Assessment Report
On the
Airborne Magnetics and VTEM Survey
MAHTIN PROPERTY
RED MOUNTAIN AREA, YUKON

Dawson Mining District, Yukon

Location: 1. 120 km SE of Dawson City, Yukon
2. NTS Map Area 115 P/15
3. Latitude: 63° 55'N
Longitude: 136° 49'W

Claims: MAHTIN 1-15 YA23544-YA23558
MAHTIN 16-34 YA28827-YA28845
MAHTIN 37-120 YA30423-YA30506

For: International Gold Resources Inc.
7200 South Alton Way
Suite B-230
Centennial, Colorado
80112

BY: R. Allan Doherty, B.Sc., P.Geo.
Aurum Geological Consultants Inc.
106A Granite Road
Whitehorse, Yukon
Y1A 2V9

October 5, 2007

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1. SUMMARY

The Mahtin Property is an exploration target for Tombstone Suite plutonic-related gold mineralization. Mahtin is in the McQuesten mineral belt between Dawson City and Mayo. It is an under explored mineral occurrence amongst many that have seen extensive exploration. It is also the only Tombstone Suite stock intruding calcareous Rabbitkettle Formation.

Brewery Creek is on the western end and Dublin Gulch and Keno Hill at the eastern end of the McQuesten mineral belt. The entire Tombstone gold belt extends for some 2000 kilometres across Yukon and Alaska. It hosts deposits located at Donlin Creek (23 M oz Au), Fort Knox (5.4 M oz Au), in Alaska. In the Yukon, Brewery Creek (0.85 M oz Au), and Dublin Gulch (4.1 M oz Au) both located in the same belt as the Mahtin property.

A prospector held the Mahtin property from 1988 through to 2002 and very little work was performed on the property. Since 2003, additional soil and rock sampling geochemical analyses and a magnetometer and IP survey were carried out. This work confirmed the previous data from the early 1980's and significantly enhanced the property.

Coincident gold, arsenic, antimony and bismuth soil geochemical anomalies are located along the contact between the Sprague Creek quartz monzonite and Rabbitkettle Formation calcareous siltstones which has a well developed calc-silicate skarn developed over a 4 km by 2 km zone. This area also shows a strong magnetic high over the area of calc-silicate skarn and has returned three samples that assayed 4-6 gm/t gold.

An airborne magnetic and VTEM survey was conducted between June 8-15th by Geotech Ltd of Aurora Ontario covering a 4 km by 5 km area over the Mahtin claims.

2. INTRODUCTION AND TERMS OF REFERENCE

This report was prepared at the request of International Gold Resources Inc. Its purpose is to satisfy the reporting requirements for assessment work under the Yukon Quartz Mining Act, through a description of exploration work carried out on the Mahtin Property in 2006.

Exploration work carried out in 2006 on the Mahtin Property consisted of an airborne magnetometer and VTEM survey flown by Geotech Limited starting June 8 and completed on June 15, 2006.

3. PROPERTY DESCRIPTION AND LOCATION

The Mahtin claims are located 135 km east of Dawson City, Yukon (Figure 1). The claims are all contiguous covering an area of 2470 ha, centred at approximately 63^{o} 55' N latitude and 136^{o} 49' W longitude within NTS map area 115 P/15.

The property consists of 118 Mahtin Claims 100% owned by Shawn Ryan of Dawson City, Yukon, and currently under an Option Agreement to International Gold Resources Inc. The unsurveyed two-post quartz claims (Figure 2), were staked in accordance with the Yukon Quartz Mining Act. All the claims are in the Dawson Mining District; current claim status is shown on Yukon Quartz Sheet 115 P-15. At the date of this report, Mining records show all claims registered to Shawn Ryan. Expiry dates for the claims are in 2007, 2008 or 2012, as indicated on Table I.

In accordance with the Yukon Quartz Mining Act, yearly extensions to the expiry dates of quartz claims are dependent upon conducting $100 of work per claim or paying the equivalent cash in lieu of work. Work must be filed in the year the work was completed. Excess work can be used to extend expiry dates up to maximum of four years. Assessment costs can be applied to adjoining claims through filing grouping certificates. Filing a statement of work and costs and submission of an assessment report to the Dawson Mining Recorder verifying completion of the work, are also required no later than six months after the anniversary date of the claim. YESAA is the Yukon Environment and Socio-economic Assessment Act which came into force on November 20, 2005. Under the act, the Yukon Environmental and Socio-economic Assessment Board (YESAB) was set up to assess the environmental and socio-economic impacts of any projects which exceed well defined thresholds under the act. In the case of exploration drilling projects, a trigger would be having a camp with more than 10 persons or a camp occupied for greater than 250 man-days

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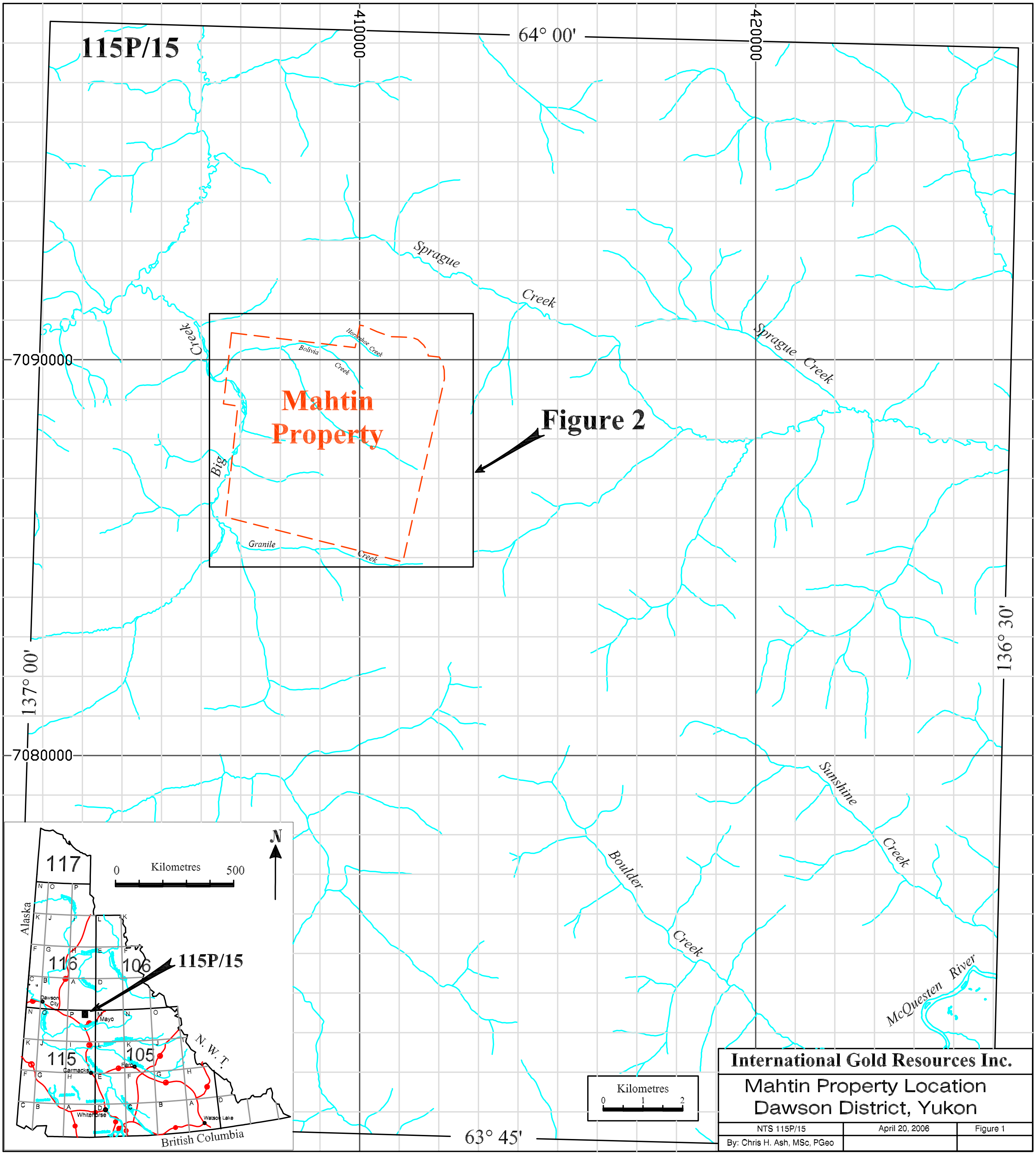
The claim data as of October 2007 are as follows:

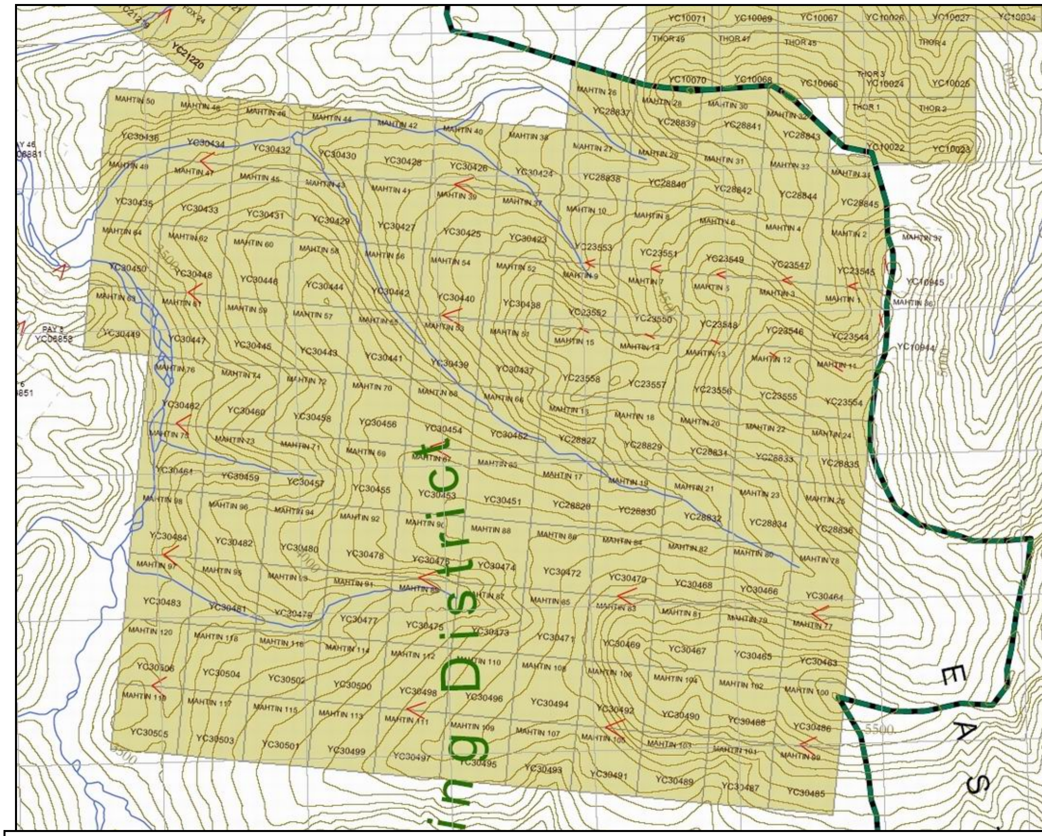
TABLE 1. INTERNATIONAL GOLD RESOURCES INC. - MATHIN OPTIONED CLAIMS

Claim Name	Claim Numbers	Grant/Record Number.	Mining District	Operation Recording Date	Claim Expiry Date
Mahtin	**1-13**	**YC23544 - YC23556**	**Dawson**	**2003-01-30**	**2016-01-30**
Mahtin	**14**	**YC23557**	**Dawson**	**2003-01-30**	**2017-01-30**
Mahtin	**15**	**YC23558**	**Dawson**	**2003-01-30**	**2016-01-30**
Mahtin	**16-34**	**YC28827 - YC28845**	**Dawson**	**2003-09-12**	**2012-01-30**
Mahtin	**37-120**	**YC30423 - YC30506**	**Dawson**	**2004-04-08**	**2017-01-30**

Above information obtained from the Yukon Government, Department of Energy Mines and Resources web site October 5. 2007.

The claims are located within the Traditional Territory of the Nacho Nyak Dun First Nation, which has a land claim settlement Agreement under the Yukon Umbrella Final Agreement.


115P/15
64° 00'
410000
420000
7090000
7080000
137° 00'
136° 30'
63° 45'
Sprague Creek
Sprague Creek
Big Creek
Bolivia Creek
Horseshoe Creek
Granite Creek
Mahtin Property
Figure 2
Sunshine Creek
Boulder Creek
McQuesten River
Kilometres
0
1
2
117
116
106
115
105
Kilometres
0
500
N
115P/15
Alaska
N. W. T.
British Columbia
Dawson City
Mayo
Carmacks
Faro
Whitehorse
Watson Lake
International Gold Resources Inc.
Mahtin Property Location
Dawson District, Yukon
NTS 115P/15
April 20, 2006
Figure 1
By: Chris H. Ash, MSc, PGeo



International Gold Resources

Mahtin Property Claim Map

NTS: 115P/15 Figure 2

4. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

Access to the property is by helicopter, based in Mayo 55 kilometres to the southeast. Alternatively, helicopters are available in Dawson City. The Clear Creek Road, which connects to the Klondike highway (#2), provides four-wheel drive road access to the area. The road is 4 kilometres north of the Mahtin claim block. The Clear Creek Road is not maintained and is usable only during the summer months.

The Mahtin Claims are situated in the partly unglaciated Stewart Plateau. Although Pleistocene glaciation scoured the major drainages in the area such as Sprague Creek, most of the property, higher elevations in particular, escaped the effects of glaciation. Topography is moderate to rugged and is characterized by rounded hills, ridges and a dendritic drainage system. The claims cover the north end of the East Ridge, on the boundary of the Dawson and Mayo Mining Districts. Elevations on the property range from 1200 m (4000') at Horseshoe Creek to 1680 m (5500') at the highest point on the East Ridge. Outcrop exposure is fair (approximately 20%) with almost no exposures on lower ridge slopes and forested areas. Most of the property is covered by felsenmeer and talus fines.

An interior continental climate with precipitation of about 31 cm annually, warm summers and cold winters typifies the area. Permafrost is common, especially on the steeper north and east facing slopes and lower forested areas. Most of the property is above treeline. Below 1200 m (4000') elevation ground cover consists of alpine fur, sparse spruce forest, alder, dwarf willow and birch. The area above treeline is mostly lichen-covered rock with sparse moss and alpine plant cover.

The Town of Mayo (Population 418) is the closest centre for obtaining groceries, fuel, accommodation and some limited rental and contracted exploration services. Trans North Helicopters maintains a summer helicopter base at Mayo airport and there is normally a single engine Otter on floats working out of Mayo. Mayo is also the location of the Mayo District Mining Recorders office, and Mining Land Use Inspections and Land Use and the YESAB District office. The property is within the Nacho Nyak Dun First Nation traditional territory. There is a 4 Kilowatt Power station just north of Mayo and a transmission line runs between Mayo and Dawson.

The exploration season in this part of the Yukon normally extends from late May to late September but cool rainy conditions and snowstorms are not uncommon in late September. The months of June through September are normally free of snow cover.

5. HISTORY

The Red Mountain area situated approximately 7 kilometers northeast of the Mahtin property was first prospected in the mid 1920's when Treadwell Yukon Corporation drove a short adit on the south side of Red Mountain drifting on a quartz-gold-arsenopyrite-stibnite vein with a large red alteration and oxidation halo, hence the name Red Mountain. The Mahtin Property may have been prospected at this time but there are no records to confirm this. The first recorded claims were staked 3.5 km east of the main Mahtin showings in 1948. The first assessment reports were filed in 1981 by CCH Minerals Ltd., Paul (1981).

CCH Minerals Ltd completed a large soil geochemistry grid over the intrusion looking for Tin and Tungsten mineralization. A total of 1346 soil samples were collected and analyzed for Sn, W, Cu, Ag, and As. A broad >500 ppm Arsenic anomaly was outlined over the intrusion. The geochemical anomaly (Figure 4) is some 700 m long by approximately 150-200 m wide, Paul (1981), Paul and Rota (1981).

CCH held the claims for a few years and they were re-staked by M.J. Moreau Enterprise Ltd., in 1988. The claims were maintained in good standing for over 15 years until December of 2003 when he allowed the claims to lapse. During this tenure, there were only two small exploration programs on the property. Which included some limited soil and rock sampling (179 samples), Hulstien (1989).

The property was examined over a two day period by H. Marsden and B. Sauer in 2001. They collected three samples along the contact between the Rabbitkettle Formation and the intrusive contact. The samples were of green actinolite and brown-red garnet skarn hosting 1-3% disseminated chalcopyrite and minor arsenopyrite. These samples assayed 4-6 gm/t Au. The work was completed on behalf of Goldfields, Marsden (2001).

Ryanwood Explorations Inc. completed GPS gridding (90 line km), Soil sampling (471 samples), IP surveys (8 Line Km) and some limited trenching, mapping and rock sampling in 2003 and 2004.

The property was optioned to International Gold Resources Inc., in October of 2004. Under the terms of the agreement, International Gold Resources Inc. agreed to pay cash payments totaling $420,000 and issue 400,000 shares and complete $1,600,000 in exploration expenditures on the Mahtin property prior to August 15, 2007.

6. GEOLOGICAL SETTING

6.1 REGIONAL GEOLOGY

The Mahtin Claims (Figure 3) are situated within the Selwyn Basin, part of the Ominica Belt. The geology of the McQuesten map area was initially mapped by H.S. Bostock (1964), at a scale of 1:253,440. More recently the area has been mapped at 1:50,000 scale by the Yukon Geological Survey formerly the Yukon/Canada Geoscience Office (Murphy et al. 1993; Murphy and Heon, 1994).

Two suites of granitoid intrusives, ranging from Paleozoic to Cenozoic age, related to underplating and or subduction, are found on both sides of the Tintina fault Granitoid emplacement peaked during the Early - Middle Cretaceous (Tempelman-Kluit, 1981). The Western Suite granitoid intrusives found west and southwest of the Selwyn Basin are predominantly granodiorite in composition and are associated with porphyry copper - molybdenum and copper skarn deposits.

The Eastern or Selwyn Plutonic Suite of granitoid intrusives are distributed along a northwest trending arcuate belt within the Selwyn Basin. The granitoids are mainly granitic in composition and are associated with tin, tungsten, and molybdenum and gold mineralization. The Dublin Gulch gold deposit some 30 kilometers to the east as well as significant mineralized systems at Red Mountain to the north and Clear Creek to the west are all associated with Tombstone Suite intrusions. Recent age dating by J. Mortensen at the University of British Columbia, dates the Sprague Creek Stock at 91.0 ± 0.2 Ma; Red Mountain Stock at 92.3 ± 0.8 Ma. These intrusions are considered excellent targets for

Tombstone Suite intrusion related gold deposits. Ages and mineralogy are correlative with other Tombstone Suite plutons in the area. Regional airborne magnetic data obtained from the Geological Survey of Canada from 800 m spaced flight lines show an unusually large magnetic response underlying the Red Mountain intrusion. At Mahtin, the regional magnetic relief is more subdued than at Red Mountain.

The Mahtin property is situated on the southern flank of the Lost Horses Syncline, a syncline of folded Gull Lake Formation, Rabbitkettle Formation, Duo Lake and Steele Formations and Earn Group Sediments, intruded by the 91 ±0.2 Ma Cretaceous Sprague Creek Stock, Murphy, (1997).

6.2 PROPERTY GEOLOGY

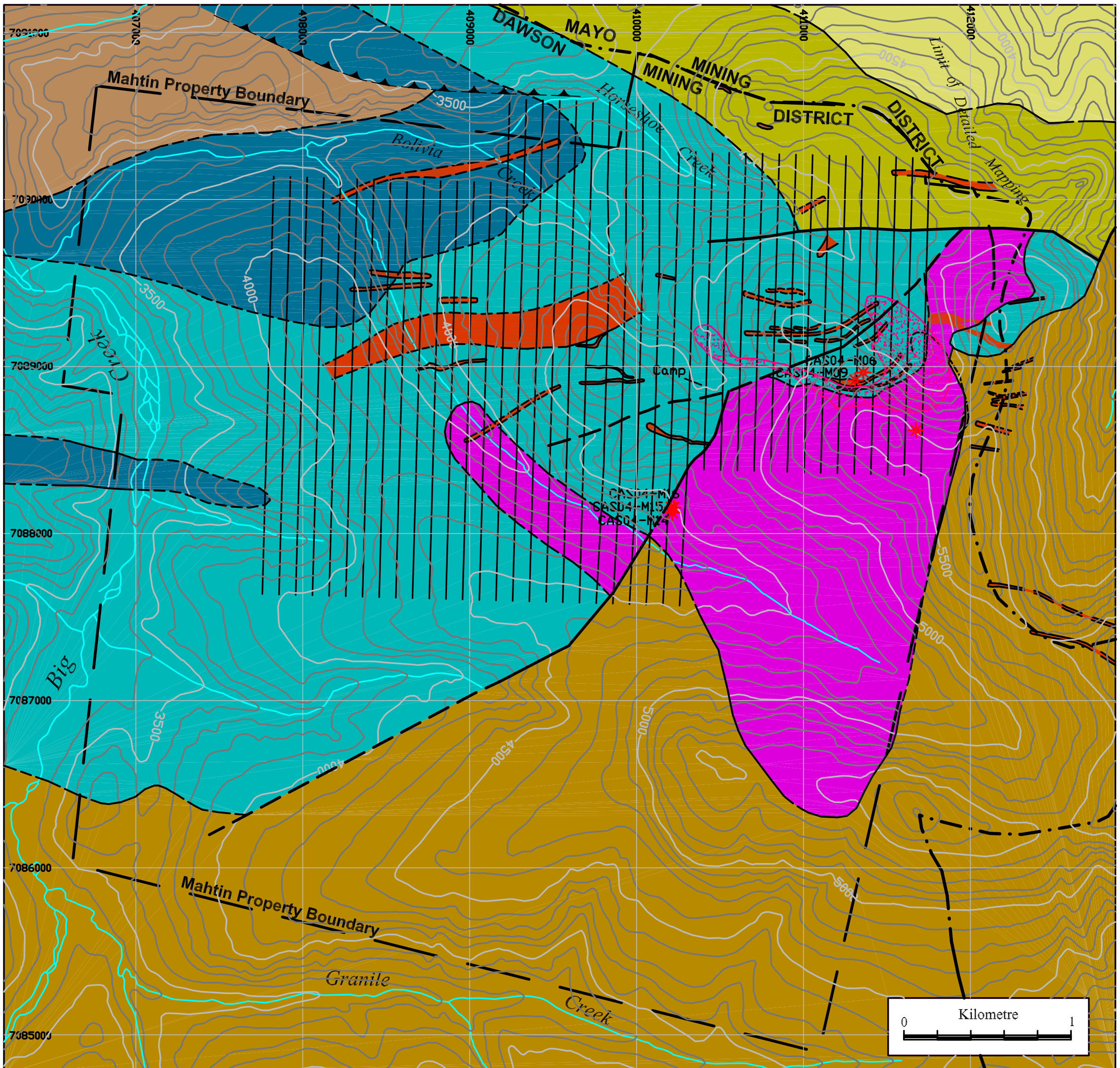
The Mahtin Property is underlain by Late Proterozoic to Early Mississippian marine clastic sediments that have been intruded by the Late Cretaceous Sprague Creek Stock and a related suite of marginal dikes (Figure 4). Sedimentary rocks proximal to the stock are thermally metamorphosed and locally hydrothermally altered with skarn and calcsilicate mineralization developed where proximal to calcareous sediments.

Late Paleozoic to Early Cambrian Yusezyu Formation, Hyland Group sediments underlies the southeastern portion of the property. These are dominated by foliated tan to grey metasandstone and muscovite chlorite phyllite, with lesser pebbly metasandstone and pebble metaconglomerate.

These older rocks are separated from a younger more compositionally varied succession of Cambrian to Mississippian sediments that underlie the north and western property area. These younger rocks form part of a regional anticlinal feature in which sedimentary units become progressively younger towards the core of the structure (Figure 4). In plan view that would be from east to west across the top of the map area shown.

The most significant of these units from a mineral potential standpoint and a function of their calcareous nature and ability to produce skarn assemblages is the Rabbitkettle Formation which is also the dominate rock type underlying the property area (Figure 4). This unit comprises a laterally continuous finely laminated light to dark grey sequence of siltstone, argillaceous, calcareous and siliceous siltstones, limestone and chert.

Skarn and calcsilicate alteration with associated sulphide mineralization are variably developed where in contact with the Sprague Creek Stock and to a lesser extent where proximal to dikes. The Sprague Creek stock is a medium- to coarse-grained, granitic textured quartz monzonite intrusion underlying the east central portion of the property area (Figure 4). Paul (1981) estimates mineral composition consisting of roughly 20% quartz, 35% K-feldspar, 35% plagioclase and 10% mafic minerals, mainly biotite with occasional minor hornblende or pryroxene. The related dike swarm is mainly east-west trending and most prevalent to the north of the stock intruding Rabbitkettle formation sediments.



LAYERED ROCKS

EARLY DEVONIAN - LATE MISSISSIPPIAN

Earn Group

Grey to black shale, phyllite, siltstone, sandstone and chert pebble conglomerate

ORDOVICIAN - SILURIAN

Duo Lake Formation

Grey to black shale and thin bedded chert

LATE CAMBRIAN - ORDOVICIAN

Rabbit Kettle Formation

Calcareous phyllite, thin to medium bedded marble/dolomitic marble, calcsilicate alteration near intrusion

CAMBRIAN

Gull Lake Formation

Tan-to brown-weathering, thinly bedded calcareous siltstone, sandstone, shale and limestone

Finely laminated siltstone, argillaceous siltstone, limestone and chert

LATE PROTEROZOIC - EARLY CAMBRIAN

HYLAND GROUP

Yusezyu Formation

Buff, brown and rusty weathering quartzite and quartz mica schist

INTRUSIVE ROCKS

CRETACEOUS

Hypabyssal dykes of porphyritic monzonite and syenite

Biotite +/- hornblende quartz monzonite

ALTERATION

CRETACEOUS

Zone of > 500 ppm As in soils (from Paul & Rota, 1981)

SYMBOLS

Contact (defined, approximate, inferred)..................

Fault (defined, approximate, inferred)......................

Contact (defined, approximate, inferred)..................

Yukon Mining District Boundary ....

Rock Assay Sample Location ....

CARTOGRAPHIC INFORMATION

North American Datum 1983, UTM Zone 7; Transverse Mercator Projection.
Contour interval in feet.

International Gold Resources Inc.

Mahtin Property Geology
Dawson District, Yukon

NTS 115P/15	April 20, 2006	Figure x
By: Chris H. Ash, MSc, PGeo		

7. MINERALIZATION

Known mineralization on the Mahtin property is spatially and temporally related to the Sprague Creek stock. Two distinct styles of mineralization are present. Mineralized quartz-calcite veins are contained within the quartz monzonite body and calcsilicate alteration with associated skarn mineralization is variably developed around the margins of the intrusion where in contact with Rabbitkettle calcareous sediments. Pyrite is disseminated locally within the stock and is ubiquitous in the surrounding hornfels.

Intrusion hosted quartz calcite veins and veinlets from 1 to 5 cm in width containing arsenopyrite, pyrite, stibnite and chalcopyrite occupy late fractures in the quartz monzonite. Locally, brecciated and tourmalinized zones are also present within the quartz monzonite. This type of mineralization is best developed near the north eastern margin of the stock and has been previously sampled and assayed for gold (Paul, 1981), returning uniformly low values.

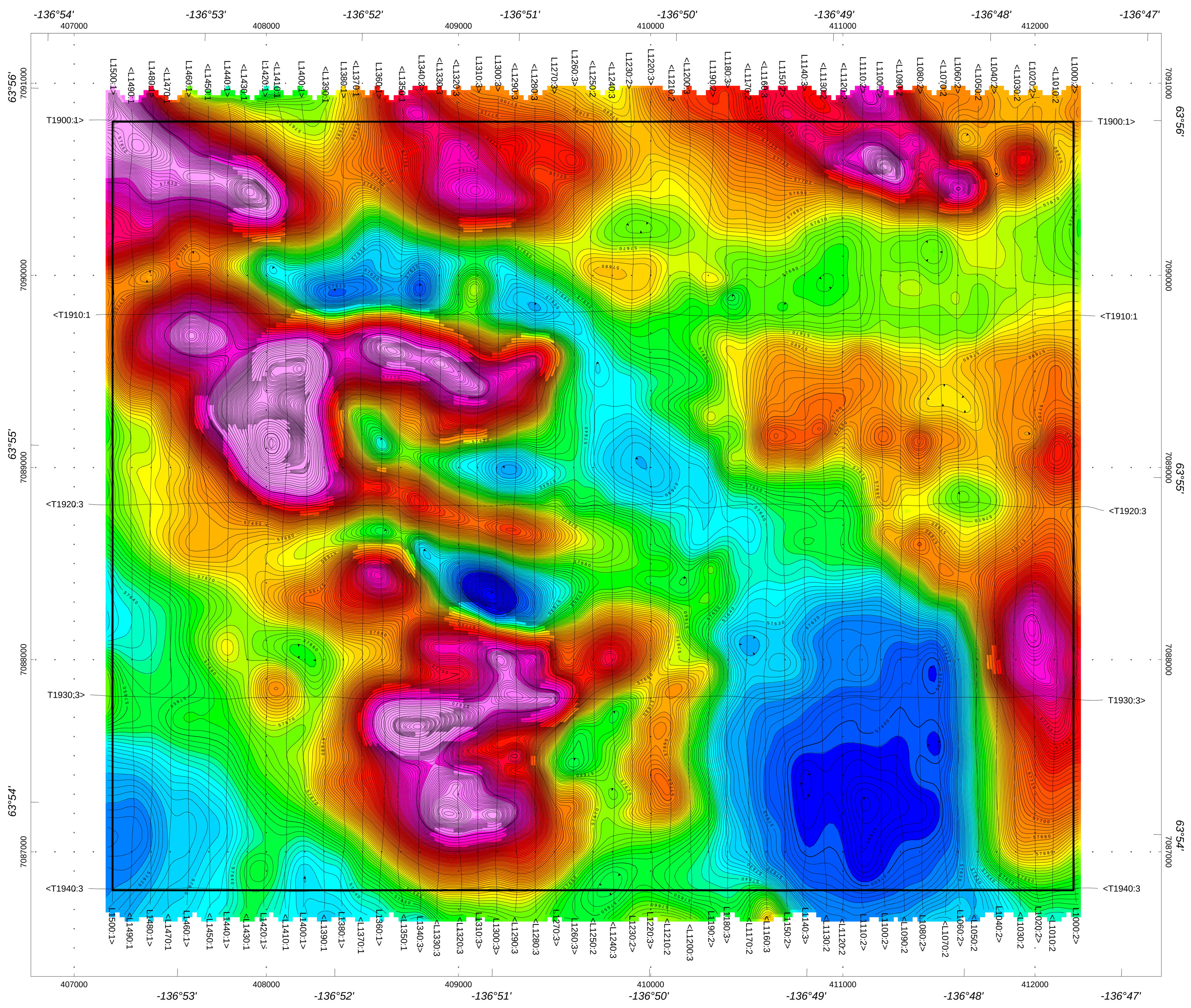
The calc-silicate rocks alteration is best developed, near the periphery of the biotite quartz monzonite, but also occurs along some of the porphyry dyke margins. Sulphide skarns containing arsenopyrite, scorodite and lesser amounts of pyrite have been found in a number of localities, and usually show some degree of brecciation. Banded arsenopyrite-pyrrhotite skarns are also locally developed and are thought to have replaced an interbedded carbonate/argillite host. These skarns are again commonly crackle brecciated, the late veinlets being infilled with sulphide.

8. AIRBORNE GEOPHYSICAL SURVEY

An airborne geophysical survey of the entire MAHTIN claim block was flown by Geotech of Aurora Ontario between June 1-15th. The helicopter-mounted loop was flown from Mayo daily using a Trans North Helicopters Astar helicopter.

Geophysical equipment specifications and survey methodology are detailed in the final report received from Geotech Ltd (Appendix A). The Magnetic Data and VTEM data are shown in Figures 3 and 4.

The VTEM data has not been interpreted at the time this report was prepared.



Survey Specifications:

Aircraft: Astar B2 helicopter, Registration C-GTNU
Flight Line Spacing: 100 metres
Nominal terrain clearance 85 metres
EM Loop is 42 metres under helicopter
Magnetic sensor is 42 metres under helicopter

Instruments:

Geotech Time Domain Electromagnetic System (VTEM)
with concentric Rx/Tx geometry
Transmitter Loop Diameter 26 m, Base Frequency 30 Hz
Dipole Moment 370,000 NIA
Transmitter Wave Form: Trapezoid, Pulse Width 7.5 ms
Geometrics Optically-pumped,
High Sensitivity Cesium Magnetometer
Mag Resolution 0.02 nT at 10 samples/sec

PRELIMINARY

57835
57805
57785
57765
57755
57740
57730
57720
57710
57705
57700
57695
57690
57685
57680
57675
57670
57665
57660
57655
57650
57645
57640
57635
57630
57625
57615
57605
57595

Magnetic field
(nT)

Contour intervals:
2 nT
10 nT
50 nT
200 nT

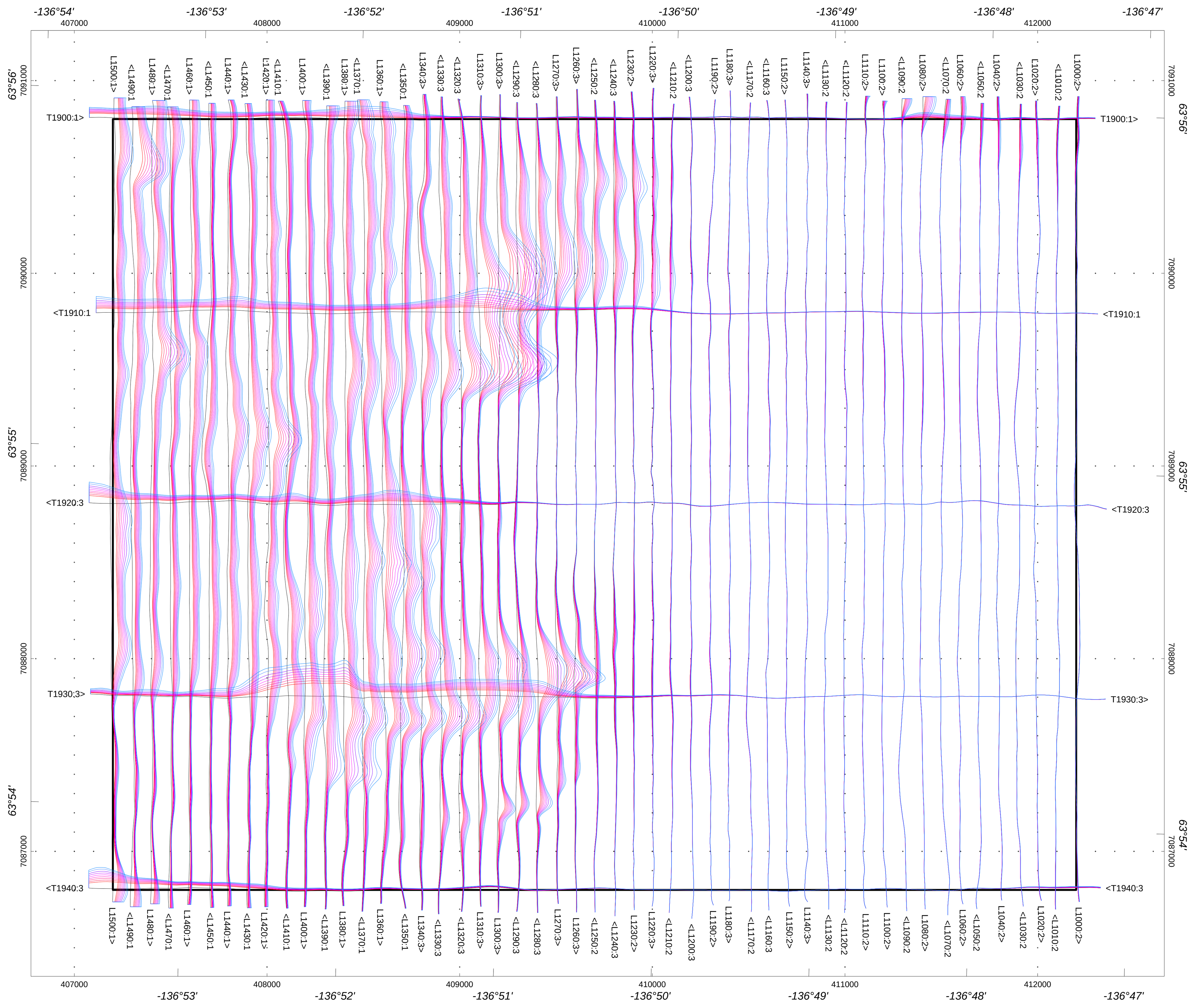
Scale 1:10000
100 0 100 200 300 400 500
metres
WGS 84 / UTM zone 8N

Aurum Geological Consultants Inc.
MAH Block
Yukon, Canada

Geotech VTEM System
Total Field Magnetics

Flown and processed by Geotech Ltd.
30 Industrial Parkway S.,
Aurora, Ontario, Canada L4G 3W2
www.geotechairborne.com

July 2006



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Instruments:

Geotech Time Domain Electromagnetic System (VTEM)
with concentric Rx/Tx geometry
Transmitter Loop Diameter 26 m, Base Frequency 30 Hz
Dipole Moment 370,000 NIA
Transmitter Wave Form: Trapezoid, Pulse Width 7.5 ms
Geometrics Optically-pumped,
High Sensitivity Cesium Magnetometer
Mag Resolution 0.02 nT at 10 samples/sec

PRELIMINARY

0.19 ms, 1mm = 0.3 pV/A/m^4
0.22 ms, 1mm = 0.3 pV/A/m^4
0.26 ms, 1mm = 0.3 pV/A/m^4
0.30 ms, 1mm = 0.3 pV/A/m^4
0.35 ms, 1mm = 0.3 pV/A/m^4
0.41 ms, 1mm = 0.3 pV/A/m^4
0.48 ms, 1mm = 0.3 pV/A/m^4
0.57 ms, 1mm = 0.3 pV/A/m^4
0.68 ms, 1mm = 0.3 pV/A/m^4

Scale 1:10000

100 0 100 200 300 400 500

metres

WGS 84 / UTM zone 8N

Aurum Geological Consultants Inc.
MAH Block
Yukon, Canada

Geotech VTEM System
VTEM Profiles
Time Gates 0.19 - 0.68 ms

Flown and processed by Geotech Ltd.
30 Industrial Parkway S.,
Aurora, Ontario, Canada L4G 3W2
www.geotechairborne.com

July 2006

9. RECOMMENDATIONS

The property is under explored and warrants a minimum of 3000 feet (1000 meter) core drilling program. The drill program should consist of five drill sites with 2-3 holes fanned off of each site. Fewer sites would reduce the requirement for helicopter moves and reduce costs.

The drilling should focus on the coincident geological, geochemical, magnetic, and IP anomalies associated with the Sprague Creek intrusion and particularly along the well defined contact between the intrusion and the Rabbitkettle Formation calcareous phyllite and associated skarn zones.

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Tempelman-Kluit, D.J., 1981. Geology and Mineral Deposits of Southern Yukon: in Yukon Geology and Exploration 1979-80; Geology Section, Department of Indian and Northern Affairs, Whitehorse Yukon.

11. CERTIFICATE OF QUALIFICATIONS

I, R. Allan Doherty, hereby certify that:

1. I am a consulting mineral exploration geologist with AURUM GEOLOGICAL CONSULTANTS INC., 106A Granite Road, Whitehorse, Yukon, Y1A 2V9.

2. I am a graduate of the University of New Brunswick, with a degree in geology (Hons. B.Sc., 1977). I attended graduate school at Memorial University of Newfoundland, 1978-80. I have been involved in geological mapping and mineral exploration primarily in the Yukon continuously since 1980.

3. I am a "Qualified Person" as defined in Sec 1.2 of National Instrument 43-101.

4. I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia, Registration No. 20564, and have been registered as a Professional Geologist since 1993.

5. I am the author of this report on the Mahtin Property. The report is based on field work conducted in 2006 under the author's supervision and on published assessment reports and company files.

6. I am the author of all sections of this report.

7. I am not aware of any material fact or material change with respect to the subject matter of this technical report, which is not reflected in the technical report, the omission to disclose makes the technical report misleading.

8. I am independent of the Issuer and have no direct or indirect interest in the properties or securities of International Gold Resources Inc., or affiliated companies, nor do I expect to receive any.

9. I have had direct involvement with the exploration programs conducted on the area discussed in this report both for prior property owners and International Gold Resources Inc. I visited the property in September 2003. I am familiar with the Tombstone gold deposit model and have experience writing Qualifying Reports and conducting evaluations of mineral properties.

10. I have read National Instrument 43-101 and Form 43-101F and have prepared this technical Report on the Mahtin Property in compliance with this Instrument and Form 43-101F1.

R. Allan Doherty, P. Geo.

October 5, 2007

12. STATEMENT OF COSTS

A Certificate of Work was filed on the Mahtin Claims located in the Dawson Mining District. On April 13, 2007 The required value of work is $69,165.00. Geotech Ltd of Aurora Ontario mobilized and flew an airborne magnetometer and VTEM survey at 100 m line spacing over the entire property. Crew mobilized to the Property on June 10 and demobilized on June 15^{th}, 2006. Work consisted of mobilization and demobilization of helicopter and geophysical bird from Mayo daily. Costs have been prorated per claim.

Airborne Magnetometer and VTEM Survey

Geotech Invoices

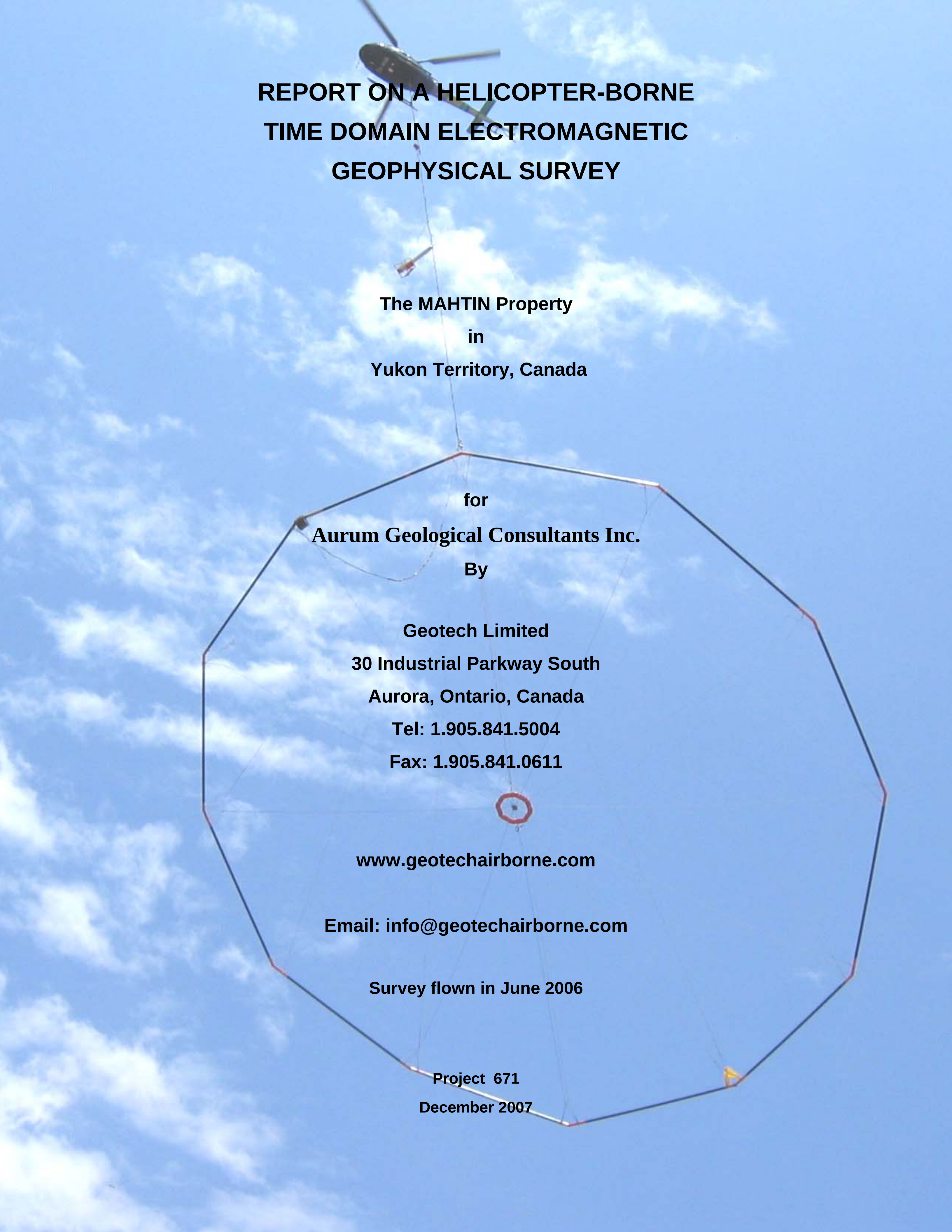
990742	$23,595.64	
990738	$23,007.68	
990846	$10,209.92	
Sub-Total		**S56,813.24**
JET B Fuel (3000 L)	$8,793.73	
Diesel Fuel	$ 546.94	
Sifton Air Fuel Haul	$2,434.25	
Al Doherty 1 day	$ 600.00	
Sub-Total		**$12,374.92**
Total Value for Assessment		**$ 69,188.16**

R. Allan Doherty, P. Geo

October 5, 2007

APPENDIX A

GEOTECH LTD AIRBORNE MAGNETOMETER ANSD VTEM SURVEY REPORT



REPORT ON A HELICOPTER-BORNE TIME DOMAIN ELECTROMAGNETIC GEOPHYSICAL SURVEY

The MAHTIN Property

in

Yukon Territory, Canada

for

Aurum Geological Consultants Inc.

By

Geotech Limited

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Aurora, Ontario, Canada

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Survey flown in June 2006

Project 671

December 2007

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APPENDICES

REPORT ON A HELICOPTER-BORNE
TIME DOMAIN ELECTROMAGNETIC SURVEY

Of the MAHTIN Property, Yukon Territory, Canada

Executive Summary

During the period of June 15th to June 18th, 2006, Geotech Ltd. carried out a helicopter-borne geophysical survey for Aurum Geological Consultants Inc. over one block, Mahtin, located in Yukon Territory, Canada, approximately 50 km north of Mayo, YT.

Principal geophysical sensors included a versatile time domain electromagnetic system (VTEM) and a cesium magnetometer. Ancillary equipment included a GPS navigation system and a radar altimeter. A total of 229 line-km were flown.

In-field data processing involved quality control and compilation of data collected during the acquisition stage, using the in-field processing centre established at survey base. Preliminary and final data processing, including generation of final digital data products were done at the office of Geotech Ltd. in Aurora, Ontario.

The processed survey results are presented as total magnetic field grid and electromagnetic stacked profiles.

Digital data includes all electromagnetic and magnetic products plus positional, altitude and raw data.

1. INTRODUCTION

1.1 General Considerations

These services are the result of the Agreement made between Geotech Ltd. and Aurum Geological Consultants Inc., to perform a helicopter-borne geophysical survey over the MAHTIN block, located in Yukon Territory, Canada.

229.0 line-km of geophysical data were acquired during the survey.

The survey block is as shown in Appendix A.

The crew was based in various locations in Yukon Territory for the acquisition phase of the survey, as shown in Section 2 of this report.

The helicopter was obtained from the TransNorth Helicopters for the duration of the survey. Multiple fuel caches were arranged.
Survey flying was completed on June 18th, 2006. Preliminary data processing was carried out daily during the acquisition phase of the project. Final data presentation and data archiving was completed in the Aurora office of Geotech Ltd. in January 2007.

1.2. Survey and System Specifications

The survey block was flown at nominal traverse line spacing of 100 metres.
Tie lines were flown perpendicular to traverse lines at line spacing of 1000 metres, as shown in the Section 2 of this report.

Where possible, the helicopter maintained a mean terrain clearance of 80 metres, which translated into an average height of 45 meters above ground for the bird-mounted VTEM system and 45 metres for the magnetic sensor.

The survey was flown using an Astar B2 helicopter, registration C-GTNU, operated by TransNorth Helicopters Limited. Details of the survey specifications may be found in Section 2 of this report.

1.3. Data Processing and Final Products

Data compilation and processing were carried out by the application of Geosoft OASIS Montaj and programs proprietary to Geotech Ltd.

Database, grid and maps of final products were presented to Aurum Geological Consultants Inc.

The survey report describes the procedures for data acquisition, processing, final image presentation and the specifications for the digital data set.

1.4. Topographic Relief

The survey block location is shown in the location map (Appendix A).

The MAHTIN property is located approximately 60 km. NW of Mayo and 60 km. NE of Mcquesten. This is also 130 km. E of Dawson City.

Topographically, the block exhibited mountainous relief, with range of elevations from approximately 990 to 1770 metres ASL.

2. DATA ACQUISITION

2.1. Survey Area

The survey block (see location maps, Appendix A) and general flight specifications are as follows:

Survey areas	Line /Tie spacing (m)	Area km. ^{2}	Line / Tie direction	Line number	Line KM
MAHTIN	100	21.6	N0E	1000 - 1500	229
	1000		N90E	1900 - 1940	

Table 1 - Survey block

Survey block boundaries are as shown in Appendix B.

2.2. Survey Operations

Date	Flights	Production	Block	Crew location	REMARK
15-Jun	1	74	MAHTIN	Mayo	2 ferry flights. Strong winds
16-Jun		0	MAHTIN	Mayo	Poor weather, no flights
17-Jun		0	MAHTIN	Mayo	Poor weather, no flights
18-Jun	2,3	155	MAHTIN	Mayo	2 ferry flights

Table 2 - Survey schedule

2.3. Flight Specifications

The nominal EM sensor terrain clearance was 45 m. (EM bird height above ground, i.e. helicopter is maintained 80 m. above ground). Nominal survey speed was 80 km/hr. The data recording rates of the data acquisition was 0.1 second for electromagnetics and magnetometer, 0.2 second for altimeter and GPS. This translates to a geophysical reading about every 2 metres along flight track. Navigation was assisted by a GPS receiver and data acquisition system, which reports GPS co-ordinates as latitude/longitude and directs the pilot over a pre-programmed survey grid.

The operator was responsible for monitoring of the system integrity. He also maintained a detailed flight log during the survey, tracking the times of the flight as well as any unusual geophysical or topographic feature.

On return of the aircrew to the base camp the survey data was transferred from a compact flash card (PCMCIA) to the data processing computer.

2.4. *Aircraft and Equipment*

2.4.1. Survey Aircraft

An Astar B2 helicopter, registration C-GTNU - owned and operated by Trans North Helicopters Ltd. was used for the survey. Installation of the geophysical and ancillary equipment was carried out by Geotech Ltd.

2.4.2. Electromagnetic System

The electromagnetic system was a Geotech Versatile Time Domain EM (VTEM) system. The layout of the configuration used for this survey is as indicated in Figure 1 below.

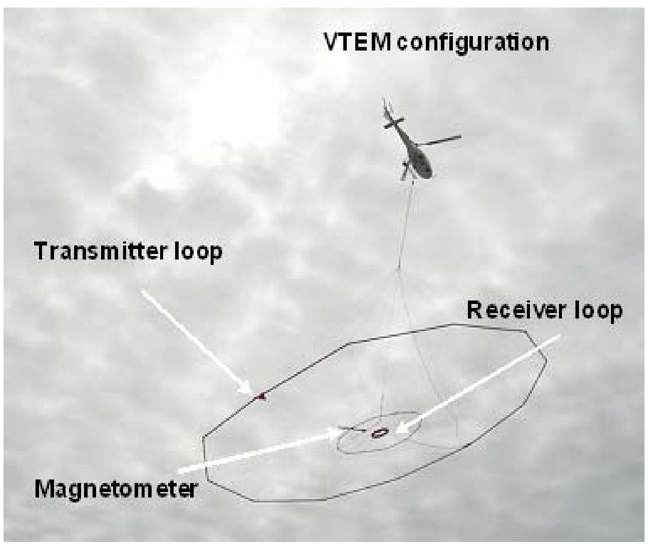


Figure 1 - VTEM Configuration

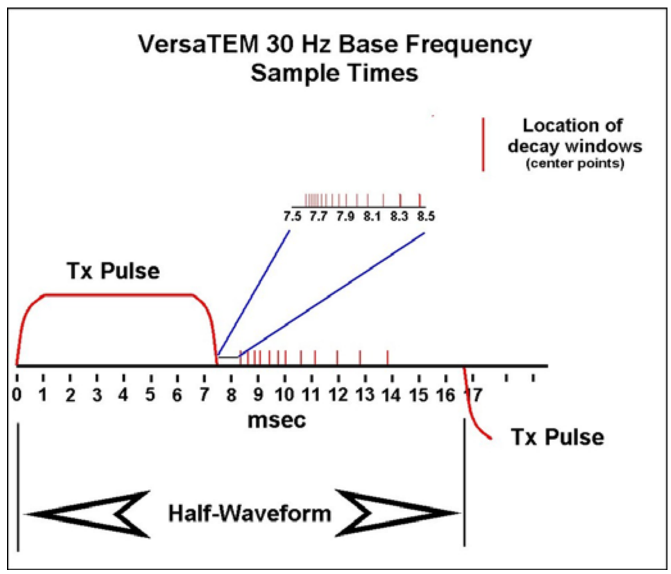


Figure 2 - VTEM sample times

Receiver and transmitter coils are concentric and Z-direction oriented.

The receiver decay recording scheme is shown diagrammatically in Figure 2.

Twenty-six measurement gates were used in the range from 130 μs to 7540 μs, as shown in the following table.

VTEM Decay Sampling scheme (Microseconds)			
Time gate	Start	End	Width
130	120	140	20
150	140	160	20
170	160	180	20
190	180	205	25
220	205	240	35
260	240	280	40
300	280	325	45
350	325	380	55
410	380	445	65
480	445	525	80
570	525	625	100
680	625	745	120
810	745	885	140
960	885	1045	160
1130	1045	1235	190
1340	1235	1470	235
1600	1470	1750	280
1900	1750	2070	320
2240	2070	2450	380
2660	2450	2920	470
3180	2920	3480	560
3780	3480	4120	640
4460	4120	4880	760
5300	4880	5820	940
6340	5820	6860	1040
7540	6860	8220	1360

Table 3 - VTEM decay sampling scheme

.

Transmitter coil diameter was 26 metres, the number of turns was 4.
Transmitter pulse repetition rate was 30 Hz.
Peak current was 167 A.
Duty cycle was 37%.
Peak dipole moment was 355,000 NIA.

Receiver coil diameter was 1.2 metres, the number of turns was 100.
Receiver effective area was 113 m^2
Wave form – trapezoid.
Recording sampling rate was 10 samples per second.

The EM bird was towed 35 m. below the helicopter.

2.4.3. Airborne magnetometer

The magnetic sensor utilized for the survey was a Geometrics optically pumped cesium vapour magnetic field sensor, mounted in a separate bird towed at the same altitude as the EM loops. The sensitivity of the magnetic sensor is 0.02 nanoTesla (nT) at a sampling interval of 0.1 seconds. The magnetometer sends the measured magnetic field strength as nanoTeslas to the data acquisition system via the RS-232 port.

2.4.4. Ancillary Systems

2.4.4.1. Radar Altimeter

A Terra TRA 3000/TRI 40 radar altimeter was used to record terrain clearance. The antenna was mounted beneath the bubble of the helicopter cockpit.

2.4.4.2. GPS Navigation System

The navigation system used was a Geotech PC based navigation system utilizing a NovAtel's WAAS enable OEM4-G2-3151W GPS receiver, Geotech navigate software, a full screen display with controls in front of the pilot to direct the flight and an NovAtel GPS antenna mounted on the helicopter tail.
The co-ordinates of the block were set-up prior to the survey and the information was fed into the airborne navigation system.

2.4.4.3. Digital Acquisition System

A Geotech data acquisition system recorded the digital survey data on an internal compact flash card. Data is displayed on an LCD screen as traces to allow the operator to monitor the integrity of the system. Contents and update rates were as follows:

DATA TYPE	SAMPLING
TDEM	0.1 sec
Magnetometer	0.1 sec
GPS Position	0.2 sec
Radar Altimeter	0.2 sec

Table 4 - Sampling Rates

2.4.5. Base Station

A combine magnetometer/GPS base station was utilized on this project. A Geometrics Cesium vapour magnetometer was used as a magnetic sensor with a sensitivity of 0.001 nT. The base station was recording the magnetic field together with the GPS time at 1 Hz on a base station computer. The base station magnetometer sensor was installed away from electric transmission lines and moving ferrous objects such as motor vehicles. The magnetometer base station's data was backed-up to the data processing computer at the end of each survey day.

3. PERSONNEL

The following Geotech Ltd. personnel were involved in the project.

Field

Crew chiefs / Operators:	Calin Cosma

The survey pilot and the mechanic engineer were employed directly by the helicopter operator – TransNorth Helicopters.

Pilot:	Alan Stannard
Mechanical Engineer:	Margo Hager

Office

Data Processing:	Harish Kumar
Data Processing / Reporting:	George Lev
Data Technician:	Maria Jagodkin

Data acquisition and processing phases were carried out under the supervision of Andrei Bagrianski, Surveys Manager. Overall management of the project was undertaken by Edward Morrison, President, Geotech Ltd.

4. DATA PROCESSING AND PRESENTATION

4.1. *Flight Path*

The flight path, recorded by the acquisition program as WGS 84 latitude/longitude, was converted into the UTM coordinate system in Oasis Montaj.

The flight path was drawn using linear interpolation between x, y positions from the navigation system. Positions are updated every second and expressed as UTM eastings (x) and UTM northings (y).

4.2. *Electromagnetic Data*

A three stage digital filtering process was used to reject major sferic events and to reduce system noise. Local sferic activity can produce sharp, large amplitude events that cannot be removed by conventional filtering procedures. Smoothing or stacking will reduce their amplitude but leave a broader residual response that can be confused with geological phenomena. To avoid this possibility, a computer algorithm searches out and rejects the major sferic events. The filter used was a 16 point non-linear filter.

The signal to noise ratio was further improved by the application of a low pass linear digital filter. This filter has zero phase shift which prevents any lag or peak displacement from occurring, and it suppresses only variations with a wavelength less than about 1 second or 20 metres. This filter is a symmetrical 1 sec linear filter.

The results are presented as stacked profiles of EM voltages for the gate times, in logarithmic scale.

Generalized modeling results of the VTEM system, written by Geophysicist Roger Barlow, are shown in Appendix C.

The VTEM output voltage of the receiver coil is shown in Appendix D.

4.3. Magnetic Data

The processing of the magnetic data involved the correction for diurnal variations by using the digitally recorded ground base station magnetic values. The base station magnetometer data was edited and merged into the Geosoft GDB database on a daily basis. The aeromagnetic data was corrected for diurnal variations by subtracting the observed magnetic base station deviations.

Tie line levelling was carried out by adjusting intersection points along the traverse lines. A micro-levelling procedure was then applied. This technique is designed to remove persistent low-amplitude components of flight-line noise remaining after tie line levelling.

The corrected magnetic data was interpolated between survey lines using a random point gridding method to yield x-y grid values for a standard grid cell size of approximately 0.2 cm. at the mapping scale. The Minimum Curvature algorithm was used to interpolate values onto a rectangular regular spaced grid.

5. DELIVERABLES

5.1. *Survey Report*

The survey report describes the data acquisition, processing, and final presentation of the survey results.

The survey report is provided in two paper copies and digitally in PDF format.

5.2. *Maps*

Final maps were produced at a scale of 1: 10,000. The coordinate/projection system used was the WGS84, UTM zone 8 north. All maps show the flight path trace. Latitude and longitude are also noted on maps.

The following maps are presented to Aurum Geological Consultants Inc. on paper as results of the helicopter-borne geophysical survey carried out over the MAHTIN block.

- Total Magnetic Field contours and colour images
- Logarithmic scale VTEM profiles, Time Gates 0.22 - 6.34 ms

5.3. *Digital Data*

There are three (3) main directories,

Data contains a database, grid and maps, as described below.

Report contains a copy of the report and appendixes in PDF format.

VTEM_fp_GoogleEarth
contains a kmz file containing flightpath of the MAHTIN block. Free version of Google Earth software can be downloaded from, http://earth.google.com/download-earth.html

- Database in Geosoft GDB format,

671mah_final.gdb containing the following channels:

X:	X positional data (metres – WGS84, utm zone 8 north)
Y:	Y positional data (metres – WGS84, utm zone 8 north)
Z:	GPS antenna elevation (metres - ASL) (on the tail of the helicopter)
Gtime1:	GPS time (seconds of the day)
Radar:	Helicopter terrain clearance from radar altimeter (metres - AGL)
DEM:	Digital elevation model (metres)
Mag1:	Raw Total Magnetic field data (nT)
Basemag:	Base station magnetic data (nT)
Mag2:	Total Magnetic field base station corrected data (nT)
Mag3:	Levelled Total Magnetic field data (nT)
C130f:	Raw 130 microsecond time channel ($pV/A/m^4$)
C150f:	Raw 150 microsecond time channel ($pV/A/m^4$)
C170f:	Raw 170 microsecond time channel ($pV/A/m^4$)
C190f:	Raw 190 microsecond time channel ($pV/A/m^4$)
C220f:	Raw 220 microsecond time channel ($pV/A/m^4$)
C260f:	Raw 260 microsecond time channel ($pV/A/m^4$)
C300f:	Raw 300 microsecond time channel ($pV/A/m^4$)
C350f:	Raw 350 microsecond time channel ($pV/A/m^4$)
C410f:	Raw 410 microsecond time channel ($pV/A/m^4$)
C480f:	Raw 480 microsecond time channel ($pV/A/m^4$)
C570f:	Raw 570 microsecond time channel ($pV/A/m^4$)
C680f:	Raw 680 microsecond time channel ($pV/A/m^4$)
C810f:	Raw 810 microsecond time channel ($pV/A/m^4$)
C960f:	Raw 960 microsecond time channel ($pV/A/m^4$)
C1130f:	Raw 1130 microsecond time channel ($pV/A/m^4$)
C1340f:	Raw 1340 microsecond time channel ($pV/A/m^4$)
C1600f:	Raw 1600 microsecond time channel ($pV/A/m^4$)
C1900f:	Raw 1900 microsecond time channel ($pV/A/m^4$)
C2240f:	Raw 2240 microsecond time channel ($pV/A/m^4$)
C2660f:	Raw 2660 microsecond time channel ($pV/A/m^4$)
C3180f:	Raw 3180 microsecond time channel ($pV/A/m^4$)
C3780f:	Raw 3780 microsecond time channel ($pV/A/m^4$)
C4460f:	Raw 4460 microsecond time channel ($pV/A/m^4$)
C5300f:	Raw 5300 microsecond time channel ($pV/A/m^4$)
C6340f:	Raw 6340 microsecond time channel ($pV/A/m^4$)
C7540f:	Raw 7540 microsecond time channel ($pV/A/m^4$)
PLinef:	Power line monitor (linear trend removed)

- Grids in Geosoft GRD format, as follow,

  mah_magfin: Total Magnetic field (nT)

  A Geosoft .GRD file has a .GI metadata file associated with it, containing grid projection information.

  For traverse line spacing of 100 metres, 10 m. grid cell size was used.

- Maps in Geosoft MAP format, as follow,

  mah_magfin: Total Magnetic Field image and contours
  mah_EM-LP: Logarithmic scale profiles, Time Gates 0.22 – 6.34 ms

- ASCII file VTEM_WaveForm.xyz in Geosoft format containing the following channel:

  Volt: output voltage of the receiver coil
  (volts, sampling rate 20 microseconds)

- A *readme.txt* file describing the content of digital data, as described above.

6. CONCLUSIONS

A versatile time domain electromagnetic helicopter-borne geophysical survey has been completed over one block, MAHTIN, located northwest of the town of Mayo, in Yukon Territory, Canada.

Total survey line coverage is 229.0 line kilometres. The principal sensors included a Time Domain EM system and a magnetometer. Results have been presented as colour contour maps and stacked profiles.

Final data processing at the office of Geotech Ltd. in Aurora, Ontario was carried out under the supervision of Andrei Bagrianski, Surveys Manager.

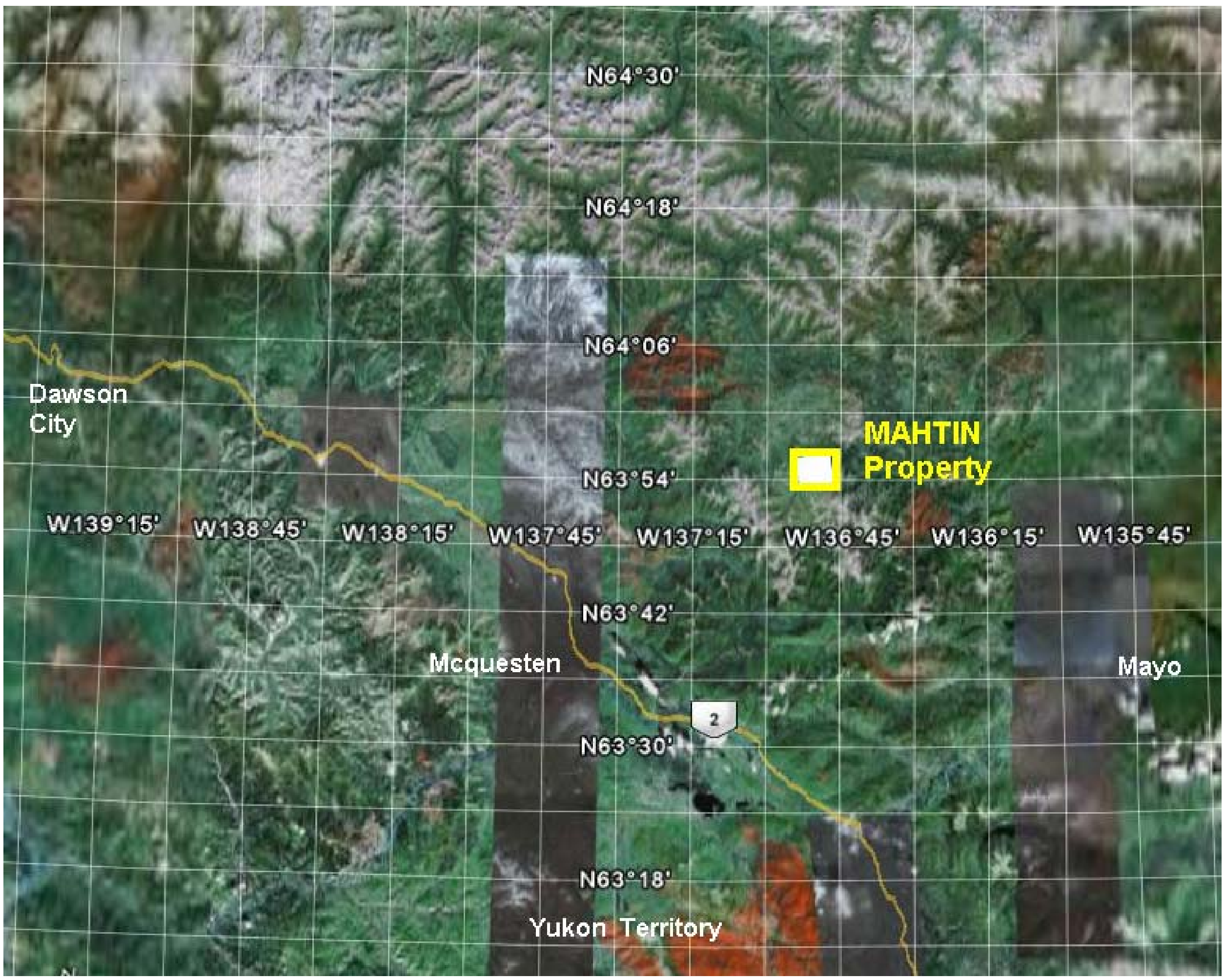
Respectfully submitted,

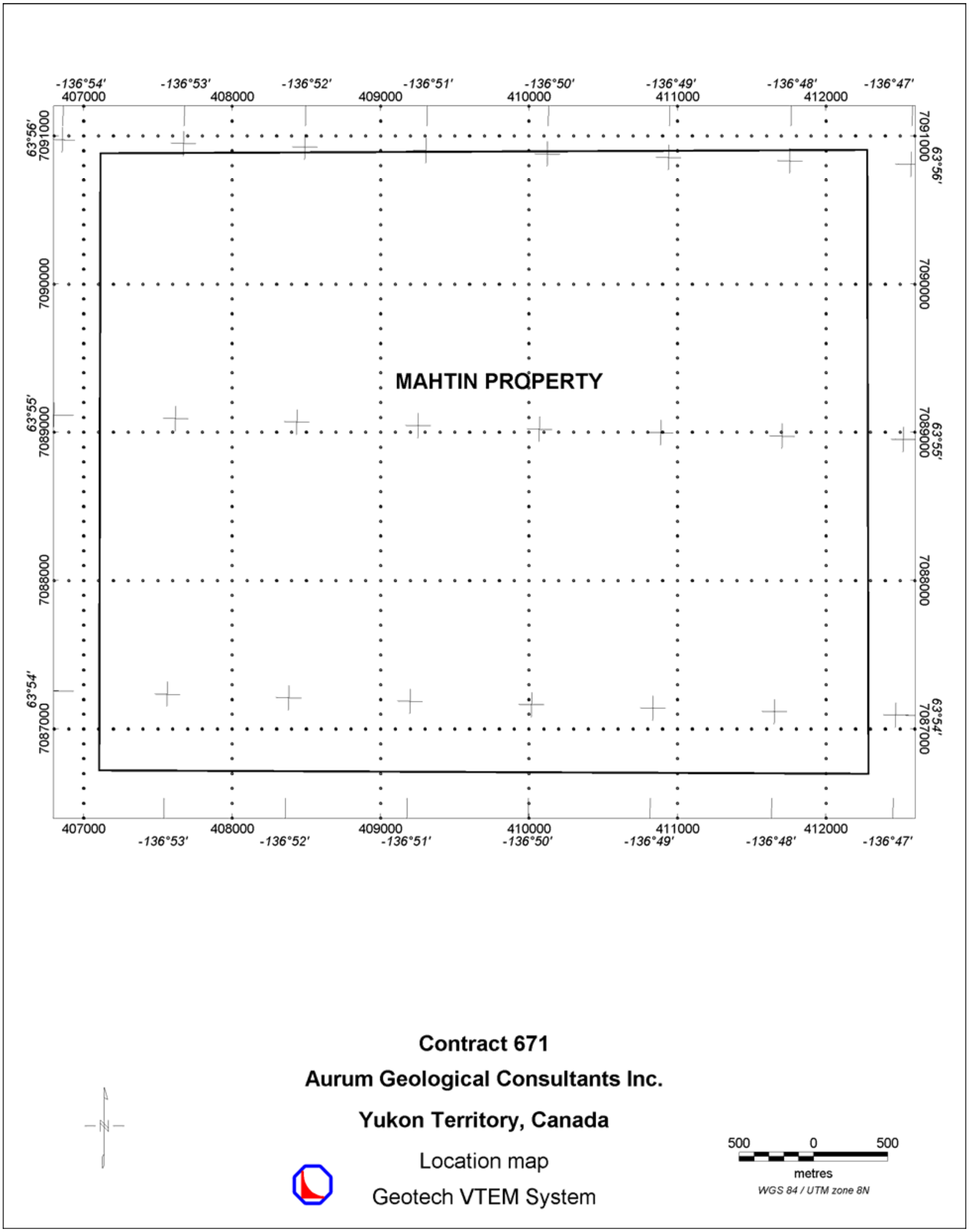
Marta Orta
on behalf of

George Lev
Geotech Ltd.
January, 2007

APPENDIX A

SURVEY BLOCK LOCATION MAP




MAHTIN PROPERTY
Contract 671
Aurum Geological Consultants Inc.
Yukon Territory, Canada
Location map
Geotech VTEM System
500
0
500
metres
WGS 84 / UTM zone 8N

APPENDIX B

SURVEY BLOCK COORDINATES

(WGS 84, UTM zone 8N)

MAHTIN	
412200.0	7090800.0
412200.0	7086800.0
407200.0	7086800.0
407200.0	7090800.0

APPENDIX C

General Modeling Results of the VTEM System

APPENDIX D

VTEM WAVE FORM

GENERALIZED MODELING RESULTS OF THE VTEM SYSTEM

Introduction

The VTEM system is based on a concentric or central loop design, whereby, the receiver is positioned at the centre of a 26.1 meters diameter transmitter loop that produces a dipole moment up to 625,000 NIA at peak current. The wave form is a bi-polar, modified square wave with a turn-on and turn-off at each end. With a base frequency of 30 Hz, the duration of each pulse is approximately 7.5 milliseconds followed by an off time where no primary field is present.

During turn-on and turn-off, a time varying field is produced (dB/dt) and an electro-motive force (emf) is created as a finite impulse response. A current ring around the transmitter loop moves outward and downward as time progresses. When conductive rocks and mineralization are encountered, a secondary field is created by mutual induction and measured by the receiver at the centre of the transmitter loop.

Measurements are made during the off-time, when only the secondary field (representing the conductive targets encountered in the ground) is present.

Efficient modeling of the results can be carried out on regularly shaped geometries, thus yielding close approximations to the parameters of the measured targets. The following is a description of a series of common models made for the purpose of promoting a general understanding of the measured results.

Variation of Plate Depth

Geometries represented by plates of different strike length, depth extent, dip, plunge and depth below surface can be varied with characteristic parameters like conductance of the target, conductance of the host and conductivity/thickness and thickness of the overburden layer.

Diagrammatic models for a vertical plate are shown in figures A and G at two different depths, all other parameters remaining constant. With this transmitter-receiver geometry, the classic **M** shaped response is generated. Figure A shows a plate where the top is near surface. Here, amplitudes of the duel peaks are higher and symmetrical with the zero centre positioned directly above the plate. Most important is the separation distance of the peaks. This distance is small when the plate is near surface and widens with a linear relationship as the plate (depth to top) increases. Figure G shows a much deeper plate where the separation distance of the peaks is much wider and the amplitudes of the channels have decreased.

Variation of Plate Dip

As the plate dips and departs from the vertical position, the peaks become asymmetrical. Figure B shows a near surface plate dipping 80º. Note that the direction of dip is toward the high shoulder of the response and the top of the plate remains under the centre minimum.

As the dip increases, the aspect ratio (Min/Max) decreases and this aspect ratio can be used as an empirical guide to dip angles from near 90º to about 30º. The method is not sensitive enough where dips are less than about 30º. Figure E shows a plate dipping 45º and, at this angle, the minimum shoulder starts to vanish. In Figure D, a flat lying plate is shown, relatively near surface. Note that the twin peak anomaly has been replaced by a symmetrical shape with large, bell shaped, channel amplitudes which decay relative to the conductance of the plate.

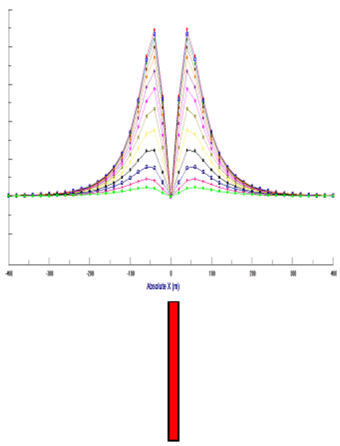
Figure H shows a special case where two plates are positioned to represent a synclinal structure. Note that the main characteristic to remember is the centre amplitudes are higher (approximately double) compared to the high shoulder of a single plate. This model is very representative of tightly folded formations where the conductors where once flat lying.

Variation of Prism Depth

Finally, with prism models, another algorithm is required to represent current on the plate. A plate model is considered to be infinitely thin with respect to thickness and incapable of representing the current in the thickness dimension. A prism model is constructed to deal with this problem, thereby, representing the thickness of the body more accurately.

Figures C, F and I show the same prism at increasing depths. Aside from an expected decrease in amplitude, the side lobes of the anomaly show a widening with deeper prism depths of the bell shaped early time channels.

A



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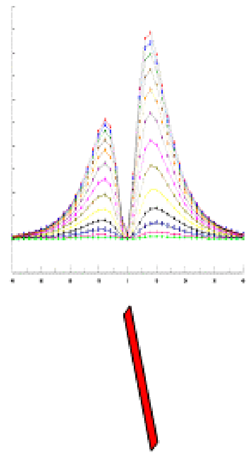

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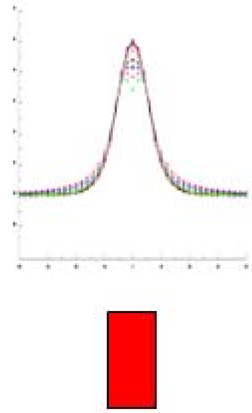

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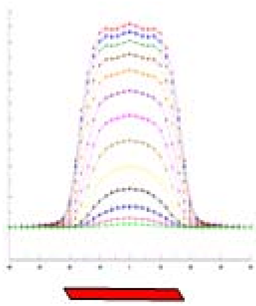

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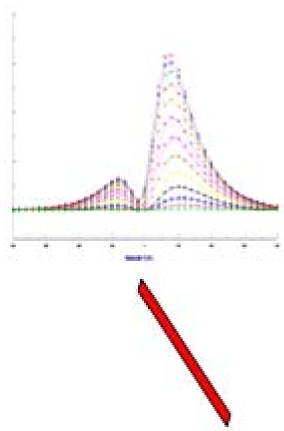
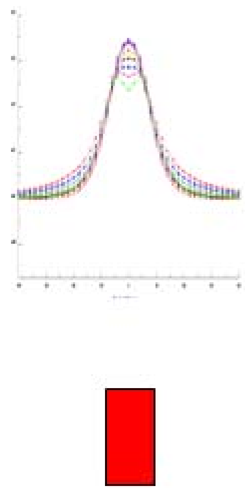
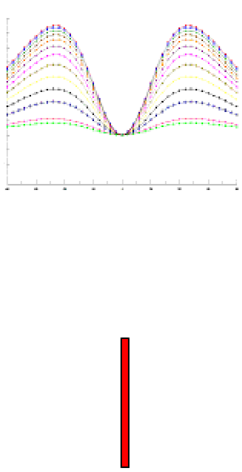


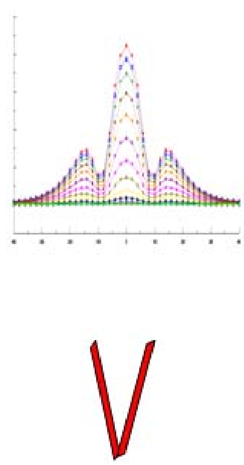
F



G



H



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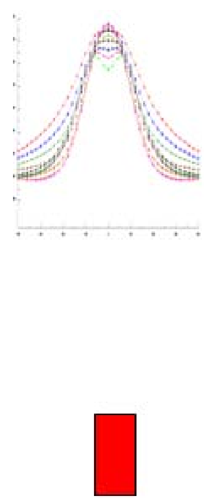

General Modeling Concepts

A set of models has been produced for the Geotech VTEM® system with explanation notes (see models A to I above). The reader is encouraged to review these models, so as to get a general understanding of the responses as they apply to survey results. While these models do not begin to cover all possibilities, they give a general perspective on the simple and most commonly encountered anomalies.

When producing these models, a few key points were observed and are worth noting as follows:

- For near vertical and vertical plate models, the top of the conductor is always located directly under the centre low point between the two shoulders in the classic **M** shaped response.
- As the plate is positioned at an increasing depth to the top, the shoulders of the **M** shaped response, have a greater separation distance.
- When faced with choosing between a flat lying plate and a prism model to represent the target (broad response) some ambiguity is present and caution should be exercised.
- With the concentric loop system and Z-component receiver coil, virtually all types of conductors and most geometries are most always well coupled and a response is generated (see model H). Only concentric loop systems can map this type of target.

The modelling program used to generate the responses was prepared by PetRos Eikon Inc. and is one of a very few that can model a wide range of targets in a conductive half space.

General Interpretation Principals

Magnetics

The total magnetic intensity responses reflect major changes in the magnetite and/or other magnetic minerals content in the underlying rocks and unconsolidated overburden. Precambrian rocks have often been subjected to intense heat and pressure during structural and metamorphic events in their history. Original signatures imprinted on these rocks at the time of formation have, it most cases, been modified, resulting in low magnetic susceptibility values.

The amplitude of magnetic anomalies, relative to the regional background, helps to assist in identifying specific magnetic and non-magnetic rock units (and conductors) related to, for example, mafic flows, mafic to ultramafic intrusives, felsic intrusives, felsic volcanics and/or sediments etc. Obviously, several geological sources can produce the same magnetic response. These ambiguities can be reduced considerably if basic geological information on the area is available to the geophysical interpreter.

In addition to simple amplitude variations, the shape of the response expressed in the wave length and the symmetry or asymmetry, is used to estimate the depth, geometric parameters and magnetization of the anomaly. For example, long narrow magnetic linears usually reflect mafic flows or intrusive dyke features. Large areas with complex magnetic patterns may be produced by intrusive bodies with significant magnetization, flat lying magnetic sills or sedimentary iron formation. Local isolated circular magnetic patterns often represent plug-like igneous intrusives such as kimberlites, pegmatites or volcanic vent areas.

Because the total magnetic intensity (TMI) responses may represent two or more closely spaced bodies within a response, the second derivative of the TMI response may be helpful for distinguishing these complexities. The second derivative is most useful in mapping near surface linears and other subtle magnetic structures that are partially masked by nearby higher amplitude magnetic features. The broad zones of higher magnetic amplitude, however, are severely attenuated in the vertical derivative results. These higher amplitude zones reflect rock units having strong magnetic susceptibility signatures. For this reason, both the TMI and the second derivative maps should be evaluated together.

Theoretically, the second derivative, zero contour or colour delineates the contacts or limits of large sources with near vertical dip and shallow depth to the top. The vertical gradient map also aids in determining contact zones between rocks with a susceptibility contrast, however, different, more complicated rules of thumb apply.

Concentric Loop EM Systems

Concentric systems with horizontal transmitter and receiver antennae produce much larger responses for flat lying conductors as contrasted with vertical plate-like conductors. The amount of current developing on the flat upper surface of targets having a substantial area in this dimension, are the direct result of the effective coupling angle, between the primary magnetic field and the flat surface area. One therefore, must not compare the amplitude/conductance of responses generated from flat lying bodies with those derived from near vertical plates; their ratios will be quite different for similar conductances.

Determining dip angle is very accurate for plates with dip angles greater than 30º. For angles less than 30º to 0º, the sensitivity is low and dips can not be distinguished accurately in the presence of normal survey noise levels.

A plate like body that has near vertical position will display a two shoulder, classic **M** shaped response with a distinctive separation distance between peaks for a given depth to top.

It is sometimes difficult to distinguish between responses associated with the edge effects of flat lying conductors and poorly conductive bedrock conductors. Poorly conductive bedrock conductors having low dip angles will also exhibit responses that may be interpreted as surfacial overburden conductors. In some situations, the conductive response has line to line continuity and some magnetic correlation providing possible evidence that the response is related to an actual bedrock source.

The EM interpretation process used, places considerable emphasis on determining an understanding of the general conductive patterns in the area of interest. Each area has different characteristics and these can effectively guide the detailed process used.

The first stage is to determine which time gates are most descriptive of the overall conductance patterns. Maps of the time gates that represent the range of responses can be very informative.

Next, stacking the relevant channels as profiles on the flight path together with the second vertical derivative of the TMI is very helpful in revealing correlations between the EM and Magnetics.

Next, key lines can be profiled as single lines to emphasize specific characteristics of a conductor or the relationship of one conductor to another on the same line. Resistivity Depth sections can be constructed to show the relationship of conductive overburden or conductive bedrock with the conductive anomaly.

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