit in the Creston Formation which surrounds the relatively quiet magnetic response of the rocks of the Aldridge Formation. This magnetic response within the magnetic unit(s) of the Creston Formation is not uniform. Some of this can be attributed to topographic effects as most of the mountain peaks correlate well with the magnetic highs. However faulting within this magnetic unit is apparent and the St. Eugene fault is identifiable through this magnetic unit. The weakly anomalous magnetic responses in the relatively non-magnetic rocks of the Aldridge Formation do not correlate with the general strike that would be expected given the orientation of the north-plunging anticline. Instead, subtle linear magnetic highs extend in several directions including east-west,

northeast, east northeast and southeast. The St. Eugene fault is weakly visible in the PFT and VDR magnetic derivatives, but would be difficult to trace without prior knowledge of its location. The other subtle linear magnetic trends in the Aldridge Formation rocks are interpreted to reflect minor accumulations of magnetite or other magnetic mineralization associated with structural features or dykes. Some of these apparent structures may be important as they may reflect other zones where mineralizing processes have occurred.

The magnetic data has been affected by the abundant cultural sources in the Lower Moyie Lake area. These cultural sources are, perhaps, best identified by correlating magnetic anomalies with EM responses classified as cultural sources.

MONROE LAKE GRID:

The magnetic data has a low dynamic range of only 46nT (from 56,316 to 56,362 nT) with an average background of 56,330 nT; this is typical for rocks of the Aldridge Formation. There are two larger areas of elevated magnetic response, one in the central northeastern portion of the block and the other in the far south-central portion. There appears to be a north-south trending boundary between the elevated responses in the eastern portion of the survey area. Along this apparent contact there is a discrete dipole response which extends ESE for approximately 200 m (at 580,810E – 5,468,010N). An EM response is associated with this discrete magnetic source.

ELECTROMAGNETIC DATA:

The Aerotem responses are especially near Lower Moyie Lake strongly influenced by cultural effects like power lines. The geological responses over the two grids are rather

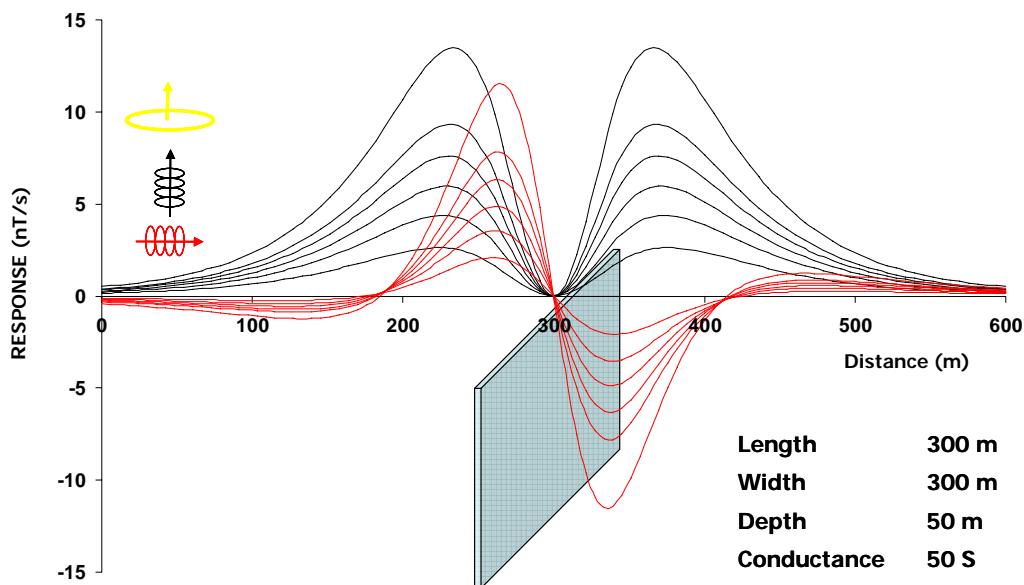


Figure 3: AeroTEM response of a thin vertical conductor.

weak meaning that very few conductors could be picked with confidence in the area of power lines (~lines 10341 to 10550 on the Moyie Lake Grid). A strong EM response was also recorded over the natural gas pipe line in the SE part of the Moyie Lake Grid.

The EM responses could be best interpreted using a thin, vertically oriented model. It produces a double peak anomaly in the Z-component response and a positive to negative crossover in the X-component response as shown in figure 3.

MOYIE LAKE GRID:

Plates 7 and 8 show clearly the resistive nature of the Creston Formation. And that of the core of the anticline were Mine Quartzites are mapped (Aldridge Formation). The conductivity shown (warm colours) is caused by pyrrhotite in the Upper Aldridge Formation. Its contact with the Creston Formation on the west side if the grid is rather smooth but on the east side are possibly structural offsets present including the St. Eugene break. No conductor intercepts with a conductivity of greater than 0.1 S were recorded over the Creston Formation. Roughly 50% of those selected over rocks of the Aldridge Formation are between 0.1 and 1.0 S with the highest one reaching 18 S (line 10640 A) (See Appendix 3). Several of the intercepts can be connected from line to line; these conductor axes are shown by means of a solid or broken line on Plate 8. No EM-response is recorded over the remnants of the Lake Shore deposit.

It is assumed that St. Eugene style mineralization is poorly conductive. This means that most conductors picked have to be cross-correlated with known exploration data and prioritized for follow-up.

MONROE LAKE GRID:

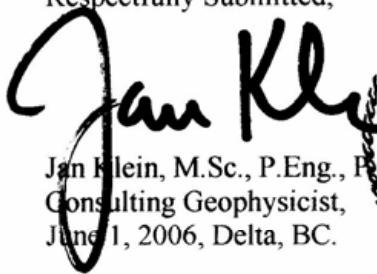
The EM-responses over this grid are also weak. The strongest intercept shows a value of 10S (line 20440 B, see Plates 7a and 8a); it is unfortunately located in Monroe Lake. Weak responses were also recorded near the magnetic dipole mentioned above. This area has been extensively drilled in the past. No significant mineralization was detected. The strongest EM-responses were recorded in the NE part if the grid but they correlate with power lines to the numerous cottages along the north shore of Monroe Lake.

CONCLUSIONS AND RECOMMENDATIONS:

Some 697 line kilometers of AeroTEM II Time Domain Electromagnetic and Magnetic data were collected over two grids in SE British Columbia in the search for St Eugene vein type mineralization. Several weak conductors that may be associated with this type of mineralization were detected. In several parts of the grid were strong responses from man-made features like power and pipe lines recorded.

It is recommended to correlate the EM-responses with known geology and drill information before ground follow-up is decided.

Respectfully Submitted,



Jan Klein, M.Sc., P.Eng., PGeo.
Consulting Geophysicist,
June 1, 2006, Delta, BC.



APPENDIX 1:

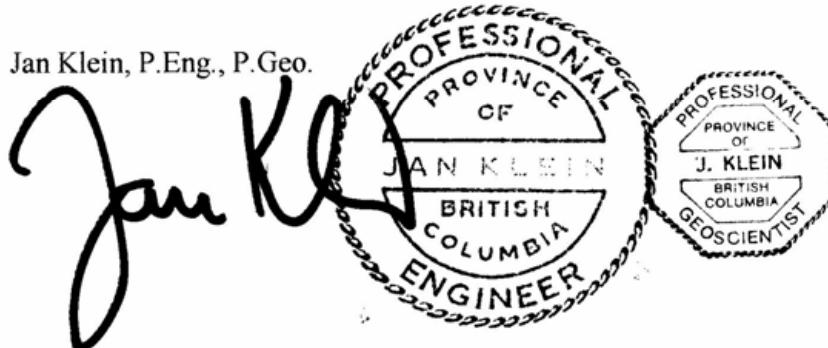
CERTIFICATE OF AUTHOR'S QUALIFICATIONS

I, Jan Klein, P.Eng., P.Geo. do hereby certify that:

1. I am a Consulting Geophysicist residing at 5300 Admiral Way, Unit #20, Delta, B.C., V4K 5G6.
2. I graduated with a M.Sc. degree in Mining Engineering option Exploration (Honours) in 1965 from the Technological University of Delft, the Netherlands.
3. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia (Member No. 9796).
4. I have practiced my profession for more than 40 years.
5. I prepared a report entitled: REPORT ON A HELICOPTER-BORNE AEROTEM II/MAGNETIC SURVEY OVER THE MOYIE LAKE AND MONROE LAKE GRIDS, SE BRITISH COLUMBIA, EXECUTED ON BEHALF OF ST. EUGENE MINING CORPORATION LTD. BY AEROQUEST LIMITED DURING MARCH 30 – APRIL 7, 2006 based on data presented to me by Aeroquest Ltd.. I did not visit the property.
6. I have no material interest in St. Eugene Mining Corporation Ltd. or any of its properties.
7. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes.

Dated this 1st Day of June, 2006

Jan Klein, P.Eng., P.Geo.



APPENDIX 2:

LISTING OF CONDUCTOR INTERCEPTS MOYIE LAKE GRID

LINE NUMBER	UTM_X	UTM_Y	COND. LABEL	CONDUCTIVITY in SIEMENS	DECAY in USEC
10211	582024.0579	5459403.06	A	3.79	194.65
10211	581935.7227	5459064.588	B	2.62	161.83
10221	582191.1059	5459599.019	A	4.02	200.50
10231	582298.4356	5459670.335	A	2.94	171.33
10241	582342.6149	5459409.095	A	0.75	86.35
10241	582385.5767	5459643.262	B	3.38	183.72
10251	582569.7796	5459882.658	A	0.45	67.01
10251	582488.9594	5459535.03	B	0.79	89.09
10261	582537.7378	5459471.169	A	2.55	159.66
10261	582697.2925	5460073.003	B	2.77	166.30
10271	582821.0807	5460122.203	A	0.61	78.41
10271	582587.4097	5459248.898	B	0.31	56.02
10281	582997.8082	5460370.567	B	3.75	193.57
10291	583289.7895	5461127.406	A	1.65	128.62
10291	583166.2257	5460623.972	C	6.07	246.41
10291	583104.3608	5460397.278	D	4.28	206.83
10291	583057.1889	5460227.048	E	2.92	170.87
10301	583185.0165	5460255.729	A	5.65	237.60
10311	583653.121	5461637.82	A	2.72	164.83
10311	583440.6019	5460811.761	B	0.61	78.20
10311	583372.4702	5460574.63	C	0.91	95.35
10311	583318.7676	5460367.854	D	1.10	104.65
10311	582528.2617	5457469.456	E	1.49	121.95
10311	582320.7907	5456726.985	F	1.00	100.13
10321	582423.4989	5456662.042	A	1.75	132.14
10321	582636.004	5457413.259	B	1.87	136.88
10321	583561.4019	5460960.413	C	1.49	122.05
10321	583726.6127	5461523.457	D	2.15	146.71
10321	583808.1543	5461831.232	E	2.54	159.24
10331	583897.3275	5461788.209	A	1.26	112.18
10331	583825.9233	5461536.083	B	1.43	119.59
10331	582719.377	5457409.943	E	0.74	85.77
10331	582665.3233	5457159.126	F	0.31	55.53
10331	582457.8175	5456405.725	G	0.12	34.28
10341	582534.2502	5456318.074	A	0.18	42.32
10341	582706.0033	5456968.298	B	0.25	50.44
10341	582769.7658	5457189.881	C	1.17	108.20
10351	584089.7412	5461759.623	A	2.24	149.74
10351	584069.5638	5461670.108	B	2.21	148.77
10360	582716.1239	5456182.454	A	5.11	226.01
10370	584230.0239	5461505.571	B	16.18	402.30

10370	584058.1364	5460876.489	C	0.78	88.22
10370	583847.5119	5460067.772	D	0.22	47.12
10400	584346.3471	5460707.343	A	0.13	35.88
10400	584511.2546	5461361.309	B	0.14	37.45
10410	584455.9153	5460717.55	A	0.90	94.87
10410	584610.5167	5461315.895	B	1.53	123.71
10480	584919.9519	5459678.069	A	7.95	282.03
10480	584837.7571	5459396.976	B	10.99	331.51
10480	584776.6154	5459188.81	C	1.04	101.97
10520	585109.3993	5458970.601	D	3.45	185.77
10520	585018.9416	5458677.931	E	3.90	197.42
10520	584825.1691	5457900.935	F	1.41	118.54
10530	584909.7964	5457810.213	A	2.50	158.00
10530	585611.6123	5460446.125	C	2.35	153.38
10550	584997.5795	5457360.826	A	2.16	146.81
10550	585829.8849	5460461.4	C	9.84	313.75
10550	585948.4412	5460958.241	D	8.97	299.48
10560	586064.6309	5461013.311	A	3.54	188.09
10560	585903.8682	5460376.188	B	1.11	105.50
10560	585680.7955	5459585.271	C	1.02	100.88
10560	585589.7314	5459243.602	E	0.45	66.85
10560	585126.4857	5457508.862	F	2.65	162.90
10570	585776.1339	5459492.646	B	3.24	180.12
10570	585990.9402	5460325.481	C	1.15	107.15
10580	586298.9612	5461074.63	A	12.88	358.89
10580	586077.7744	5460251.307	B	0.81	89.84
10580	585959.0634	5459802.86	C	0.80	89.23
10580	585855.2906	5459428.84	D	0.16	39.44
10580	585811.8001	5459281.648	E	0.13	36.01
10590	585971.8783	5459472.127	A	0.80	89.31
10590	586137.0421	5460118.603	B	1.01	100.36
10590	586189.8645	5460277.978	C	4.68	216.26
10590	586361.7632	5460977.94	D	2.44	156.19
10600	586477.123	5460970.671	A	0.12	34.25
10600	586225.6031	5460071.801	B	3.63	190.49
10600	586064.3059	5459402.737	C	0.76	87.38
10600	585497.2937	5457338.078	E	3.18	178.28
10610	586147.4339	5459320.334	C	3.84	195.93
10610	586301.4382	5459930.112	D	6.50	254.90
10610	586396.339	5460254.946	E	5.28	229.87
10620	586612.6892	5460742.442	A	1.52	123.48
10620	586498.0015	5460315.009	B	3.51	187.27
10620	586385.1788	5459869.286	C	3.28	181.08
10620	586219.2805	5459255.907	D	1.45	120.56
10620	586195.3757	5459154.876	E	1.57	125.46
10620	586040.7144	5458603.656	F	0.15	38.19
10630	586141.3393	5458541.123	B	0.10	31.75
10630	586143.2563	5458547.415	C	0.10	31.94
10630	586318.6527	5459165.365	D	0.30	54.67
10630	586436.1755	5459593.974	E	10.87	329.76

10630	586588.5071	5460240.224	F	4.06	201.38
10640	586670.9058	5460243.3	A	18.14	425.96
10640	586578.8053	5459796.23	B	1.31	114.67
10640	586518.5285	5459604.248	C	7.66	276.76
10640	586261.0703	5458592.565	D	0.15	38.57
10650	586381.7145	5458642.389	A	0.20	45.04
10650	586599.5751	5459457.078	C	0.26	50.74
10650	586671.0653	5459731.609	D	0.24	48.52
10650	586773.5656	5460145.126	E	13.36	365.47
10660	586801.4052	5459853.217	A	0.58	75.93
10660	586017.0461	5456875.829	C	8.53	292.01
10670	586087.6221	5456806.548	A	8.65	294.15
10670	586403.2555	5457967.561	B	0.36	60.01
10670	586778.8353	5459365.619	D	0.31	55.74
10670	586893.8462	5459776.342	E	0.46	67.65
10680	586942.5234	5459617.408	A	0.48	69.13
10680	586209.6172	5456866.641	D	1.94	139.45
10690	586274.5402	5456753.945	A	7.78	278.88
10690	586606.2573	5457944.17	C	1.22	110.43
10700	586796.837	5458256.705	E	0.59	76.97
10700	586737.8972	5458070.195	F	0.39	62.71
10700	586379.5219	5456747.244	H	2.56	159.98
10720	586633.5937	5456927.31	C	15.57	394.59
10730	586767.4602	5457014.143	B	1.30	114.01
10730	587072.7627	5458144.949	C	0.20	44.37
10740	587145.8414	5458079.464	A	0.14	37.50
10740	586704.6494	5456496.619	C	5.93	243.61
10750	587069.3968	5457401	A	3.65	191.13
10750	587240.846	5458016.299	B	0.40	63.47
10760	587325.626	5457953.496	A	0.68	82.26
10760	586928.4736	5456460.189	B	3.99	199.76
10770	587251.1043	5457263.057	C	1.86	136.42
10780	587578.8506	5458137.438	A	5.36	231.53
10780	587457.8758	5457707.121	B	3.62	190.22
10780	587347.5045	5457276.489	C	4.23	205.60
10790	587131.1878	5456053.289	A	1.05	102.53
10790	587460.8569	5457280.266	C	6.07	246.44
10810	587336.9029	5456050.653	A	3.74	193.41
10810	587941.9107	5458275.329	D	12.79	357.63
10820	587719.0313	5457158.33	B	0.22	46.88
10820	587580.4852	5456622.348	C	15.89	398.67
10830	587707.2445	5456674.582	A	11.39	337.49
10830	587806.4585	5457061.066	B	1.58	125.77
10840	587915.3672	5457084.186	A	0.31	55.65
10840	587827.1242	5456728.896	B	5.59	236.52
10850	587916.0459	5456706.868	A	4.06	201.41
10850	587987.716	5456986.977	B	0.29	53.73
10860	588052.189	5456801.778	B	0.40	63.08
10860	587897.6512	5456230.024	C	0.22	47.38
10870	587979.2522	5456179.103	A	0.31	55.57

10870	588062.3599	5456471.207	B	0.23	48.12
10880	588228.7983	5456757.746	B	0.38	61.42
10890	588347.3775	5456721.092	A	4.21	205.11
10970	588776.3217	5455217.339	A	2.43	155.82
10980	588875.4907	5455219.742	A	5.70	238.76
10990	588986.9851	5455213.348	A	2.11	145.34
10990	589002.5809	5455276.042	B	10.14	318.39
11180	590991.8731	5455388.633	A	2.24	149.58
11190	591092.9583	5455392.559	A	4.20	205.03

MONROE LAKE GRID

LINE Number	UTM_X	UTM_Y	COND. LABEL	CONDUCTIVITY in SIEMENS	DECAY in USEC
20140	579106.1186	5467056.24	A	0.171	41.33
20140	579132.6688	5467166.693	B	0.132	36.35
20160	579293.9881	5467049.282	A	0.107	32.74
20160	579893.6839	5469277.599	C	0.13	36.09
20200	580057.8421	5468320.328	D	0.479	69.22
20200	580228.4743	5468933.715	E	0.121	34.73
20200	580308.4116	5469261.998	F	0.155	39.34
20210	580530.3658	5469668.848	A	0.112	33.41
20210	580419.3305	5469249.489	B	0.124	35.15
20210	580252.8964	5468682.693	C	0.133	36.47
20210	580065.9377	5468032.137	D	0.304	55.13
20220	580094.6358	5467695.57	B	0.103	32.11
20220	580194.0327	5468054.39	C	0.535	73.18
20220	580357.1595	5468688.149	D	0.288	53.66
20220	580506.2767	5469223.862	E	0.123	35.03
20230	580602.4208	5469221.107	A	0.125	35.41
20230	580441.4227	5468560.817	B	0.25	49.95
20230	580238.445	5467878.392	C	0.278	52.69
20240	580327.9626	5467783.952	A	0.212	46.04
20240	580482.1249	5468342.379	B	0.737	85.83
20240	580583.0867	5468652.001	C	0.166	40.68
20240	580699.3491	5469135.676	D	0.151	38.87
20250	580768.5023	5469115.21	A	0.219	46.76
20250	580651.2035	5468647.565	B	0.189	43.42
20250	580565.3114	5468326.714	C	0.446	66.79
20260	580673.2139	5468277.042	D	0.403	63.46
20270	580892.8021	5468721.577	B	0.11	33.15
20280	580815.5537	5468032.74	B	1.473	121.36
20280	580902.1055	5468366.521	C	0.238	48.75
20290	580990.0066	5468383.664	C	0.209	45.72
20290	580930.0507	5468126.888	D	0.829	91.07
20310	581156.6623	5468179.792	B	0.202	44.89
20320	581206.7878	5467966.277	D	0.145	38.02
20350	581855.5069	5469154.112	A	0.231	48.1
20350	581764.1058	5468851.015	B	0.313	55.96

20350	581565.6385	5468177.687	C	0.203	45.06
20360	581648.9995	5468095.272	E	0.549	74.07
20370	581801.4725	5468278.496	A	0.306	55.3
20370	581738.831	5468026.796	B	0.203	45.09
20380	581814.1758	5467915.275	B	0.269	51.84
20380	581929.8668	5468340.12	C	0.959	97.95
20380	582007.8377	5468641.987	D	0.467	68.37
20380	582140.2331	5469172.751	E	0.999	99.95
20390	582188.4222	5468868.921	A	2.536	159.23
20390	582005.3334	5468293.548	B	0.76	87.19
20390	581914.6984	5467914.473	C	0.105	32.37
20400	582083.4161	5468160.45	B	0.303	55.06
20410	582229.6511	5468335.755	A	0.377	61.41
20410	581988.8045	5467405.445	B	0.108	32.82
20420	582177.1827	5467762.671	C	0.661	81.33
20420	582352.8857	5468368.956	D	0.588	76.69
20440	582289.9466	5467392.894	A	0.496	70.43
20440	582563.3553	5468426.909	B	10.341	321.58
20450	582671.6989	5468402.313	A	2.185	147.83
20450	582341.1486	5467221.499	B	0.642	80.11
20450	582166.3653	5466609.978	C	0.84	91.63
20460	582460.502	5467238.044	B	0.418	64.62
20460	582711.0555	5468202.13	C	8.974	299.56
20460	582905.4158	5468962.545	D	0.817	90.37
20470	583058.4432	5469164.014	A	0.372	61.02
20470	582805.4371	5468174.093	B	0.6	77.47
20470	582596.2193	5467422.107	C	0.134	36.6
20470	582520.6402	5467149.777	D	0.265	51.5
29020	581748.6771	5467967.346	B	2.543	159.47
29020	581382.9285	5468159.129	C	0.117	34.15
29040	580890.5755	5466309.411	A	0.107	32.75

APPENDIX 3:

AeroTEM Instrumentation Specification Sheet

System Characteristics

- Transmitter: Triangular Pulse Shape Base Frequency 30 or 150 Hz
- Tx On Time - 5,750 (30Hz) or 1,150 (150Hz) μ s
- Tx Off Time - 10,915 (30Hz) or 2,183 (150Hz) μ s
- Loop Diameter - 5 m
- Peak Current - 250 A
- Peak Moment - 38,800 NIA
- Typical Z Axis Noise at Survey Speed = 8 ppb peak
- Sling Weight: 270 Kg
- Length of Tow Cable: 40 m
- Bird Survey Height: 30 m or less nominal

Receiver

- Three Axis Receiver Coils (x, y, z) positioned at centre of transmitter loop
- Selectable Time Delay to start of first channel 21.3 , 42.7, or 64.0 ms

Display & Acquisition

- PROTODAS Digital recording at 126 samples per decay curve at a maximum of 300 curves per second (26.455 μ s channel width)
- RMS Channel Widths: 52.9,132.3, 158.7, 158.7, 317.5, 634.9 μ s
- Recording & Display Rate = 10 readings per second.
- On-board display - six channels Z-component and 1 X-component

APPENDIX 4:

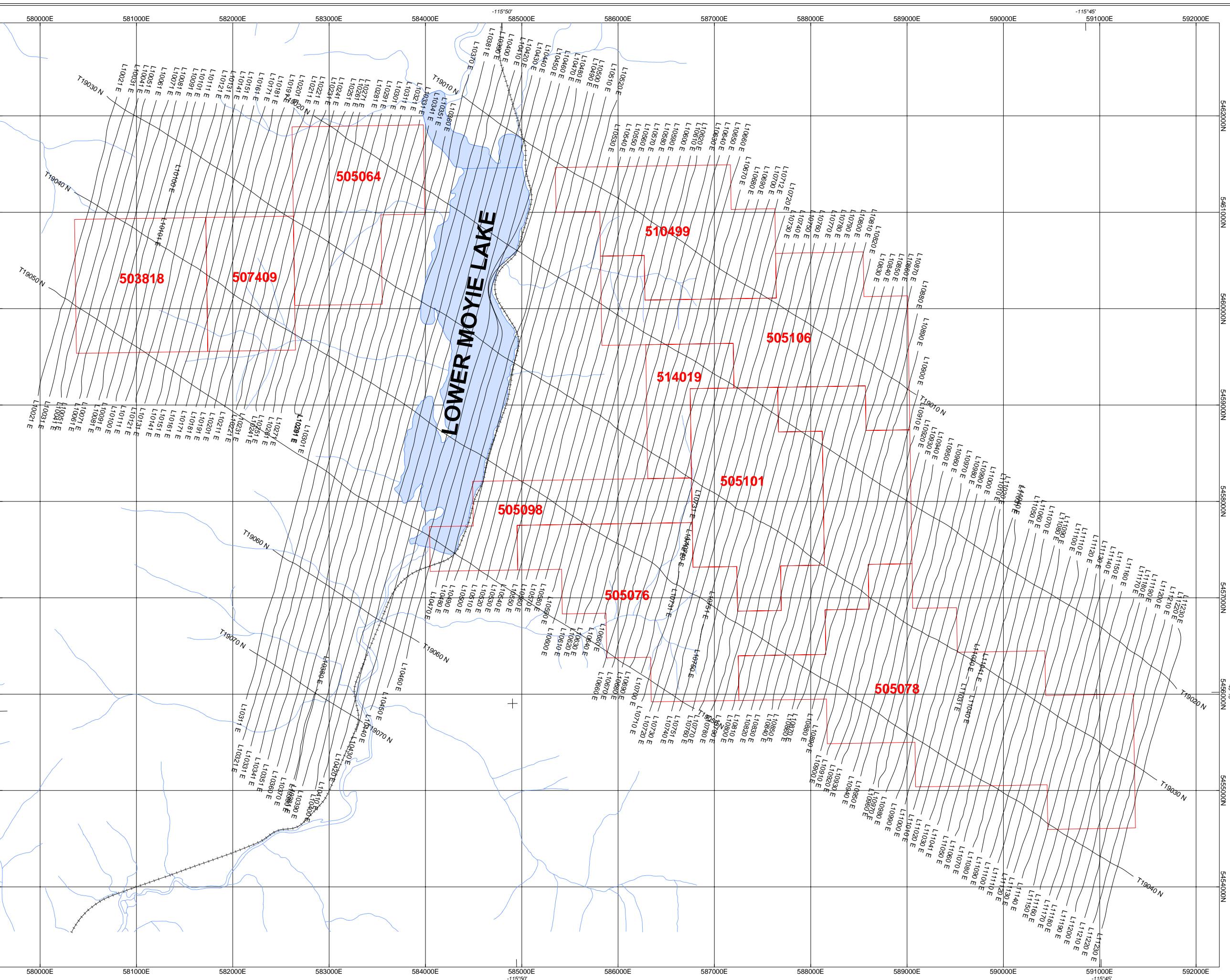
STATEMENT of COSTS

1.	AIRBORNE VTEM/MAGNETIC SURVEY by AEROQUEST	
a.	Mobilization/demobilization	\$ 12,000.00
b.	695 line kilometers @ \$137.00/km	\$ 95,215.00
c.	two days standby @ \$3,000.00/day	\$ 6,000.00
d.	Trim data provided	\$ 600.00
	Sub Total	\$113,815.00
	GST on above	\$ 7,967.05
	Total Airborne Survey	\$121,782.05
2.	GEOPHYSICAL SUPERVISION AND REPORTING	
	J. Klein, 14.5 days @ \$700.00/diem	\$ 10,150.00
	GST on above	\$ 710.50
	Total supervision etc.	\$ 10,860.50
	TOTAL CHARGES	\$132,642.55
	Or \$196.78/line km	

Jan Klein, M.Sc., P.Eng., P.Geo
Consulting Geophysicist



Delta, BC
June 28, 2006

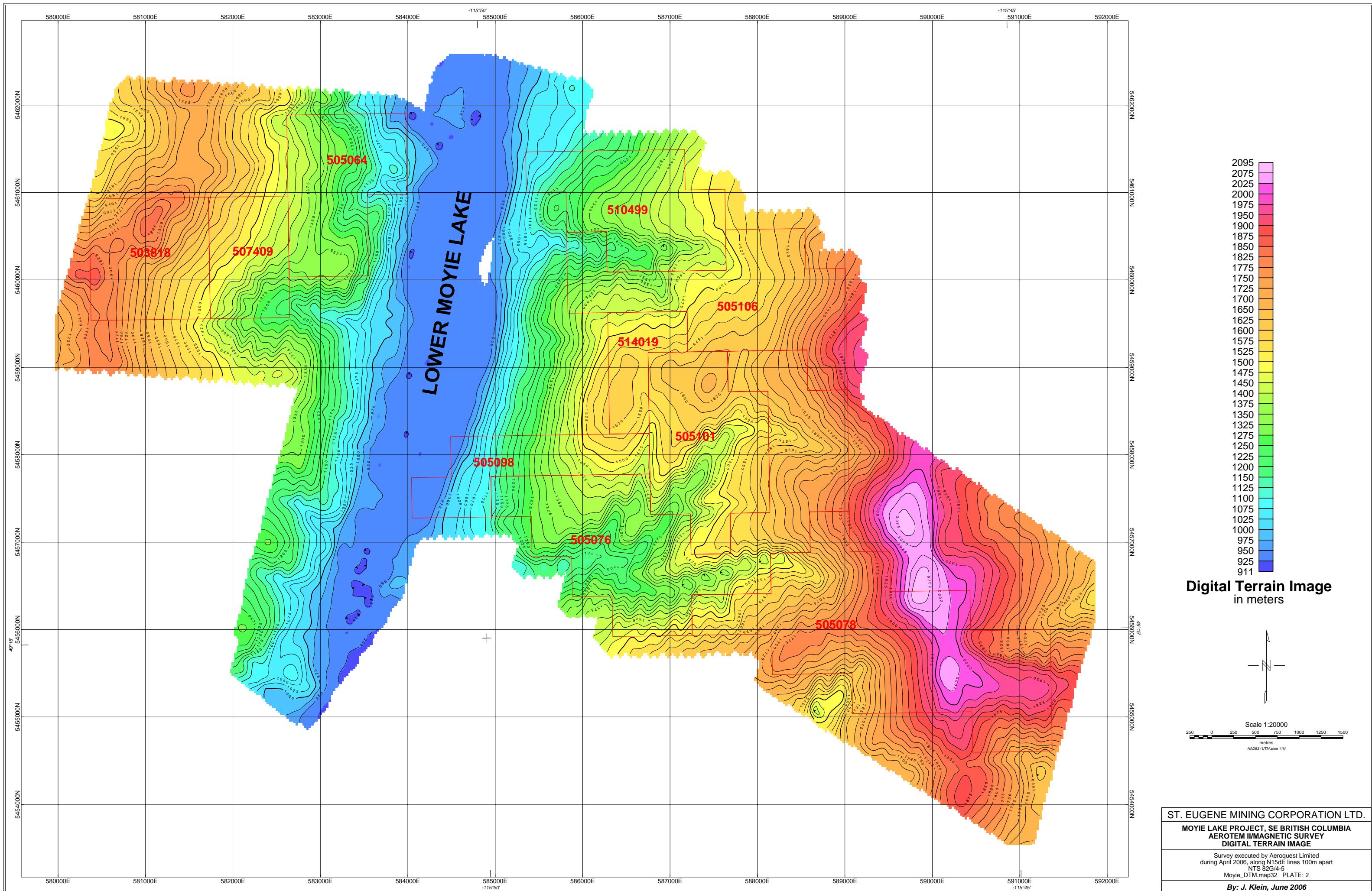


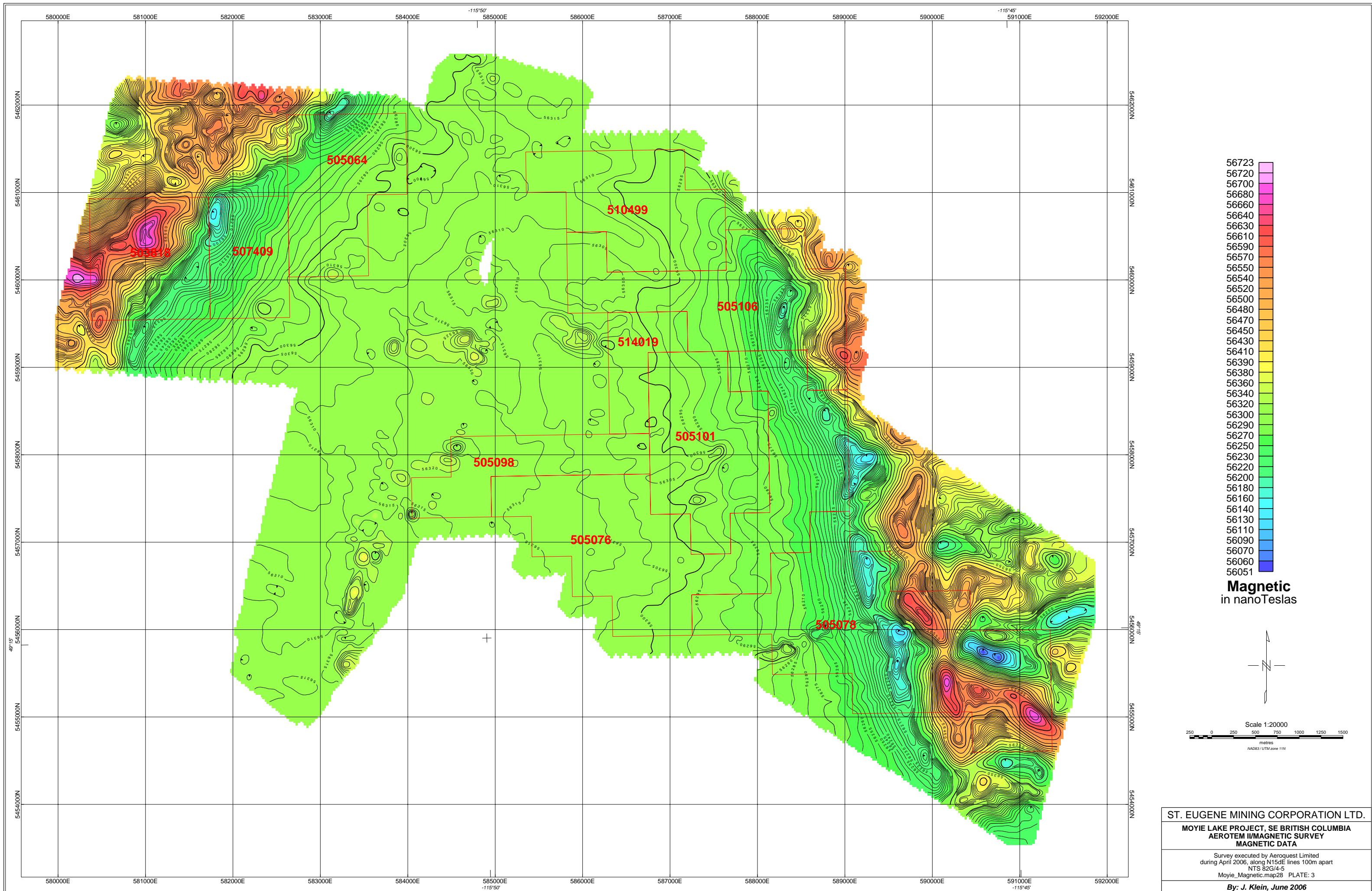
ST. EUGENE MINING CORPORATION LTD.
MOYIE LAKE PROJECT, SE BRITISH COLUMBIA
AEROTEM II/MAGNETIC SURVEY
MOYIE SURVEY GRID and CLAIMS

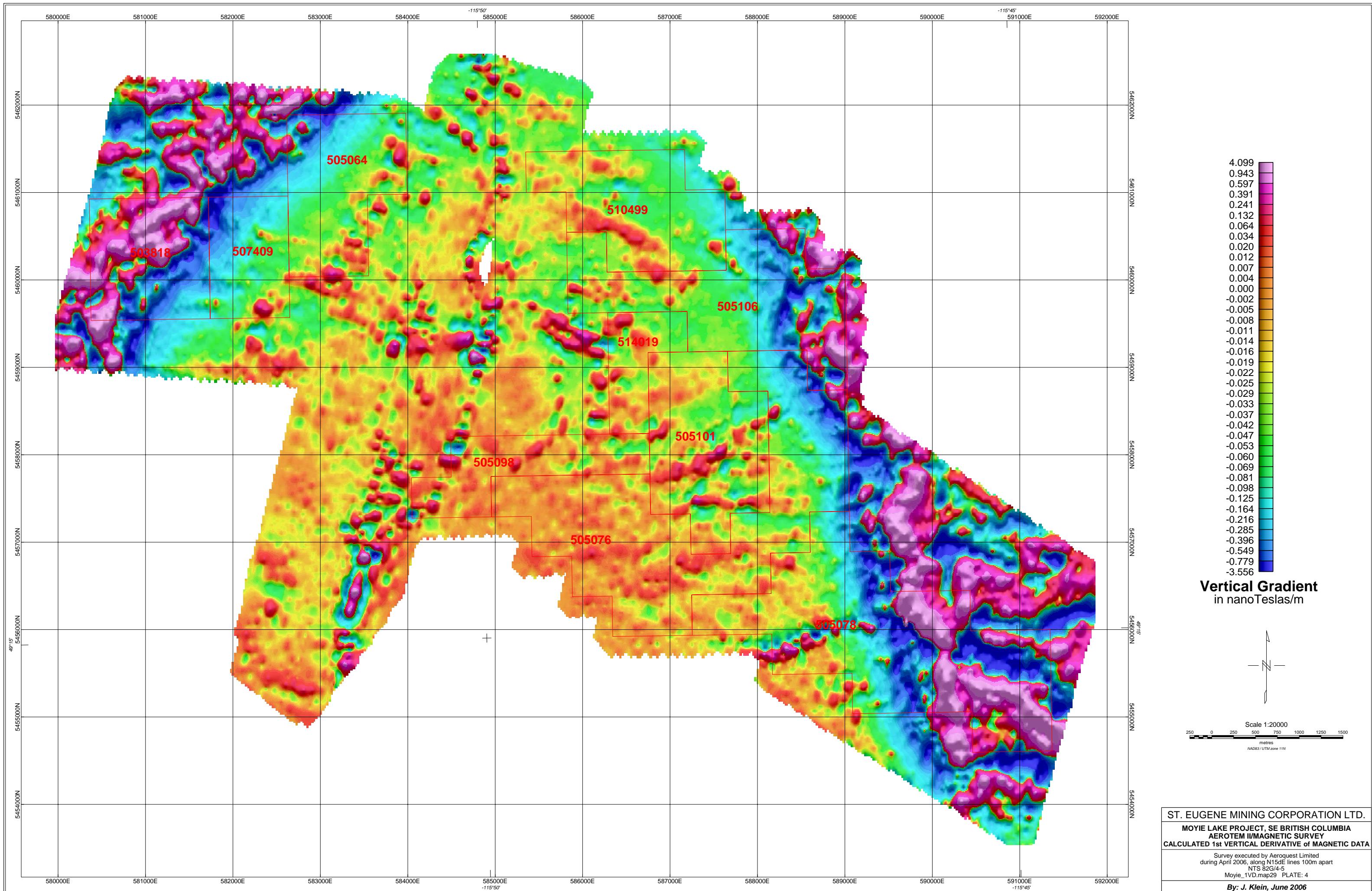
Survey executed by Aerostar Limited
during April 2006, along N15°E lines 100m apart
NTS 82G/4-5
Moyie_Grid_Claims.map27 PLATE: 1

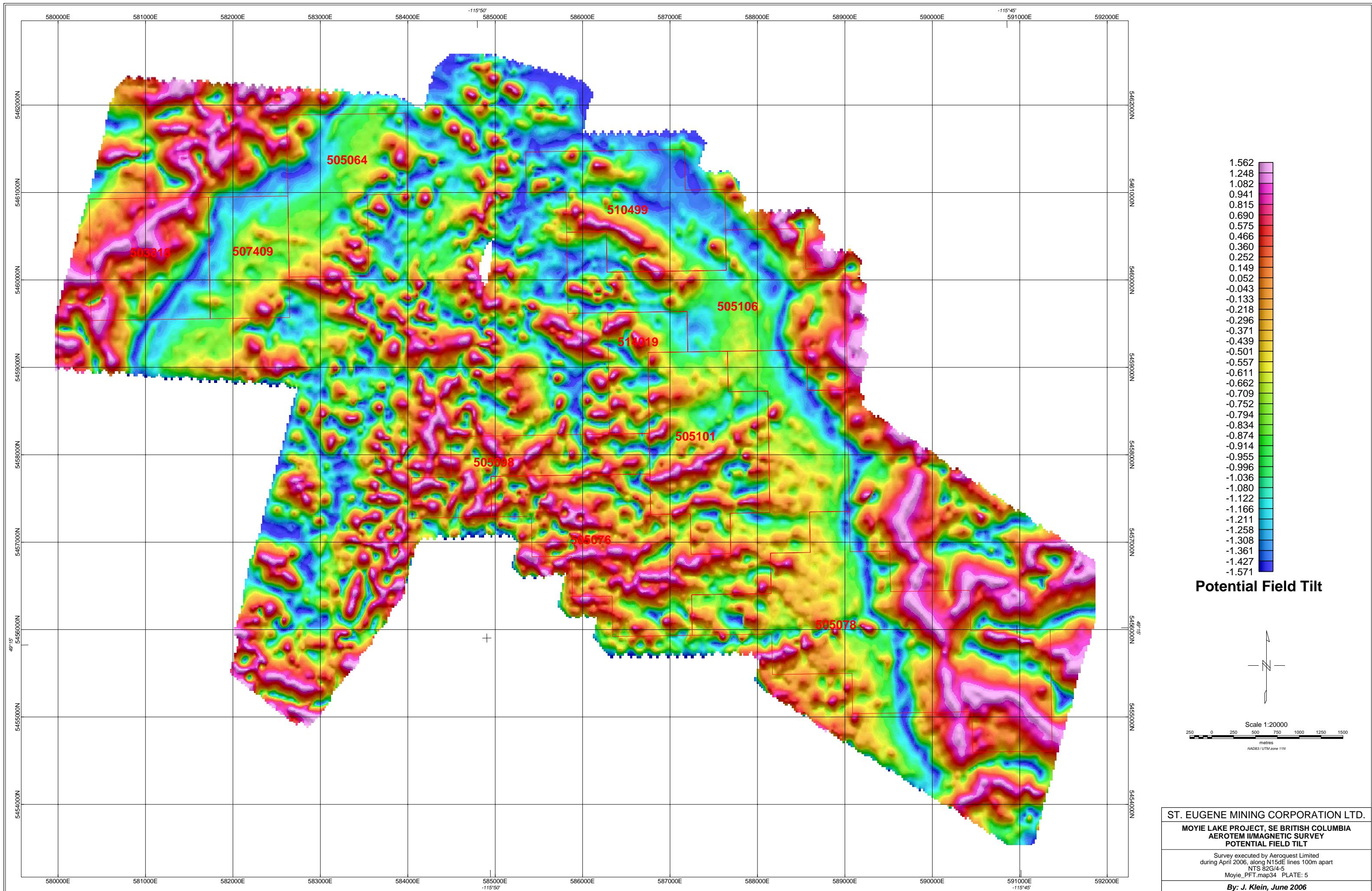
By: J. Klein, June 2006

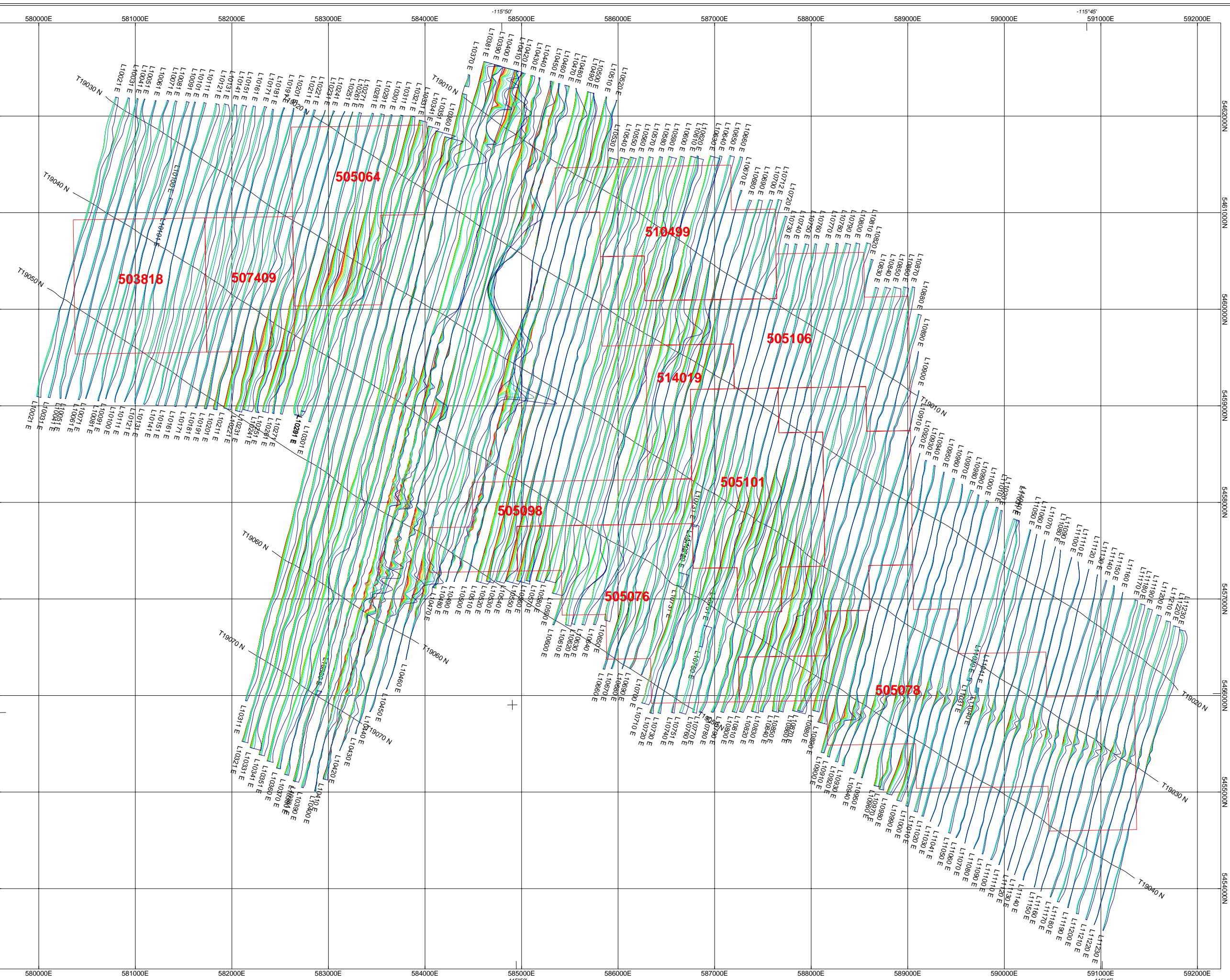
Scale 1:20000
metres
NAD83 / UTM zone 11N





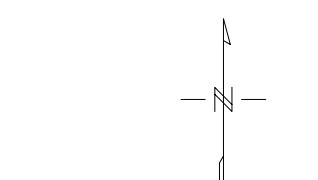




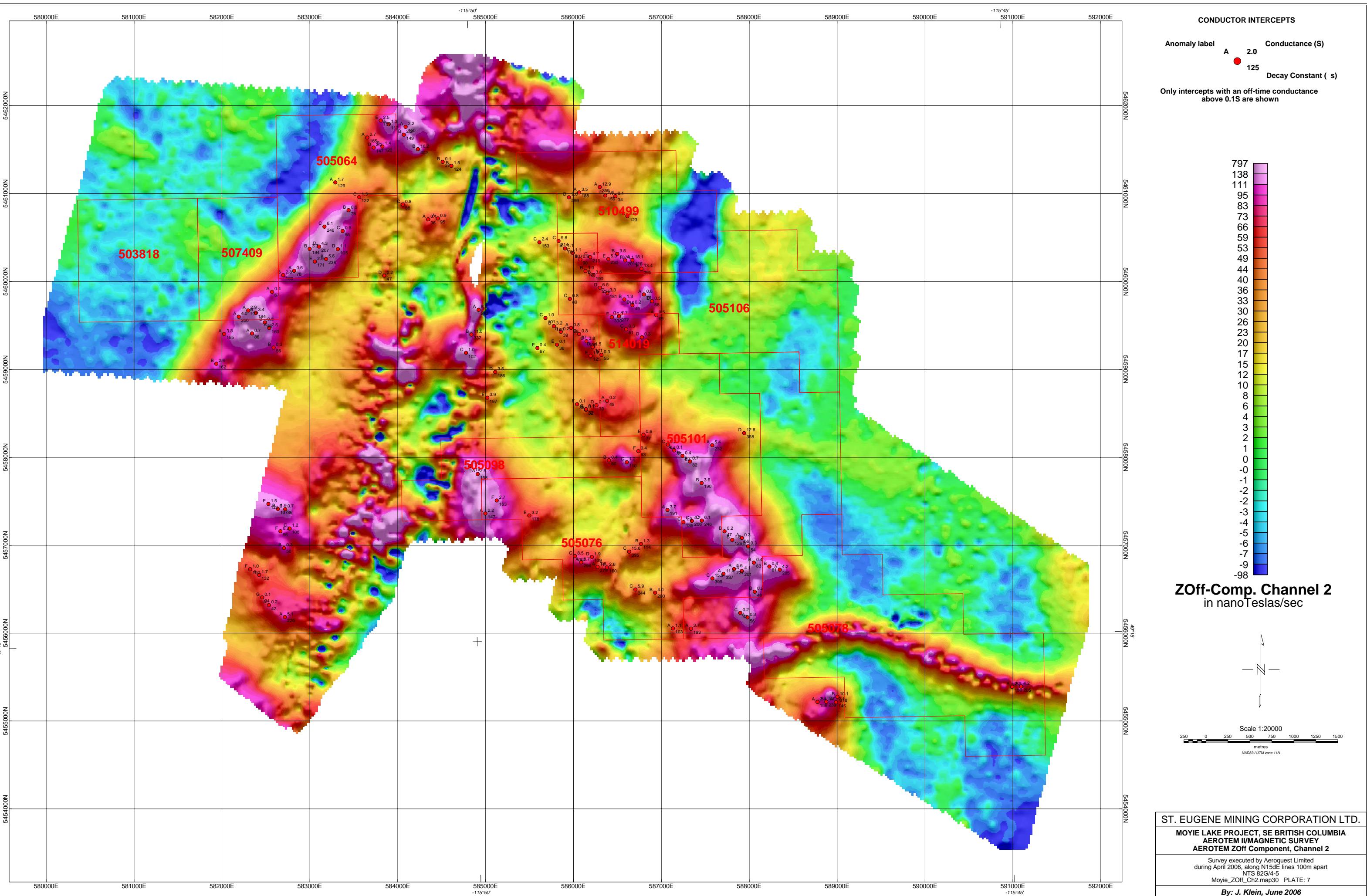


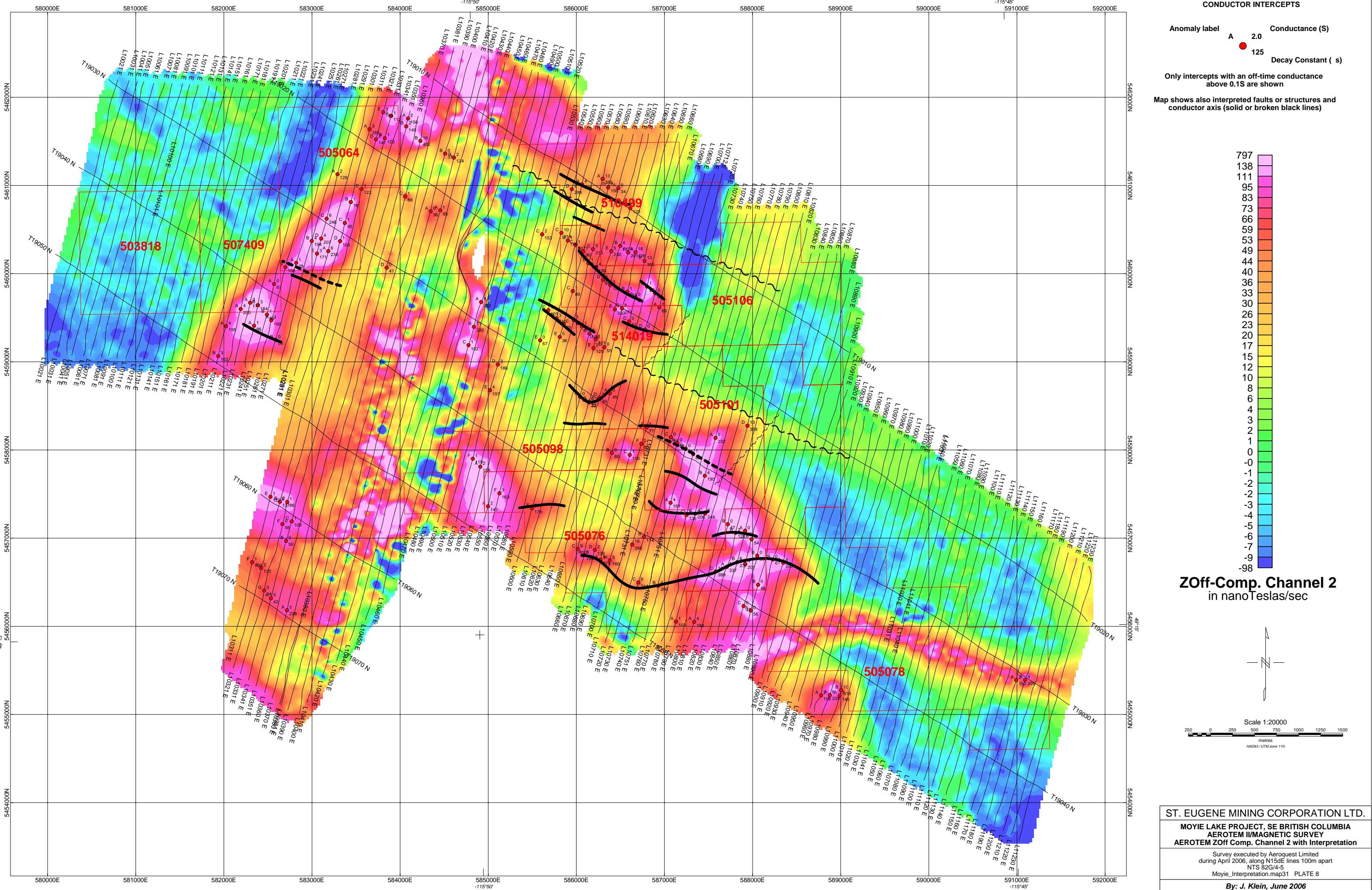
AeroTEM Profiles
positive excursion to the right, 1mm=100nT/s

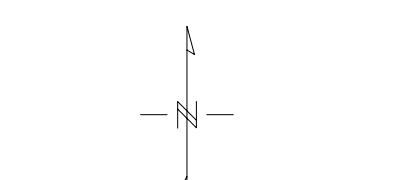
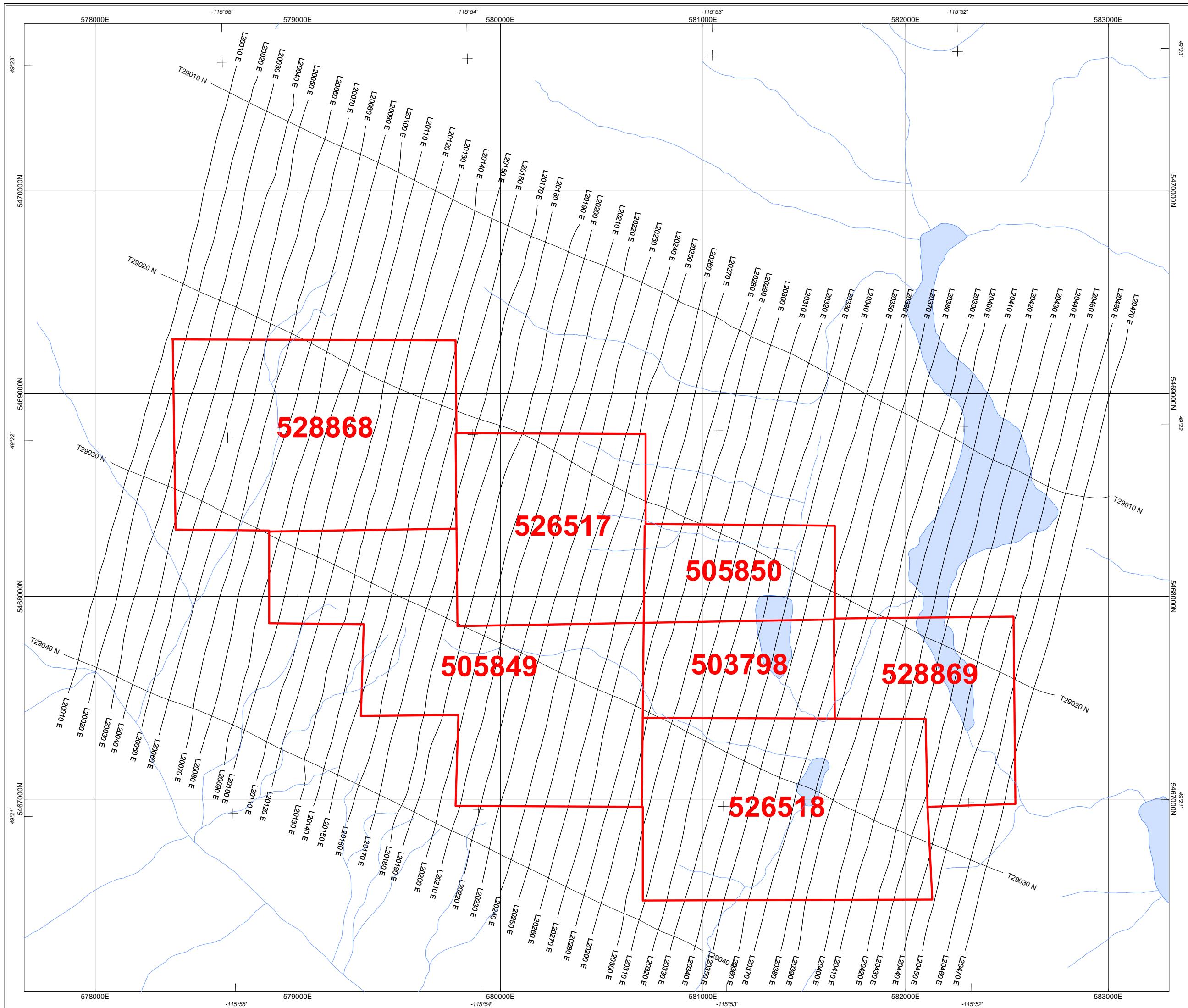
- Z0 Off-Time Channel
- Z1 Off-Time Channel
- Z2 Off-Time Channel
- Z3 Off-Time Channel
- Z4 Off-Time Channel
- Z5 Off-Time Channel
- Z6 Off-Time Channel
- Z7 Off-Time Channel
- Z8 Off-Time Channel
- Z9 Off-Time Channel
- Z10 Off-Time Channel



ST. EUGENE MINING CORPORATION LTD.	
MOYIE LAKE PROJECT, SE BRITISH COLUMBIA	
AEROTEM II/MAGNETIC SURVEY	
AEROTEM Z-OFF-TIME PROFILES	
Survey executed by Aerostar Limited during April 2006, along N15dE lines 100m apart NTS 82G4-5 Moyie_ZOff_Profiles.map33 PLATE: 6	
By: J. Klein, June 2006	

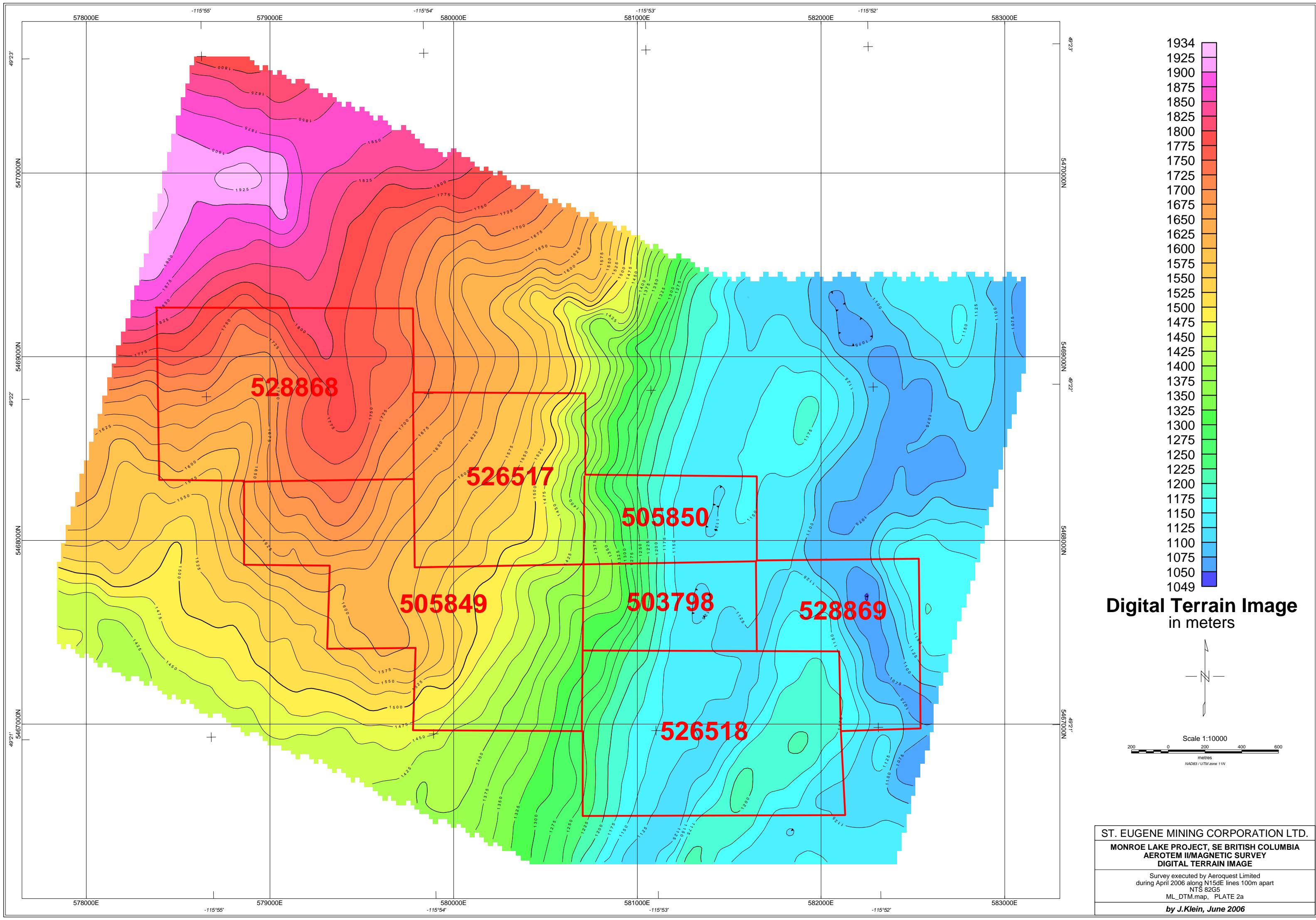


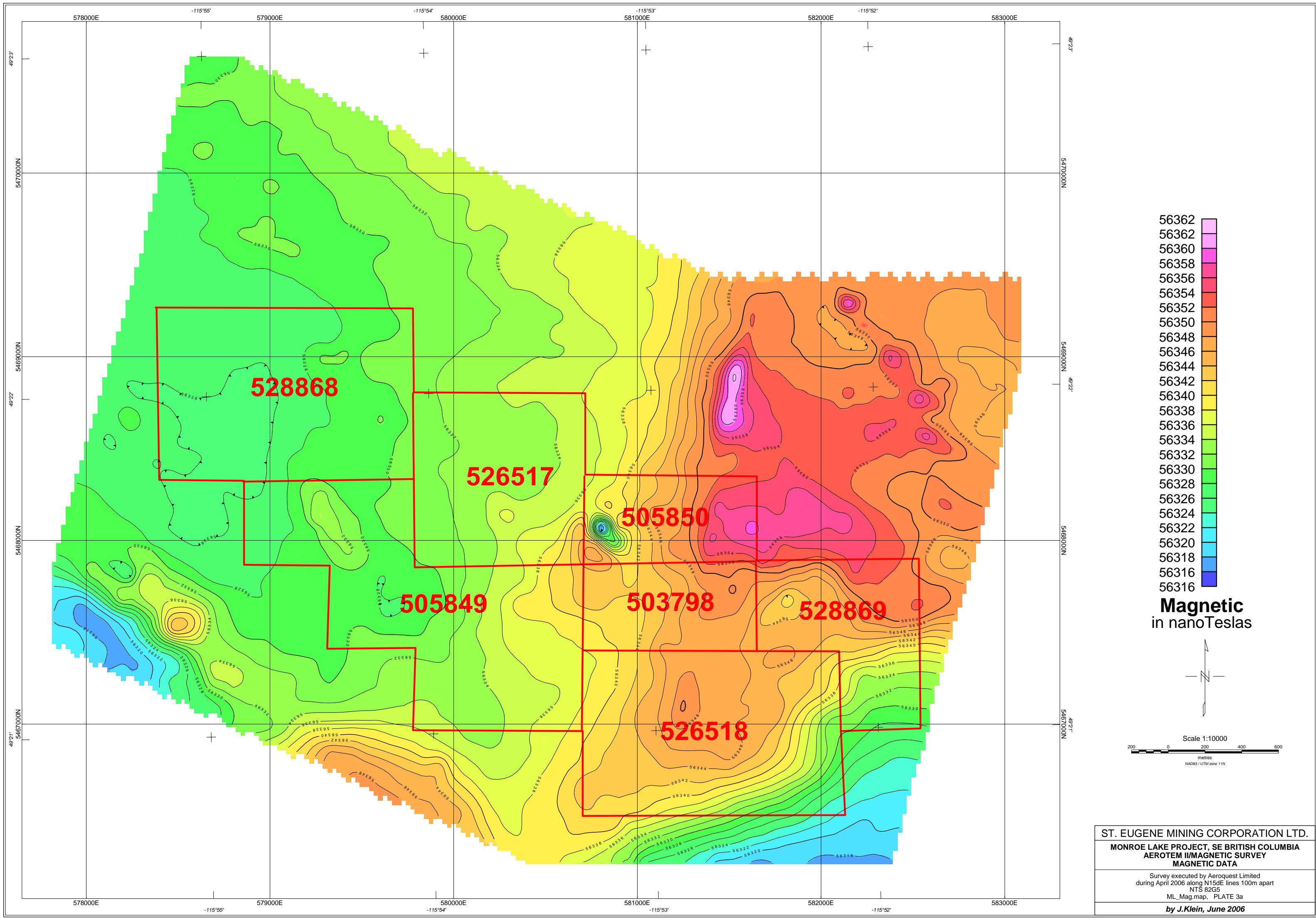


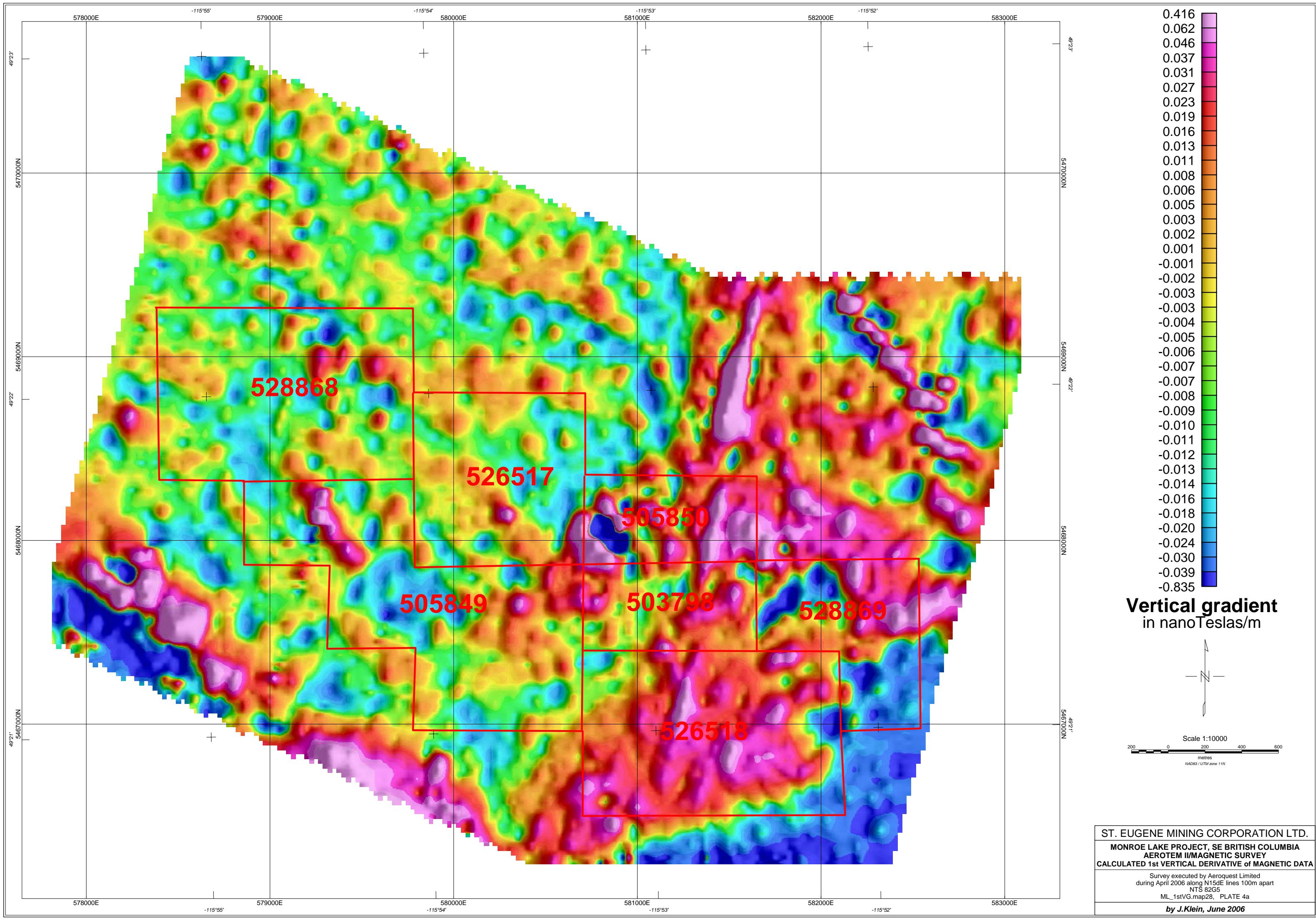


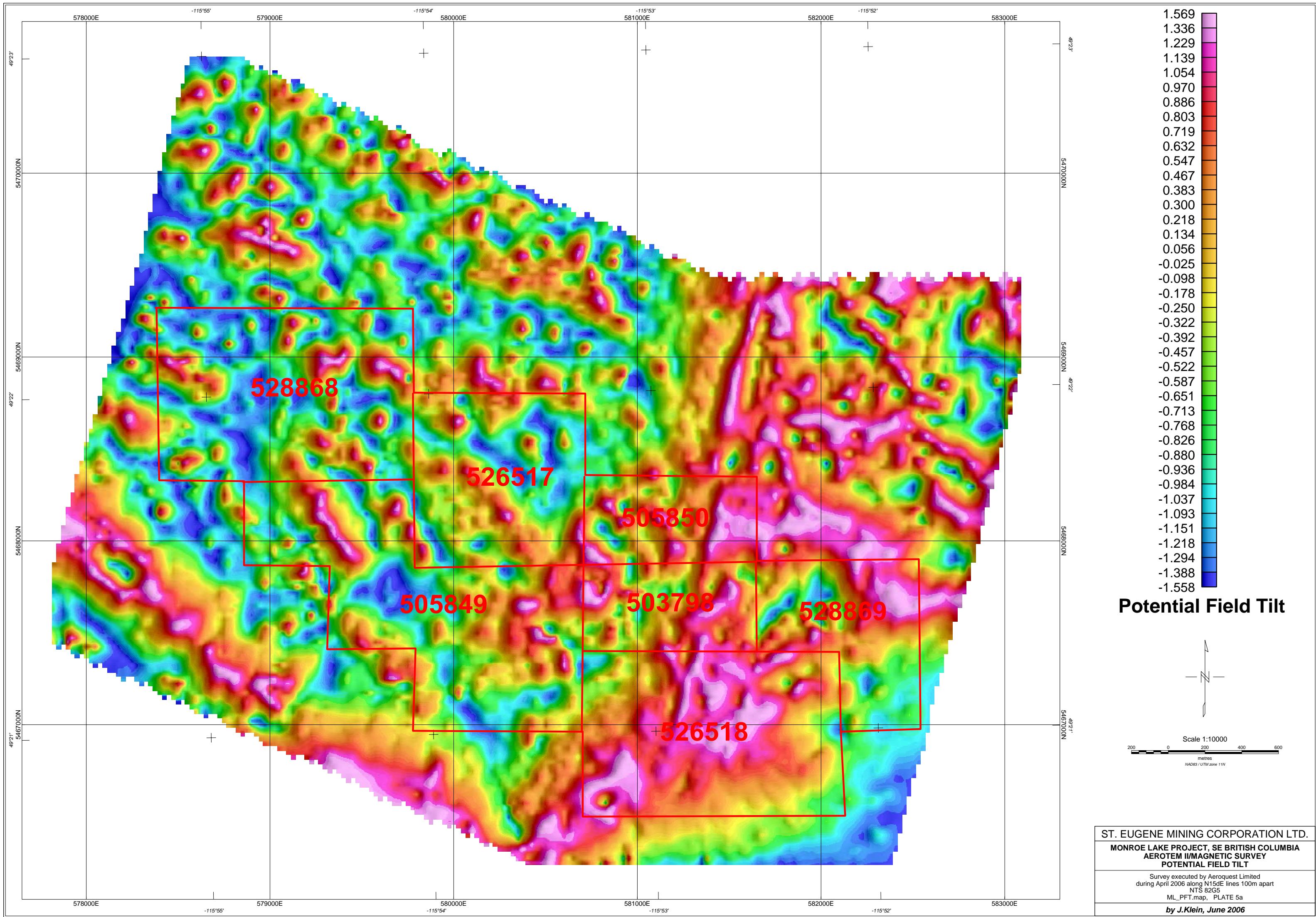
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MONROE LAKE PROJECT, SE BRITISH COLUMBIA
AEROTEM II/MAGNETIC SURVEY
MONROE LAKE SURVEY GRID and CLAIMS

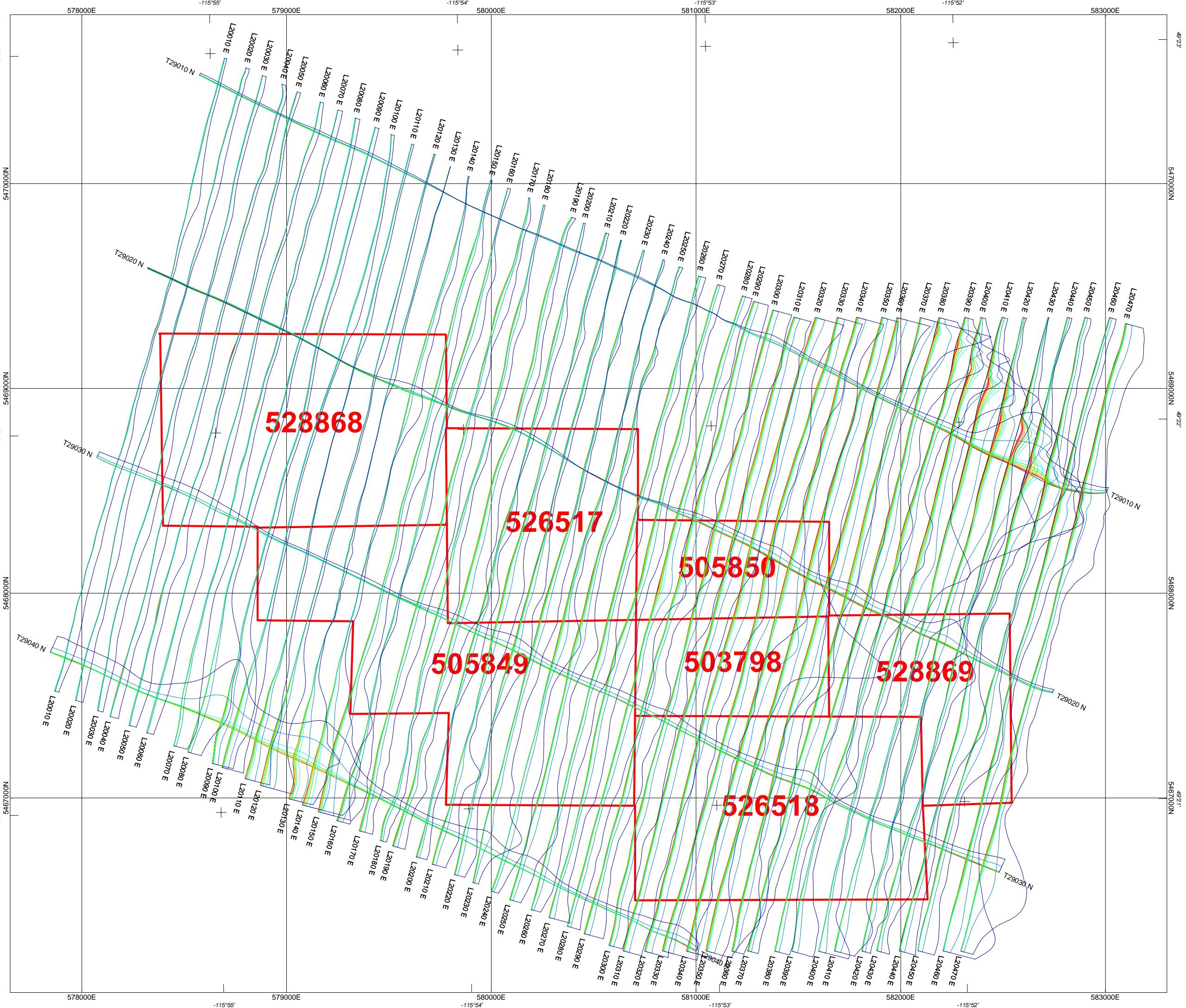
Survey executed by Aeroquest Limited
during April 2006 along N15dE lines 100m apart
NTS 82G5
ML_Grid_Claims.map25, PLATE 1a
by J.Klein, June 2006











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MONROE LAKE PROJECT, SE BRITISH COLUMBIA
AEROTEM II/MAGNETIC SURVEY
AEROTEM Z-OFF-TIME PROFILES

Survey executed by Aeroquest Limited
during April 2006 along N15dE lines 100m apart
NTS 82G5
ML_Z_Off_Profiles.map, PLATE 6a
by J.Klein, June 2006

