A PRELIMINARY REPORT

ON

A HELIBORNE MAGNETIC AND VTEM SURVEY

El Capitan Property
Cowichan Lake Area BC
48^0 57' 20''N
124^0 13' 24" W

Claims surveyed:

526525	Magnum
526528	Loon
526331	
526333	
526334	
526017	
565229	Extension
565232	Bliss
567885	Aldershot
568023	Aldershot II
526269	
582248	Aldershot III

Survey Dates: September 5-23, 2008

For

Cuda Capital Corp.

Vancouver, BC

By

Reza Mohammed B.Sc.

December 2008

SOW: #4242334

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INTRODUCTION

Between September 5th and the 23rd of 2008, Geotech Ltd./G. Santos Geoscience Ltd. carried out a 459.8 line kilometer helicopter-borne Magnetic and VTEM survey for Cuda Capital Corp. over 12 mineral tenures in southern Vancouver Island. The survey was flown at a nominal mean height of 77 meters above the ground on north-south flight lines, spaced 100 meters apart using a Eurocopter Aerospatiale 350 B3 helicopter with east-west tie lines at a spacing of 1000 meters. The survey was flown in a single block as shown in the accompanying maps.

The results of the survey are presented in contour form on plan maps of the areas that accompany this report at a scale of 1:10,000

LOCATION AND ACCESS

The El Capitan claims are located on Vancouver Island in Victoria Mining District (see Figure 1). The claims are about 7 kilometers north of the Youbou on Cowichan Lake and 80 Kilometers southwest of Nanaimo. The claims straddle the Cottonwood Creek valley and include Mount Landale, and El Capitan Mountain (see tab3) and also the Cottonwood, El Capitan and Paint Pot showings. The claims incorporate the ground to the height of the ridge west of the Cottonwood Creek valley and valley and include the Wardroper showing.

The El Capitan Gold Property is comprised of twelve mineral tenures (see Table 1) with a total combined area of 2991.84 hectares. All of the claims are or have been converted under the Ministry of Mines minerals titles online claim acquisition format. The claims are held in trust for Cuda Capital Corp. by jointly by D. Brouwer and D. Herriott from Nanaimo, B.C., Laird Rice and Gilbert Santos and Reza Mohammed of Vancouver B.C.

Access is by highway 18 along the north side of Cowichan Lake Approximately 16 kilometers west from the village of Cowichan Lake to the mouth of Cottonwood Creek. Proceed north on a logging road approximately 2 kilometers the road becomes impassable to vehicles due to deactivation.

Table 1 Claims of the El Capitan Property

Tenure	Name	Hectares	Good to date
526525	Magnum	509.18	1-Nov-09
526528	Loon	339.58	1-Nov-09
526331		190.93	1-Nov-09
526333		190.98	1-Nov-09
526334		169.79	1-Nov-09
526017		318.21	1-Nov-09
565229	Extension	63.64	1-Nov-09
565232	Bliss	190.95	1-Nov-09
567885	Aldershot	318.25	1-Nov-09
568023	Aldershot II	63.67	1-Nov-09
526269		318.3	1-Nov-09
582248	Aldershot III	318.36	21-Apr-09

Access is by highway 18 along the north side of Cowichan Lake Approximately 16 kilometers west from the village of Lake Cowichan to the mouth of Cottonwood Creek. Proceed north on a logging road approximately 2 kilometers the road becomes impassable to vehicles due to deactivation.

PREVIOUS WORK

A. General

El Capitan (Minfile 092C 019)

The majority of historic work on the property is in the area of the El Captain and Cottonwood Prospects. Surface stripping and a 2 meter drift driven on a heavily oxidized 0.5 meter vein within an east west shear zone was done prior to 1927. In 1927, a 15 meter drift (no. 2 adit), was driven westward along a shear striking 100/80S. Samples collected in the drift returning values at the time of sampling of $15.00/ton gold are reported. The drift extends for approximately 30 meters as is still reported to be in the oxidized zone.

In 1935 the El Capitan was optioned by Lomass and Powell. Lomass and Powell drove a 65 meter adit on the west side of the summit of El Capitan (?). A well defined fault was encountered 7 meters south from the face continuing for 23 meters. Local rusty gouge in minor quartzite within a 20 cm grey gouge zone returned only traces of gold and silver. A 35 cm wide fissure was discovered below the adit. The fissure is reported to have contained abundant arsenopyrite it is not known if the fissure was sampled.

Three major rock types are noted in the area of the adits and surrounding mountains. Dark green porphritic andesite, (Karmutsen Formation basalt): porphyritic hornblende andesite dykes; and medium grained diorite reported to be in contact with porphyritic andesite dyke approximately 50 meters below the number 2 adit.

The veins in two of the adits were sampled by DR.J.T. Fyles, geologist with the B.C.Department of Mines in 1955. B. McClay (Trans Pacific Ventures Ltd) work done and reported values of 467 g/ton (13.6 oz/ton) gold across 0.6 meters. A VLF-EM survey was conducted over the mineralized shear zone but appears to be little use, possibly due to the rugged terrain (Lorenzette, 1988).

Cottonwood (Minfile 092C 020

M.L. Douglas staked the cottonwood prospect (2 m vein) and through surface prospecting traced the vein up the hill for 165 meters. The vein strikes 45 degrees crosscutting porphyritic basalt it is thought to be a different shear then the El Capitan. Assays returned values of 1.60/ton gold, 1.37g/ton silver (0.04 oz/ton) and 4.7% cobalt.

In 1928 another adit was drifted for 15 meters below adit number 2 in an attempt to get below the oxide zone. A seam of ore 10 cm wide was uncovered on the footwall which assayed 92.6g/ton (2.7 oz/ton) gold, 120 g/ton silver. A 15 cm section of chalcopyrite ore on the hanging wall assayed 140.6 g/ton (4.1 oz/ton) gold, 44.57 g/ton silver (1.3 oz/ton), and 13 % copper separated by an approximately 1 meter interval of oxidized material.

Between 1927 and 1929, Douglas, Lomass and Miller drove a 26 meter upper adit, a 16 meter lower adit , two small adits and two small crosscuts between the main adits.

The lower cut at the cottonwood prospect showed that the vein has a width of 2 meters if which 65 cm on the footwall is broken porphyritic basalt with minor mineralization, then 35 cm of smaltite, chalcopyrite and pyrrhotite ore, and the hanging wall with quartz, sparsely mineralized with chalcopyrite and pyrrhotite.

Paint Pot

In 1930 martin Smith staked the Paint Pot showing, a .65 meter oxidized chalcopyrite vein with a shear zone extending over 30 meters. Assay results returned values of $2.80/ton gold, 51 g/ton (1.5oz/ton) silver and 6.1% copper. Minfile 092C 019 indicates assays of 26.06 gms per ton over a width of between 15 to 40 centimeters. This showing is located approximately 120 meters to the south, southwest of the El Capitan prospect. There are no minfiles associated with this showing.

B. Assessment Report Summaries

Three assessment reports and one prospectus were prepared through the history of the property. Below are highlights and recommendations from the various reports.

REPORT 7832
For Trans Pacific Ventures 1979
J. F. Malntyre, P. Eng.

This report is very brief and was prepared for Trans Pacific Ventures in Vancouver, BC by McIntyre.

Sample No.	Width (cm)	Au oz/ton	Ag oz/ton	Cu %	Distance from Portal (M)*
841	50.5	1.042	1.18	.59	0
842	60.6	13.628	2.92	3.48	6
843	106.1	.020	0.05	.29	9
844	45.4	7.266	1.83	3.62	12
845	20.2	1.368	.30.3	.65	15
846	30.3	1.728	2.45	7.51	15

*Distance from Portal number 1

A new showing was discovered 70 m west 30 m south on the grid. This could be the Paint Pot showing mentioned earlier in the section under History.

VLF-EM surveys were conducted but McIntyre concluded that this was not a useful exploration tool for this property.

"Stations taken over known occurrences of the mineralized shear show no anomalies; hence no projections can be made to other areas."

REPORT 15065
Geological and Geochemical Report on the El Capitan Property
for Dayton Development Corp.
Peter A. Christopher PhD., P.Eng.
April 20, 1986

__Conclusions__

Strong gold silt geochemical responses below Lomas Lake (10, 260 at outlet and 625 ppb 200 meters downstream) warrants further investigation. Geochem at the inlet to Lomas Lake return results of only ppb.

- Assays of 2.564 ounces per ton gold across 40 centimeters in Adit No. 1
- Average grade over 1.35 meters in the No. 1 adit was 0.824 ounces of gold per ton
- Grab samples from old dump material assayed 4.05 ounces per ton near adit No 1.

__GEOLOGY__

Geology of the property and area was mapped by Fyles (1955). The property is mainly underlain by cherty tuff, crystal tuff and thin bedded sediments of the Permian Sicker Group, basalt flows and diabase intrusions on the Franklin Creek Volcanics and Sannich Granodiorite. To the west ferruginous chert of the Sicker Group was mapped. This unit is rich in manganese with fracture coated wad which is associated with a number of volcanogenic massive sulphide deposits found on Vancouver Island.

A map prepared by Flyes (1955). Local geology was examined briefly by R.F McIntyre and found to accurately conform to Flyes' map. The geology is summarized below.

The host rock is massive andesite containing numerous small plagioclase phenocrysts. It is cut by a nearly vertical dyke, 3 m wide, of andesitic horneblende porphyry, striking approximately 080 degrees. The mineralized zone is a 1m wide shear along the south wall of the dyke, showing copper and iron oxidation products and containing significant amounts of gold, silver and copper. Shearing is also noted in places along the north wall of the dyke.

A previously unknown mineralized body was discovered at grid location 70 m W-30 m S. It is an unsheared quartz-chalcopyie vein striking 15^{O} 45' E, exposed for about four meters along strike. It tapers from 15-40 cm wide, widening where it disappears into overburden.

All andesites observed were essentially massive, so no specific interpretation of the structure has been made. Two additional points were noted that did not appear in Reference

Firstly, the general attitudes of small scale faults are predominantly in the range 160-180^{O} 75' W, with most faults nearly vertical. Secondly, white quartz veins 5-20 cm wide were seen, in places, sub-parallel to the fault set noted above. These veins were not sampled.

For further detail, the reader is referred to Assessment Report 18,394 submitted Feb 16, 1989 by G.M Lorenzetti, B.Sc. for Omega Gold Corporation entitled "Report on Geology, Lithogeochemistry, Soil Geochemistry, Magnetometer and VLF-EM Surveys."

PURPOSE

The purpose of this survey was to try to map faults and intrusive gold bearing mineralization—generally striking southwestwards—and to search for larger southwest trending structures that could be the plumbing sources for the mineralizing fluids on the property.

SURVEY SPECIFICATIONS

Electromagnetic System

The electromagnetic system was a Geotech Time Domain EM (VTEM-M) system, which is a lighter version of the standard VTEM designed for use in more rugged terrains with existing helicopters platforms. the differences between the two systems is described below. Receiver and transmitter coils are concentric and Z-direction oriented. The loops were towed at a mean distance of 32 meters below the aircraft.

Airborne Magnetometer

The magnetic sensor utilized for the survey was a geometrics optically pumped caesium vapour magnetic field sensor, mounted in a separate bird, 11 meters below the helicopter. The sensitivity of the magnetic sensor is 0.02 nanoTelsa(nT) at a sampling interval of 0.1 seconds. The magnetometer sends the measured magnetic field strength as nanoTelsa to the data acquisition system via the RS-232 port.

SUMMARY & RECOMMENDATIONS

Between September 5th and 23rd of 2008, Geotech Ltd./G. Santos Geoscience Ltd. carried out a 459.8 line kilometer helicopter-borne Magnetic and VTEM survey for Cuda Capital Corp. over twelve tenures in southern Vancouver Island. Subsequently, the data was corrected and processed color contour plots of the total magnetic field intensity were generated.

Data should be studied in conjunction with the known geology to generate possible targets for investigation by prospecting, exploration drifting and diamond drilling in 2009.

APPENDIX I

COST OF SURVEY

G. Santos Geoscience Ltd. undertook the contract on a kilometer basis. The survey for the El Capitan property was flown in conjunction with another survey of a property located on the southwest coast of BC: the Thurlow property. Mobilization and supervision costs were extra so that the total cost of services for both properties, including GST was $220,500.

Block	flight lines	%	Cost
El Capitan	459.8	46.20	$101,874.90
Other Block	535.4	53.80	$118,625.10
Total	995.2	100	$220,500.00

The El Capitan survey represented 46.20% of the aggregate cost for the survey for both property blocks, this being $101,874.90.

No professional fees were incurred for the preparation of this report.

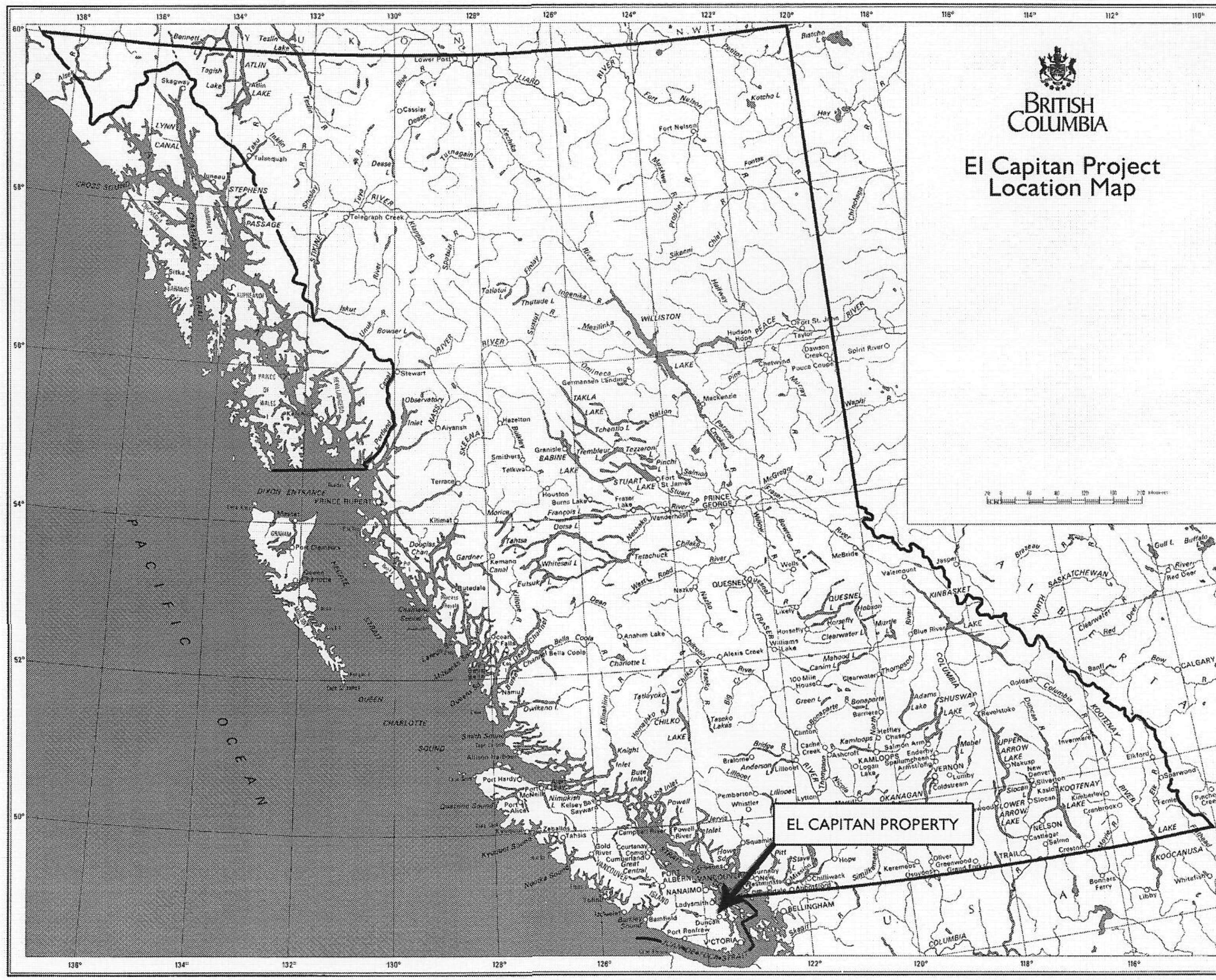
CERTIFICATION

1. I am a Graduate of the University of British Columbia in 1985 with a B.Sc. in Biology.
2. I am not a practicing geologist or geophysicist.
3. I am President and CEO of Cuda Capital Corp. and hold an interest in the securities of the Company.

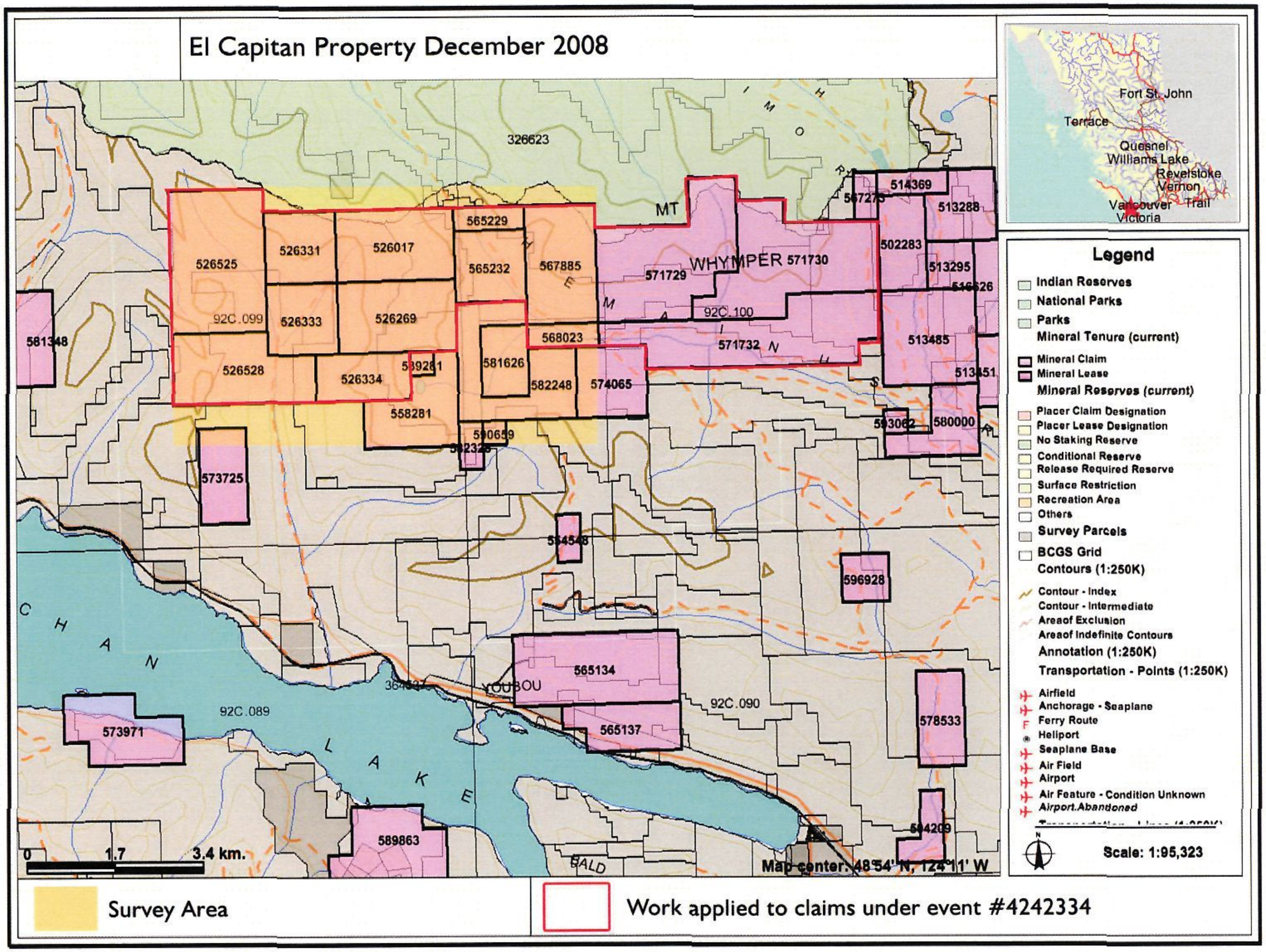
Reza Mohammed, B.Sc.

Vancouver, BC

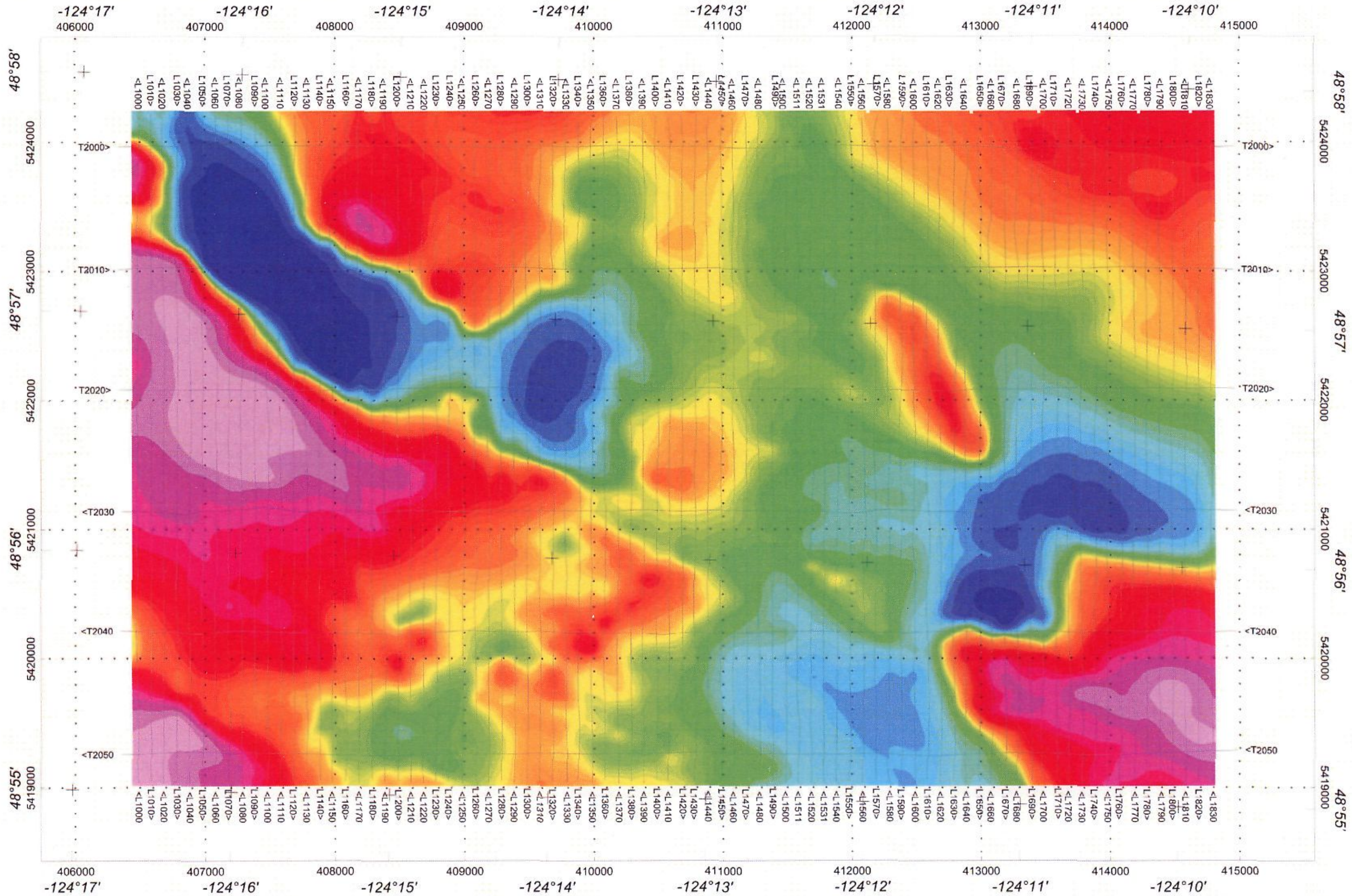
December 2008



El Capitan Location Map (Figure 1)



El Capitan Claim Map for Survey and MTO Event Number 4242334 (Figure 2)

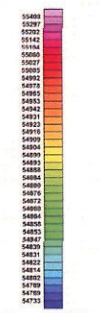


Survey Specifications:

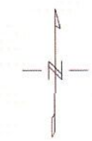
Astar B3 helicopter, Registration C-GTRK
Flight Line Spacing: 100 metres
Nominal terrain clearance 77 metres
EM Loop is 32 metres under helicopter
Magnetic sensor is 15 metres under helicopter

Instruments:

Geotech Time Domain Electromagnetic System VTEM (M) with concentric Rx/Tx geometry
Transmitter Loop Diameter 18.8 m, Base Frequency 30 Hz
Dipole Moment 292,000 NIA
Transmitter Wave Form: Trapezoid, Pulse Width 3.7 ms
Geometrics Optically-pumped,
High Sensitivity Cesium Magnetometer
Mag Resolution 0.02 nT at 10 samples/sec



Magnetic field (nT)



Scale 1:20000

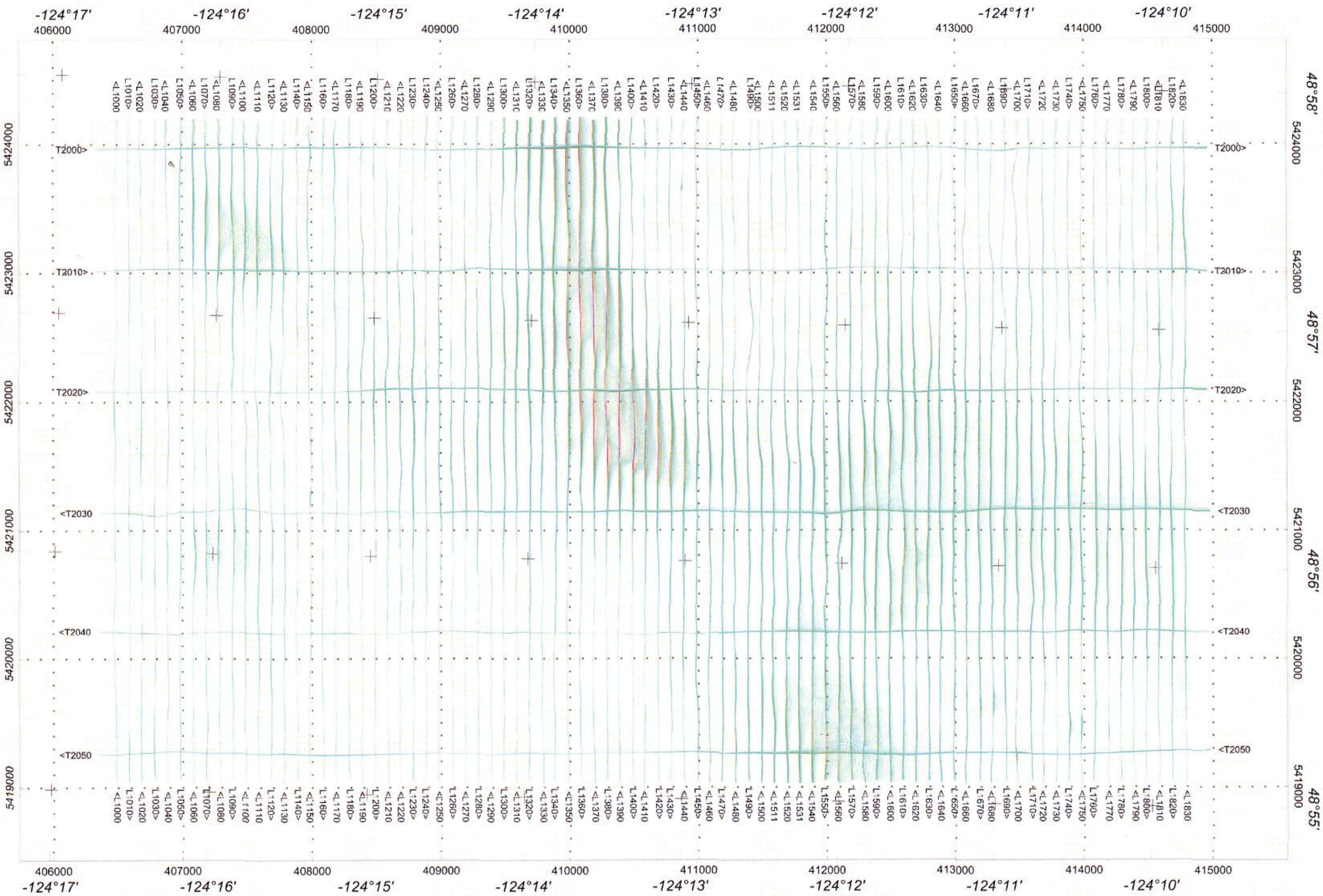
G.Santos Geoscience.
Captain Property
British Columbia.

Geotech VTEM System
Total Field Magnetics

Flown and processed by Geotech Ltd.
245 Industrial Parkway N.,
Aurora, Ontario, Canada L4G 3W2
www.geotech.ca

December 2008

Project 8214



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Geometrics Optically-pumped,
High Sensitivity Cesium Magnetometer
Mag Resolution 0.02 nT at 10 samples/sec

Profiles scale 1 mm = 0.05 pV/A/m^4
(Linear between +/- 0.2 pV/A/m^4
logarithmic above 0.2 pV/A/m^4)

0.234 ms
0.281 ms
0.339 ms
0.406 ms
0.484 ms
0.573 ms
0.682 ms
0.818 ms
0.974 ms
1.151 ms
1.370 ms
1.641 ms
1.953 ms
2.307 ms
2.745 ms
3.266 ms
3.911 ms
4.620 ms
5.495 ms
6.578 ms
7.828 ms

Scale 1:20000
250 0 250 500 750 1000
(meters)
NAD83 / UTM zone 10N

G.Santos Geoscience
British Columbia
Captain Property

Geotech TDEM System
dB/dt TDEM Profiles
Time Gates 0.22 - 6.34 ms

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

December 2008

Project 8214

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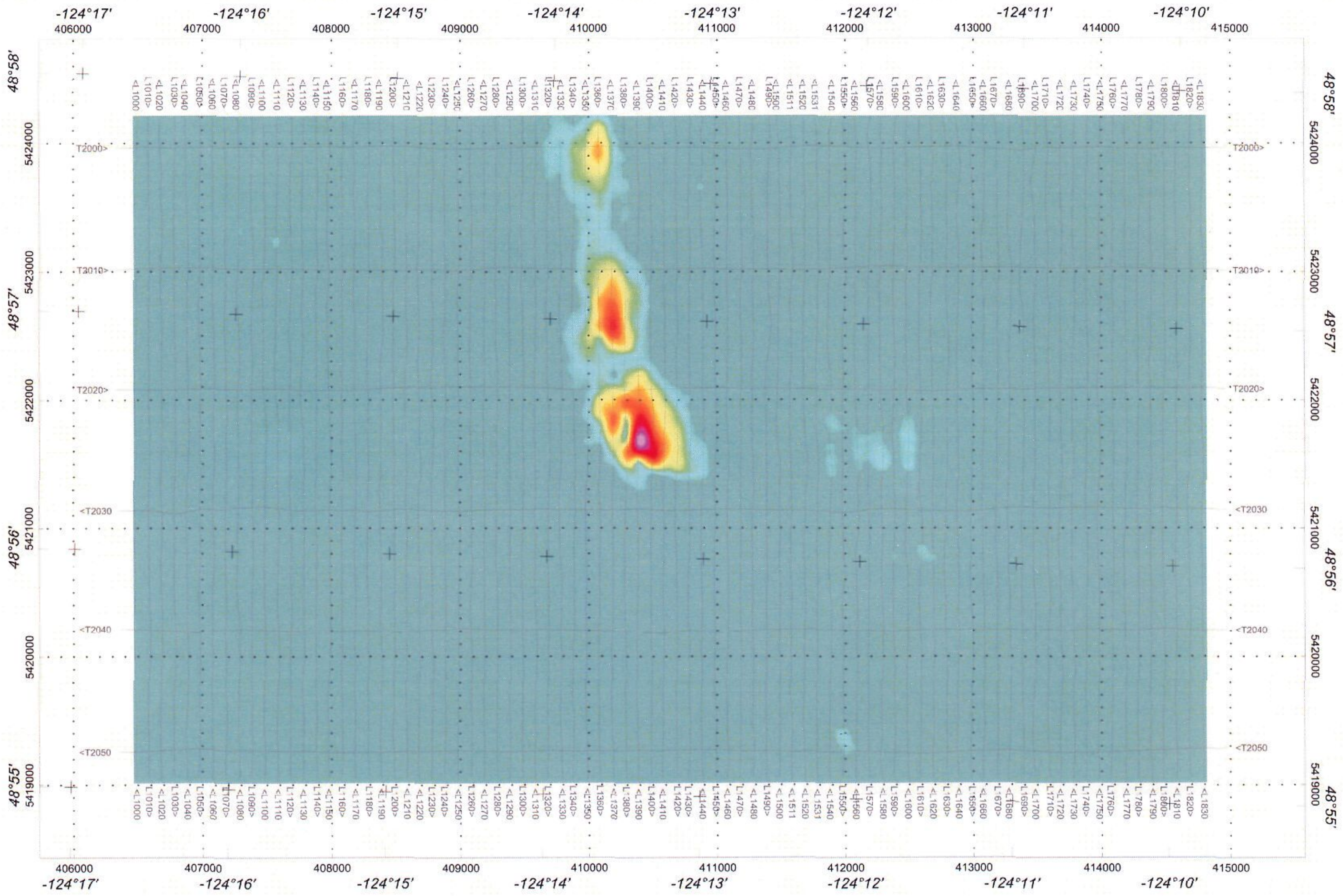

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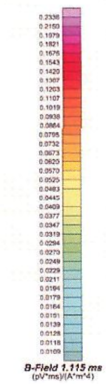

Scale 1:20000

(meters)

G.Santos Geoscience.
Captain Property
British Columbia.

Geotech VTEM System
B-Field Time Gate 1.151 ms

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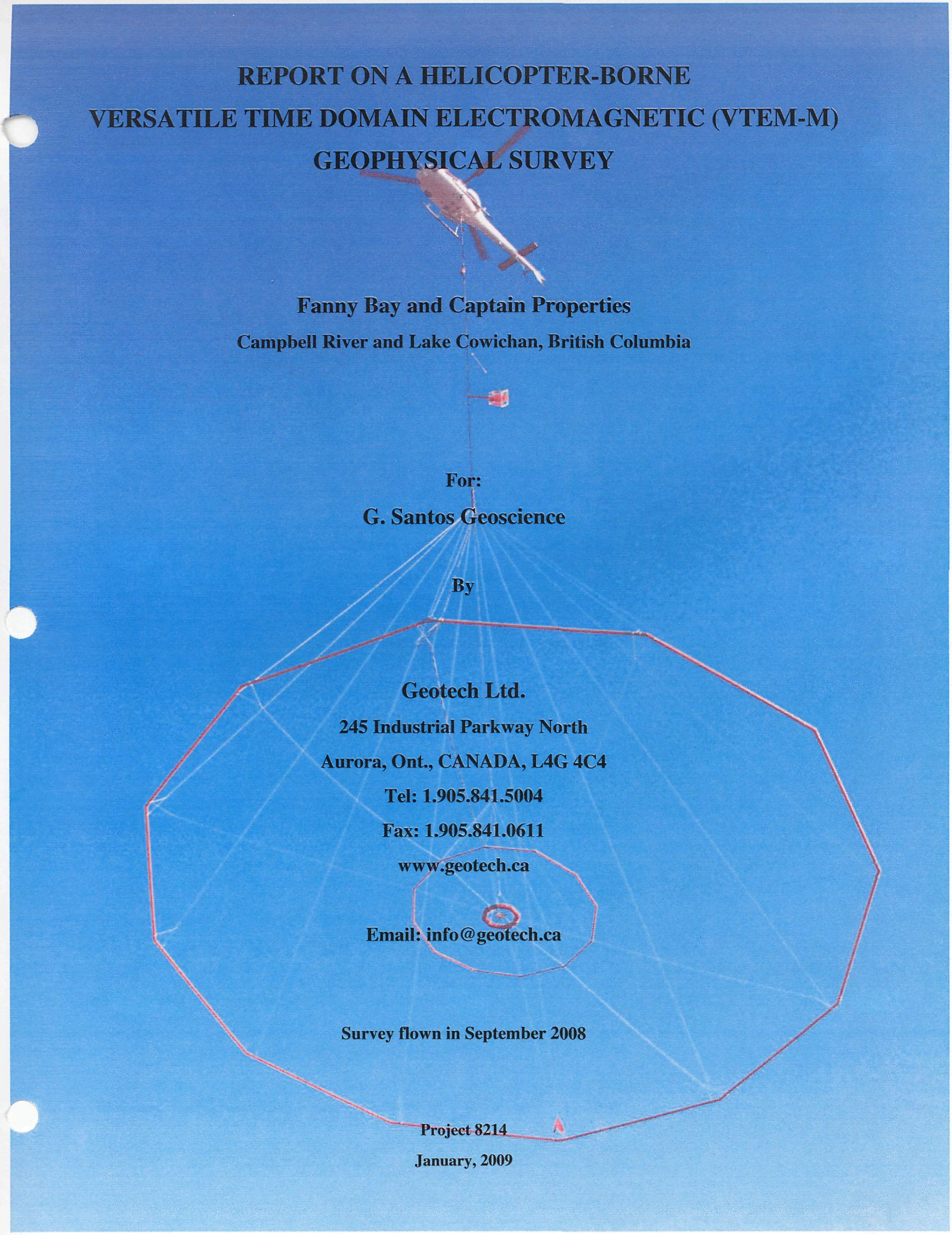
December 2008



REPORT ON A HELICOPTER-BORNE VERSATILE TIME DOMAIN ELECTROMAGNETIC (VTEM-M) GEOPHYSICAL SURVEY

Fanny Bay and Captain Properties

Campbell River and Lake Cowichan, British Columbia

For:

G. Santos Geoscience

By

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Survey flown in September 2008

Project 8214

January, 2009

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APPENDICES

REPORT ON A HELICOPTER-BORNE VERSATILE TIME DOMAIN ELECTROMAGNETIC SURVEY

Fanny Bay and Captain Properties
Campbell River and Lake Cowichan, British Columbia

Executive Summary

During September 5th to 23rd, 2008 Geotech Ltd. carried out a helicopter-borne geophysical survey for G. Santos Geoscience over the Fanny Bay and Captain Properties on the west coast of British Columbia, Canada.

Principal geophysical sensors included a versatile time domain electromagnetic (VTEM-M) system and a caesium magnetometer. Ancillary equipment included a GPS navigation system and a radar altimeter. A total of 995 line-km were flown.

The survey operations were based in Campbell River and Lake Cowichan, British Columbia. In-field data quality assurance and preliminary processing were carried out on a daily basis during the acquisition phase. Preliminary and final data processing, including generation of digital data and map products, were undertaken from the office of Geotech Ltd. in Aurora, Ontario.

The processed survey results are presented as stacked profiles for the electromagnetics and the following grid contours:

- Total magnetic intensity
- dB/dt time gate 0.818 ms and .0281 ms

Digital data includes all electromagnetic and magnetic products, plus ancillary data including the waveform.

This report describes the logistics of the survey acquisition phase and the final data processing phase. There is no formal interpretation included in this report.

1. INTRODUCTION

1.1 General Considerations

These services are the result of the Agreement made between Geotech Ltd. and G. Santos Geoscience to perform a helicopter-borne geophysical survey over the blocks of Fanny Bay and Captain, located on the west coast of British Columbia, Canada (Figure 1).

Jasmine Beaudin acted on behalf of G.Santos Geoscience during the data acquisition and data processing phases of this project.

The geophysical surveys consisted of heliborne EM using the versatile time-domain electromagnetic (VTEM-M) system and aeromagnetics using a caesium magnetometer. A total of 995 line-km of geophysical data were acquired during the survey. The survey area is shown in Figure 2.

The crew was based at Best Western in the town of Campbell River and at the Lake Cowichan Lodge in Lake Cowichan British Columbia, for the acquisition phase of the survey, as shown in Section 2 of this report. Survey flying started on September 5th and was completed on September 23rd, 2008

In-field data quality control and quality assurance as well as preliminary data processing were carried out daily during the acquisition phase of the project. Final data processing followed immediately after the end of the survey. Final reporting, data presentation and archiving were completed from the Aurora office of Geotech Ltd. in January, 2009.

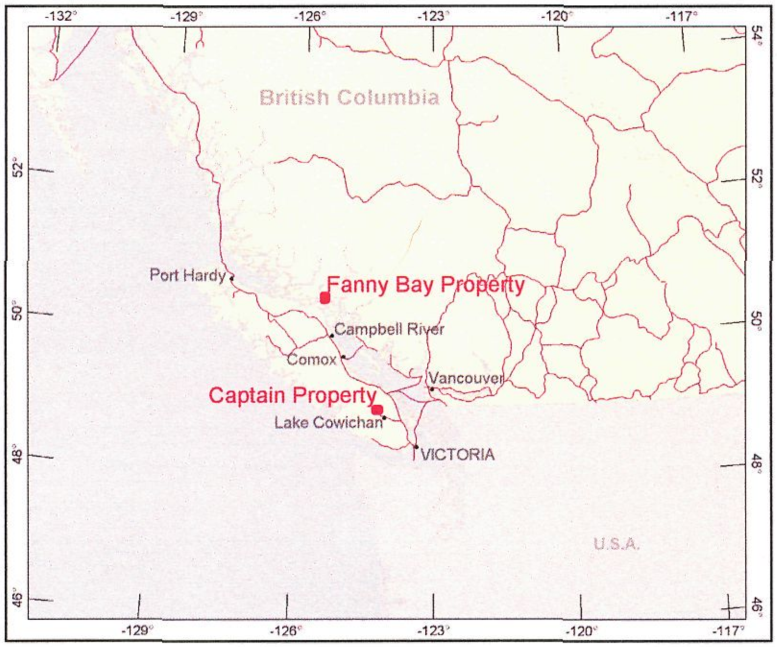


Figure 1 - Property Location

1.2 Survey Location and Specifications

The Captain block is located approximately 13 kms northwest of the town of Lake Cowichan, British Columbia. The block was flown at a 100 metre traverse line spacing wherever possible with a flight direction of N 0°E, while the tie lines were flown perpendicular to the traverse lines at a spacing of 1000 metres with a flight direction of N 90°E.

The Fanny Bay block is located approximately 60 kms north of the city of Campbell River, British Columbia. The block was flown at a 100 metre traverse line spacing wherever possible with a flight direction of N 90° E, while the tie lines were flown perpendicular to the traverse lines at a spacing of 1000 metres with a flight direction of N 0° E. For more detailed information on the flight spacing and direction see Table 1.

1.3 Topographic Relief and Cultural Features

Topographically, both block exhibits a very high relief, with an elevation ranging from 0-1500 metres above sea level (Figure 2 and 3). Special care is recommended in identifying any potential cultural features from other sources that might be recorded in the data. The Captain block was covered by NTS (National Topographic Survey) of Canada sheets 092C16, and the Fanny Bay block is covered by NTS (National Topographic Survey) of Canada sheets 092C16,092K11 and 092K06.

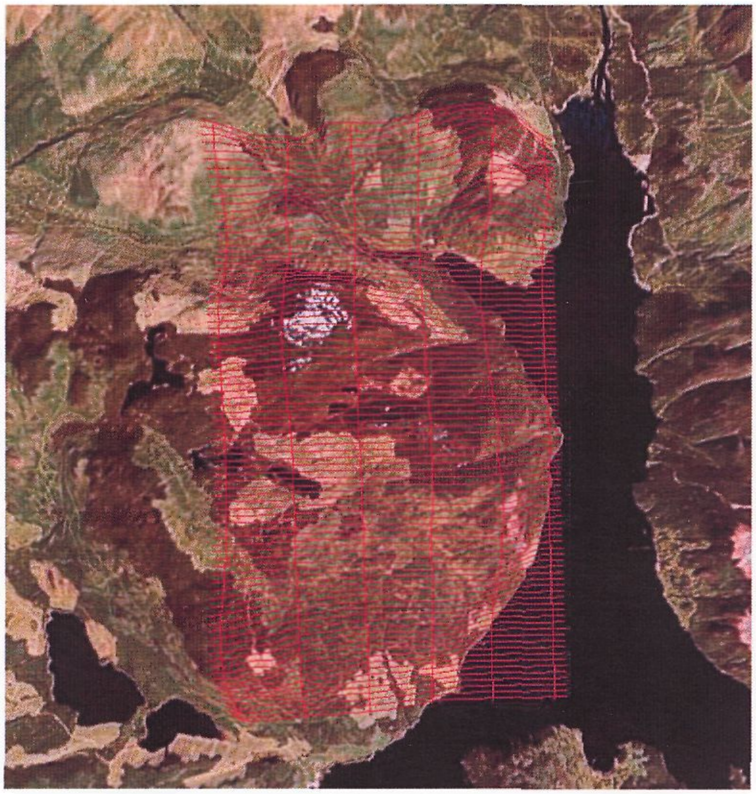


Figure 2 - Google Image with Flight Path of Fanny Bay Property

Figure 3 - Google Image with Flight Path of Captain Property

2. DATA ACQUISITION

2.1 Survey Area

The blocks (see Figure 2 and Location map in Appendix A) and general flight specifications are as follows:

Table 1 - Survey block

Survey block	Line spacing (m)	Area (km^2)	Planned Line-km	Actual Line-km[1]	Flight direction	Line number
Captain	100	44	409.7	433.4	N 0° E / N 180° E	L1000-L1830
	Tie:1000		50	51.7	N 90° E / N 270° E	T2000-T2050
Fanny Bay	100	53	481.7	506	N 90° E / N 270° E	L3000-L3890
	Tie:1000		53.7	55.4	N 0° E / N 180° E	T4000-T4050
TOTAL		97	995.1	1046.5		

Survey block boundaries coordinates are provided in Appendix B.

2.2 Survey Operations

Survey operations were based out of the Best Western in Campbell River and the Lake Cowichan Lodge in Lake Cowichan, British Columbia from September 5th to 23rd 2008. The following table shows the timing of the flying.

Table 2 - Survey schedule

Date	Flight #	Flown km	Block	Crew location	Comments
05-Sept-08				Lake Cowichan, BC	System assembly and tests
06-Sept-08				Lake Cowichan, BC	Mobilization to Lake Cowichan
07-Sept-08	1	54	FAN	Lake Cowichan, BC	Limited production – heli. Maintenance/tests
08-Sept-08	2 - 3	146	CAP	Lake Cowichan, BC	Production
09-Sept-08	4 - 7	203	CAP	Lake Cowichan, BC	Production
10-Sept-08	8 - 9	57	CAP	Lake Cowichan, BC	Limited production – crew mobilization
11-Sept-08				Campbell River, BC	No production – base station setup
12-Sept-08				Campbell River, BC	No production – fog and high winds
13-Sept-08	10 - 11	139		Campbell River, BC	Production
14-Sept-08	12 - 13	123		Campbell River, BC	Production
15-Sept-08	14 - 15	54	FAN	Campbell River, BC	Limited production – heli. Maintenance
16-Sept-08	16 - 17	157	FAN	Campbell River, BC	Production
17-Sept-08	18	9	FAN	Campbell River, BC	Production aborted – technical issues

[1] Note: Actual line-km represents the total line-km contained in the final databases. These line-km normally exceed the Planned line-km, as indicated in the survey NAV files.

Date	Flight #	Flown km	Block	Crew location	Comments
18-Sept-08	19 - 20	53	FAN	Campbell River, BC	Limited production – technical issues
19-Sept-08				Campbell River, BC	No production – technical issues
20-Sept-08				Campbell River, BC	System support
21-Sept-08				Campbell River, BC	System support
22-Sept-08				Campbell River, BC	System support, maintenance and tests
23-Sept-08				Campbell River, BC	Production (reflights) – Job Complete

2.3 Flight Specifications

The helicopter was maintained at a mean height of 75 meters above the ground where possible as deemed safe by the pilot with a nominal survey speed of 80 km/hour for the survey. This allowed for a nominal EM sensor terrain clearance was 43 meters and a magnetic sensor clearance of 64 meters. 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 meters 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. The data were then uploaded via ftp to the Geotech office in Aurora for daily quality assurance and quality control by qualified personnel, operating remotely.

2.4 Aircraft and Equipment

2.4.1 Survey Aircraft

The survey was flown using a Eurocopter Aerospatiale 350 B3 helicopter, registration C-GTRK. The helicopters were operated by TRK Helicopters Ltd. Installation of the geophysical and ancillary equipment was carried out by Geotech Ltd.

2.4.2 Electromagnetic System

The electromagnetic system was a Geotech Time Domain EM (VTEM-M) system. The configuration is as indicated in Figure 4 below.

Receiver and transmitter coils are concentric and Z-direction oriented. The loops were towed at a mean distance of 32 meters below the aircraft as shown in Figure 6. The receiver decay recording scheme is shown diagrammatically in Figure 5.

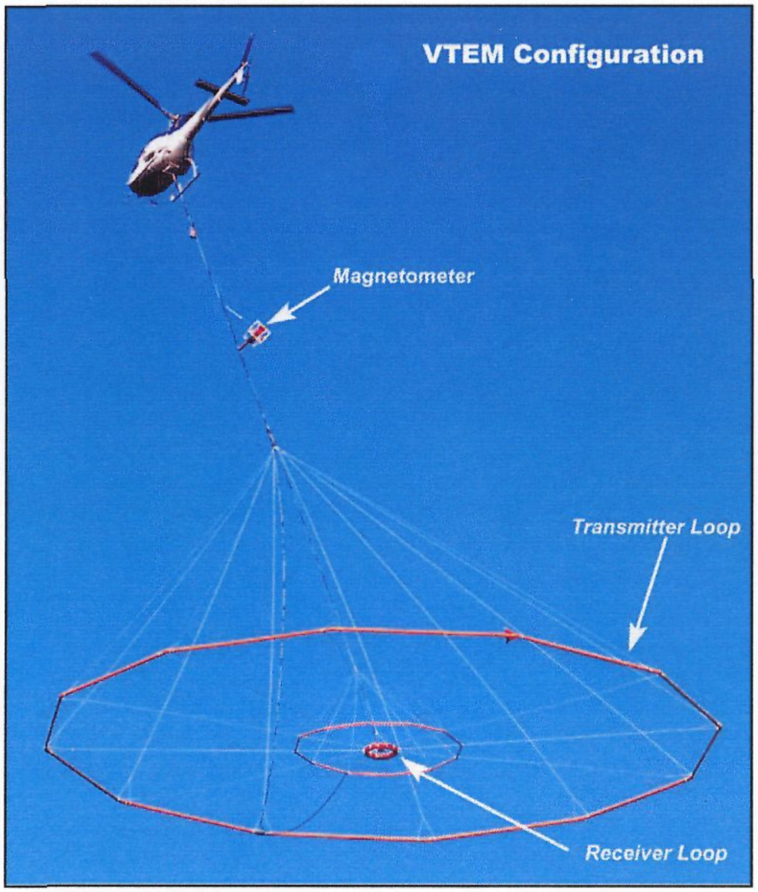


Figure 4 – VTEM-M Configuration

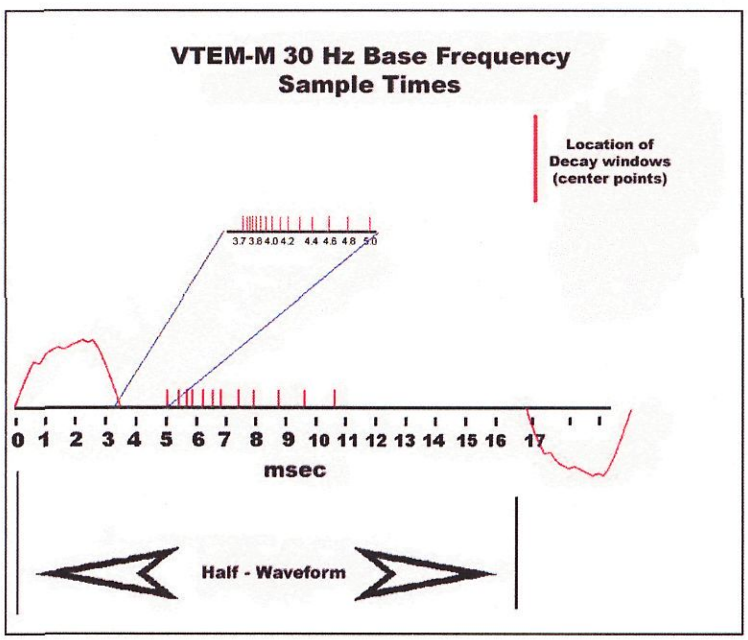


Figure 5 – VTEM-M Waveform & Sample Times

The complete VTEM decay sampling scheme is shown in Table 3 below. Twenty-four time measurement gates (ch10 to ch33) were used for the final data processing in the range from 120 to 6578 μ sec, as shown in Table 5.

Table 3 - Decay Sampling Scheme

VTEM Decay Sampling scheme[2]				
Array Index	(Microseconds)			
	Time Gate	Start	End	Width
0	0			
1	10	10	21	11
2	21	16	26	11
3	31	26	37	11
4	42	37	47	11
5	52	47	57	10
6	62	57	68	11
7	73	68	78	11
8	83	78	91	13
9	99	91	110	19
10	120	110	131	21
11	141	131	154	24
12	167	154	183	29
13	198	183	216	34
14	234	216	258	42
15	281	258	310	53
16	339	310	373	63
17	406	373	445	73
18	484	445	529	84
19	573	529	628	99
20	682	628	750	123
21	818	750	896	146
22	974	896	1063	167
23	1151	1063	1261	198
24	1370	1261	1506	245
25	1641	1506	1797	292
26	1953	1797	2130	333
27	2307	2130	2526	396
28	2745	2526	3016	490
29	3286	3016	3599	583
30	3911	3599	4266	667
31	4620	4266	5058	792
32	5495	5058	6037	979
33	6578	6037	7203	1167
34	7828	7203	8537	1334
35	9245	8537	10120	1584

[2] Note: Measurement times-delays are referenced to time-zero marking the end of the transmitter current turn-off, as illustrated in Figure 5 and Appenix C.

VTEM-M system parameters:

<u>Transmitter Section</u>

- Transmitter coil diameter: 18.8 m
- Number of turns: 3
- Transmitter base frequency: 30 Hz
- Peak current: 350 A
- Pulse width: 3.7 ms
- Duty cycle: 22%
- Peak dipole moment: 292,000 nIA
- Nominal terrain clearance: 43 m
-

<u>Receiver Section</u>

- Receiver coil diameter: 1.2 m
- Number of turns: 100.
- Effective coil area: 113.04 m^2
- Wave form shape: trapezoid
- Power Line Monitor: 60 Hz
-

<u>Magnetometer</u>

- Nominal terrain clearance: 64 m

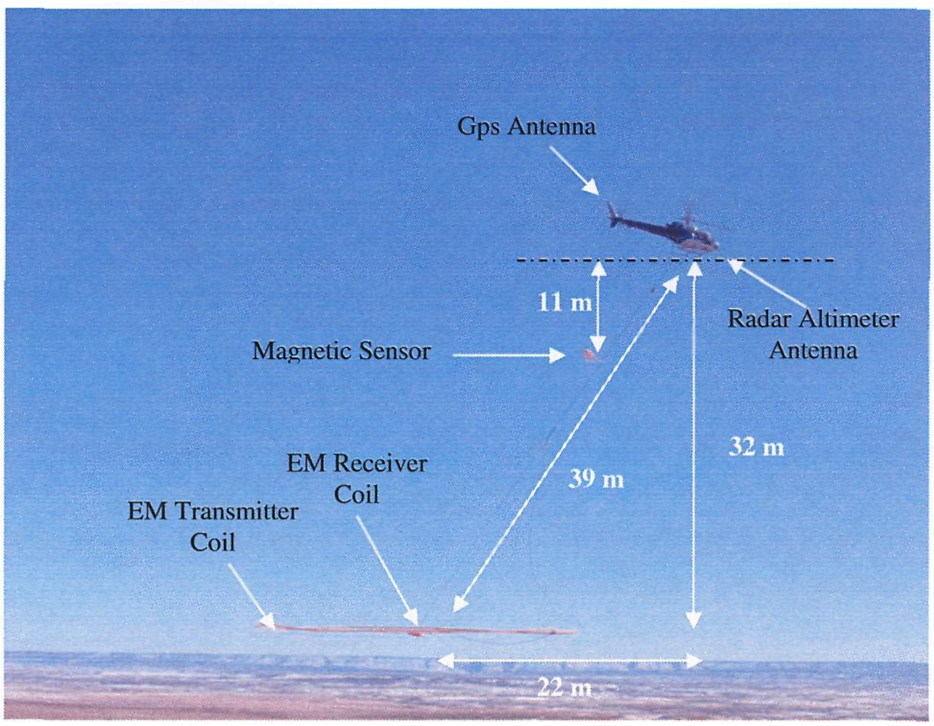


Figure 6 - Conventional VTEM-M system configuration

2.4.3 Airborne magnetometer

The magnetic sensor utilized for the survey was a Geometrics optically pumped caesium vapour magnetic field sensor, mounted in a separated bird, 11 metres below the helicopter, as shown in Figure 6. 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 nanoTesla to the data acquisition system via the RS-232 port.

2.4.4 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 (Figure 6).

2.4.5 GPS Navigation System

The navigation system used was a Geotech PC based unit consisting of a NovAtel's CDGPS (Canada-Wide Differential Global Positioning System Correction Service) enabled OEM4-G2-3151W GPS receiver, The Geotech navigate software, a full screen display with controls in front of the pilot to direct the flight and a NovAtel GPS antenna mounted on the helicopter tail (Figure 6). As many as 11 GPS and two CDGPS satellites may be monitored at any one time. The positional accuracy or circular error probability (CEP) is 1.8 m, with CDGPS active, it is 1.0 m. The co-ordinates of the block were set-up prior to the survey and the information was fed into the airborne navigation system.

2.4.6 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. The data type and sampling interval as provided in Table 4.

Table 4 - Acquisition Sampling Rates

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

2.4.7 Base Station

A combined magnetometer/GPS base station was utilized on this project. A Geometrics Caesium 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 in an isolated area inside the Campbell River airport away from electric transmission lines and moving ferrous objects such as motor vehicles. The base station data were 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:

Project Manager:	Les Moschuk (Office)
Data QC/QA:	Nick Venter (Office)
Crew chief:	Jason McKinnon
Operator:	Joseph Florjancic

The survey pilot and the mechanical engineer were employed directly by the helicopter operator - TRK Helicopters Ltd.

Pilot:	Mark Rayner
Mechanical Engineer:	Andrew Hawkins

Office:

Preliminary Data Processing:	Nick Venter
Final Data Processing:	Shawn Grant
Final Data QC:	Niel Fiset
Reporting/Mapping:	Wendy Acorn

Data acquisition phases were carried out under the supervision of Andrei Bagrianski, P. Geo, Surveys Manager. Processing phases were carried out under the supervision of Jean Legault, P. Geo, Manager of Processing and Interpretation. The overall contract management and customer relations were by Paolo Berardelli.

4. DATA PROCESSING AND PRESENTATION

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

4.1 Flight Path

The flight path, recorded by the acquisition program as WGS 84 latitude/longitude, was converted into the NAD83 Datum, UTM Zone 10N 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 easting's (x) and UTM northing's (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 15 metres. This filter is a symmetrical 1 second linear filter.

The results are presented as stacked profiles of EM voltages for the time gates, in linear - logarithmic scale for both B-field and dB/dt response. B-field time channel recorded at 0.818 milliseconds after the termination of the impulse is also presented as colour image.

The data for the Fanny Bay Property has been clipped to remove the saline water responses as per the client.

Generalized modeling results of VTEM data, written by consultant Roger Barlow and Nasreddine Bournas, P. Geo., are shown in Appendix E.

Graphical representations of the VTEM transmitter input current and the output voltage of the receiver coil are shown in Appendix C.

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 were edited and merged into the Geosoft GDB database on a daily basis. The aeromagnetic data were corrected for diurnal variations by subtracting the observed magnetic base station deviations.

Tie line levelling was carried out by adjusting intersection points along traverse lines. A micro-levelling procedure was applied to remove persistent low-amplitude components of flight-line noise remaining in the data.

The corrected magnetic data were interpolated between survey lines using a random point gridding method to yield x-y grid values for a standard grid cell size of approximately 0.25 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 NAD83, UTM zone 10 north. All maps show the flight path trace and topographic data; latitude and longitude are also noted on maps.

The preliminary and final results of the survey are presented as EM profiles, a late-time gate gridded EM channel, and color magnetic TMI contour maps.

The following maps are presented on paper:

- VTEM B-field profiles, Time Gates 0.234 – 6.578 ms in linear - logarithmic scale with TMI colour image.
- VTEM dB/dt profiles, Time Gates 0.234 – 6.578 ms in linear – logarithmic scale.
- VTEM dB/dt late time, Time Gate 0.818 ms and 0.281 ms colour image.
- Total magnetic intensity (TMI) colour image and contours.

5.3 Digital Data

- Two copies of the data and maps on DVD-ROM were prepared to accompany the report. Each DVD -ROM contains a digital file of the line data in GDB Geosoft Montaj format as well as the maps in Geosoft Montaj Map format.

- Two copies of DVD-ROMs were prepared.

There are two (2) main directories:

Data	contains databases, grids and maps, as described below.
Report	contains a copy of the report and appendices in PDF format.

Databases in Geosoft GDB format containing the channels listed, are presented in Table 5.

Table 5 - Geosoft GDB Data Format

Channel Name	Description
X:	X positional data (meters – NAD83, UTM zone10 north)
Y:	Y positional data (meters – NAD83, UTM zone 10 north)
Z:	GPS antenna elevation (meters - ASL)
Radar:	Helicopter terrain clearance from radar altimeter (meters - AGL)
RadarB:	EM Bird terrain clearance from radar altimeter (meters - AGL)
DEM:	Digital elevation model (meters)
Gtime:	GPS time (seconds of the day)
Mag1:	Raw Total Magnetic field data (nT)
Mag2:	Diurnal corrected Total Magnetic field data (nT)
Mag3:	Leveled Total Magnetic field data (nT)
Basemag:	Magnetic diurnal variation data (nT)
SF[10]:	dB/dt 120 microsecond time channel (pV/Am^4)
SF[11]:	dB/dt 141 microsecond time channel (pV/Am^4)
SF[12]:	dB/dt 167 microsecond time channel (pV/Am^4)
SF[13]:	dB/dt 198 microsecond time channel (pV/Am^4)
SF[14]:	dB/dt 234 microsecond time channel ($pV/A/m^4$)
SF[15]:	dB/dt 281 microsecond time channel (pV/Am^4)
SF[16]:	dB/dt 339 microsecond time channel (pV/Am^4)
SF[17]:	dB/dt 406 microsecond time channel (pV/Am^4)
SF[18]:	dB/dt 484 microsecond time channel (pV/Am^4)
SF[19]:	dB/dt 573 microsecond time channel (pV/Am^4)
SF[20]:	dB/dt 682 microsecond time channel (pV/Am^4)
SF[21]:	dB/dt 818 microsecond time channel (pV/Am^4)
SF[22]:	dB/dt 974 microsecond time channel (pV/Am^4)
SF[23]:	dB/dt 1151 microsecond time channel (pV/Am^4)
SF[24]:	dB/dt 1370 microsecond time channel (pV/Am^4)
SF[25]:	dB/dt 1641 microsecond time channel (pV/Am^4)
SF[26]:	dB/dt 1953 microsecond time channel (pV/Am^4)
SF[27]:	dB/dt 2307 microsecond time channel (pV/Am^4)
SF[28]:	dB/dt 2745 microsecond time channel (pV/Am^4)
SF[29]:	dB/dt 3286 microsecond time channel (pV/Am^4)
SF[30]:	dB/dt 3911 microsecond time channel (pV/Am^4)
SF[31]:	dB/dt 4620 microsecond time channel (pV/Am^4)
SF[32]:	dB/dt 5495 microsecond time channel (pV/Am^4)
SF[33]:	dB/dt 6578 microsecond time channel (pV/Am^4)
BF[10]:	B-field 120 microsecond time channel $(pVms)/(Am^4)$
BF[11]:	B-field 141 microsecond time channel $(pVms)/(Am^4)$

Channel Name	Description
BF[12]:	B-field 167 microsecond time channel (pVms)/(Am^4)
BF[13]:	B-field 198 microsecond time channel (pVms)/(Am^4)
BF[14]:	B-field 234 microsecond time channel (pVms)/(Am^4)
BF[15]:	B-field 281 microsecond time channel (pVms)/(Am^4)
BF[16]:	B-field 339 microsecond time channel (pVms)/(Am^4)
BF[17]:	B-field 406 microsecond time channel (pVms)/(Am^4)
BF[18]:	B-field 484 microsecond time channel (pVms)/(Am^4)
BF[19]:	B-field 573 microsecond time channel (pVms)/(Am^4)
BF[20]:	B-field 682 microsecond time channel (pVms)/(Am^4)
BF[21]:	B-field 818 microsecond time channel (pVms)/(Am^4)
BF[22]:	B-field 974 microsecond time channel (pVms)/(Am^4)
BF[23]:	B-field 1151 microsecond time channel (pVms)/(Am^4)
BF[24]:	B-field 1370 microsecond time channel (pVms)/(Am^4)
BF[25]:	B-field 1641 microsecond time channel (pVms)/(Am^4)
BF[26]:	B-field 1953 microsecond time channel (pVms)/(Am^4)
BF[27]:	B-field 2307 microsecond time channel (pVms)/(Am^4)
BF[28]:	B-field 2745 microsecond time channel (pVms)/(Am^4)
BF[29]:	B-field 3286 microsecond time channel (pVms)/(Am^4)
BF[30]:	B-field 3911 microsecond time channel (pVms)/(Am^4)
BF[31]:	B-field 4620 microsecond time channel (pVms)/(Am^4)
BF[32]:	B-field 5495 microsecond time channel (pVms)/(Am^4)
BF[33]:	B-field 6578 microsecond time channel (pVms)/(Am^4)
Lon:	Longitude data (degree – NAD83)
Lat:	Latitude data (degree – NAD83)
PLM:	60 Hz power line monitor

Electromagnetic B-field and dB/dt data are found in array channel format between indexes 10 – 33, as described above.

- Database of the VTEM Waveform "8214_waveform.gdb" in Geosoft GDB format, containing the following channels:

Time:	Sampling rate interval, 10.416 microseconds
RX_Volt:	Output voltage of the receiver coil (volt)
TX_Curr:	Output current of the transmitter (amps)

- Grids in Geosoft GRD format, as follow,

8214_Mag_FAN.grd:	Total magnetic intensity (nT)
8214_Mag_CAP.grd:	Total magnetic intensity (nT)
8214_SF21_CAP:	dB/dt Time Gate 0.818 ms
8214_SF15_FAN:	dB/dt Time Gate 0.281 ms

A Geosoft .GRD file has a .GI metadata file associated with it, containing grid projection information. A grid cell size of 25 metres was used.

- Maps at 1:10,000 scale in Geosoft MAP format, as follows:

8214_bfield_bb:	B-field profiles, Time Gates 0.234 – 6.578 ms in linear logarithmic scale, with TMI colour image.
8214_dBdt_bb:	dB/dt profiles, Time Gates 0.234 – 6.578 ms in linear logarithmic scale.
8214_SF21_CAP:	dB/dt late time, Time Gate 0.818 ms colour image.
8214_SF15_FAN:	dB/dt late time, Time Gate 0.281 ms colour image.
8214_TMI_bb:	Total magnetic intensity colour image and contours.

Where bb represents the block name (ie: 8214_TMI_FAN).

1:50,000 topographic vectors were taken from the NRCAN Geogratis database at; http://geogratis.gc.ca/geogratis/en/index.html.

- Google Earth files *8214_GSantos.kml* showing the flight path of the blocks .

Free version of Google Earth software can be downloaded from, http://earth.google.com/download-earth.html

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

A helicopter-borne versatile time domain electromagnetic medium (VTEM-M) geophysical survey has been completed over the Fanny Bay and Captain Properties on the west coast of British Columbia, Canada.

The total area coverage is 97 km^2. Total survey line coverage is 995 line kilometres. The principal sensors included a Versatile Time Domain EM system and caesium magnetometer. Results have been presented as stacked profiles and colour contour images at a scale of 1:10,000. There is no formal interpretation included in this report.

6.2 Recommendations

Based on the geophysical results obtained, a number of potentially interesting EM and magnetic anomalies were identified on the properties. We therefore recommend that these results be combined and compared with the existing geoscientific database. We further recommend a more detailed interpretation of the EM and magnetic data including EM anomaly picks as well as inversion and modelling techniques to better characterize them and to more accurately determine the anomaly parameters (depth, conductance, dip, etc.) prior to ground follow-up and drill testing.

Respectfully submitted[1],

Wendy Acorn
Geotech Ltd.

Jean Legault, P. Geo, P. Eng
Geotech Ltd.

J. M. LEGAULT
7-Jan-09

Shawn Grant
Geotech Ltd.

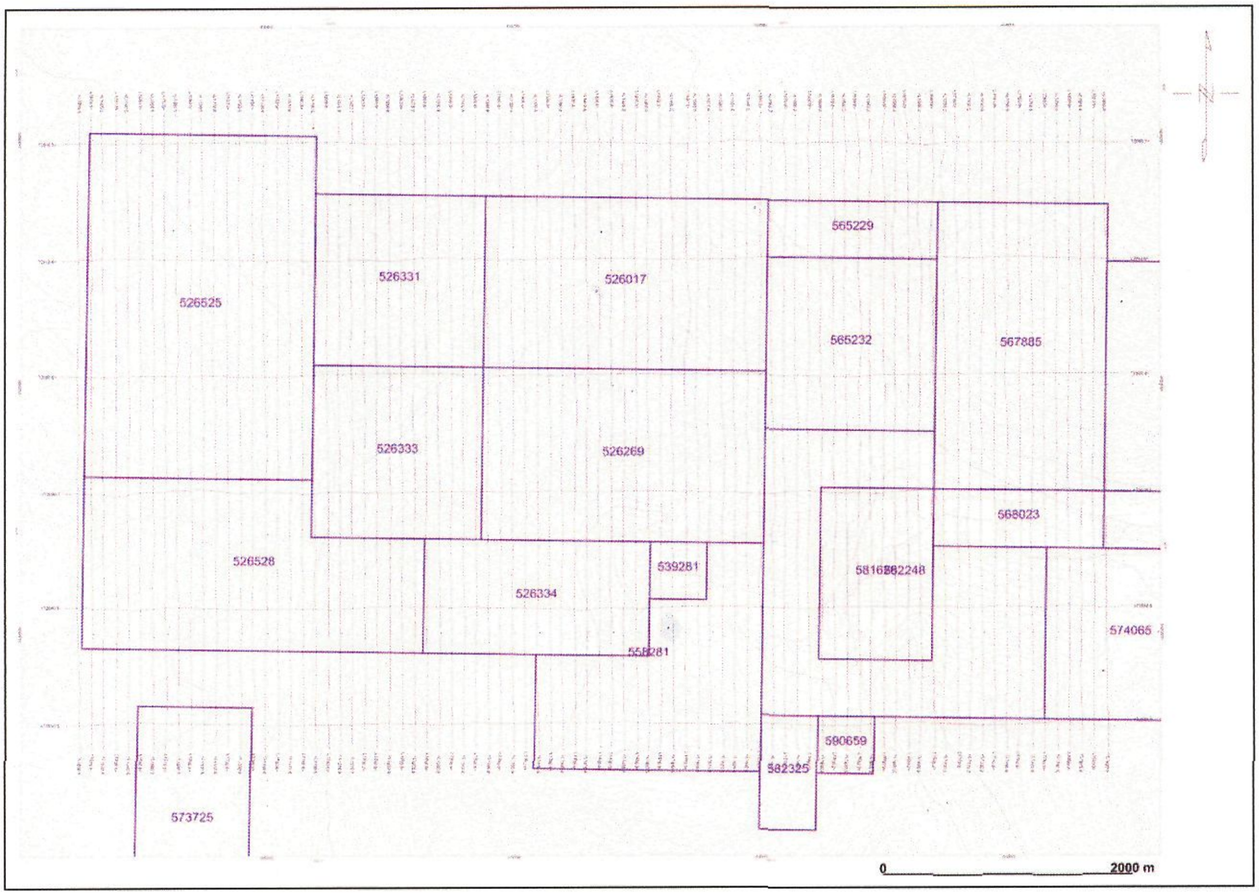
January 2009

[1]Final data processing of the EM and magnetic geophysical data were carried out by Shawn Grant from the office of Geotech Ltd., in Aurora, Ontario, under the supervision of Jean Legault, P. Geo, Manager of Data Processing and Interpretation.

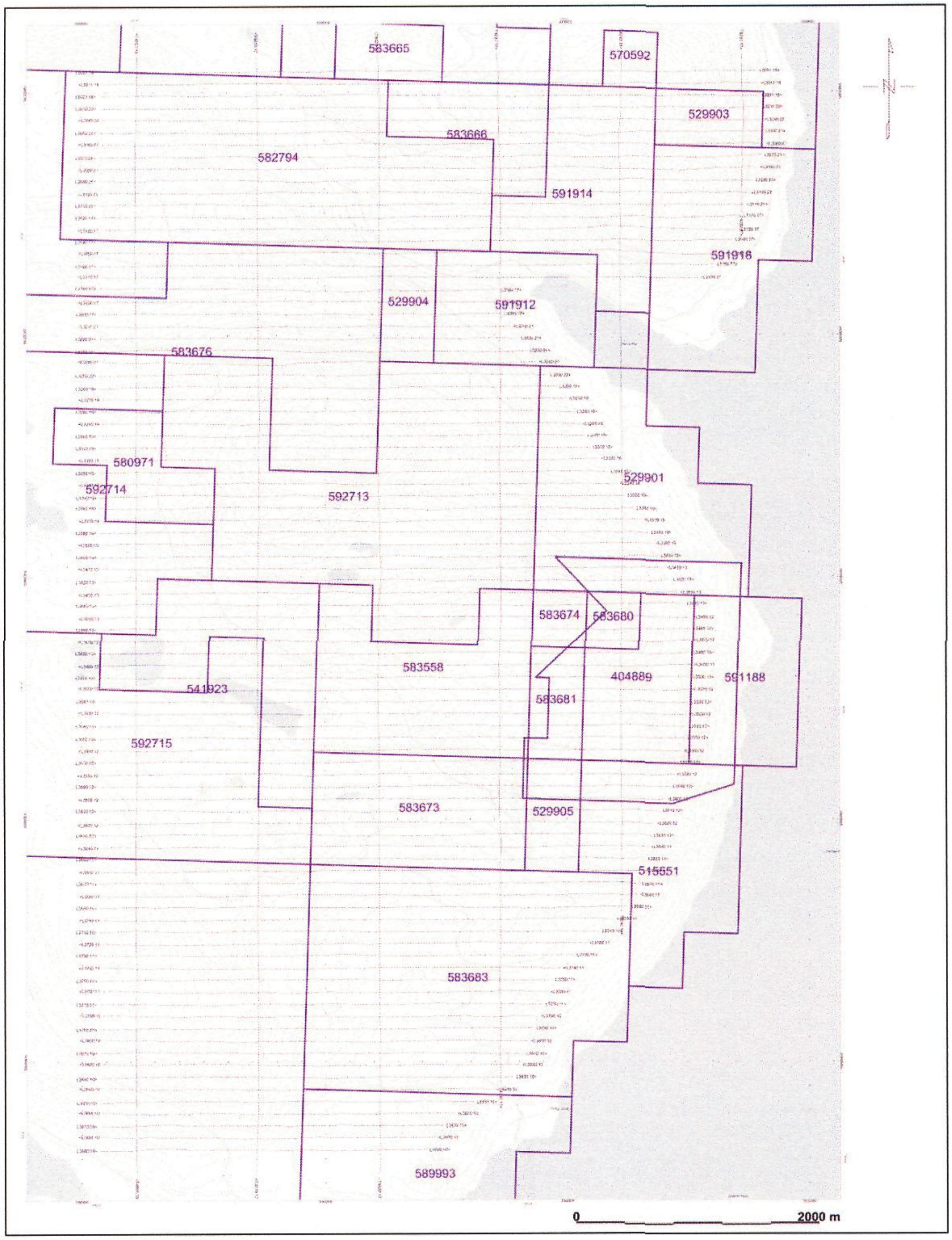
APPENDIX A

SURVEY BLOCK LOCATION MAP

Google Earth Location map of the Properties



Mining Claims map for the Captain Property



Mining Claims map for the Fanny Bay Property

APPENDIX B

SURVEY BLOCK COORDINATES

(NAD83 zone 10north)

Captain Property

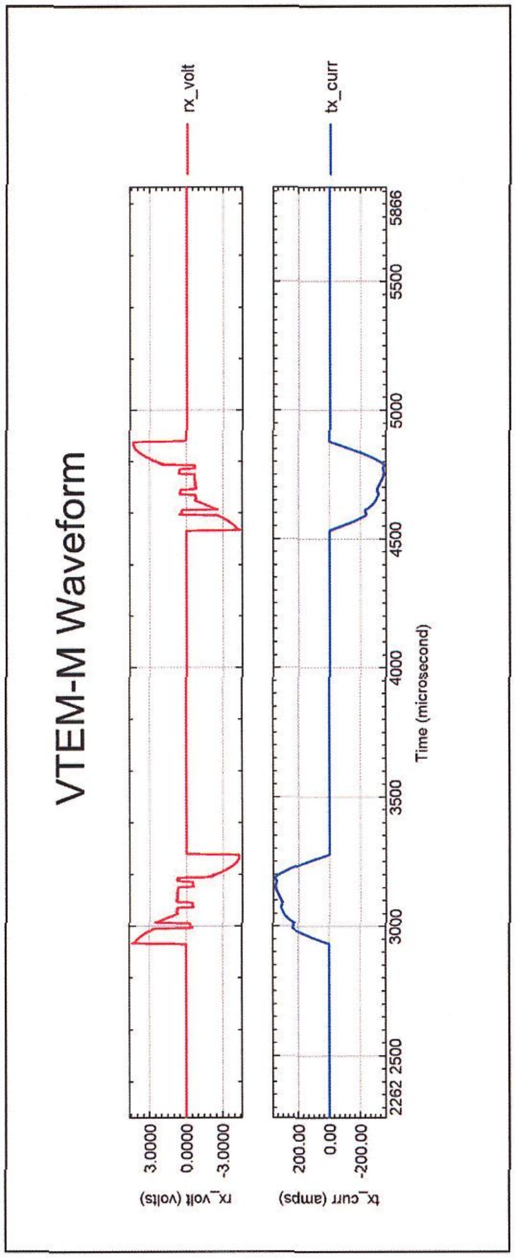
X	Y
326150	5602173
331778	5602173
331778	5593270
326150	5593270

Fanny Bay Property

X	Y
406490	5419033
406490	5424193
414776	5424193
414776	5419033

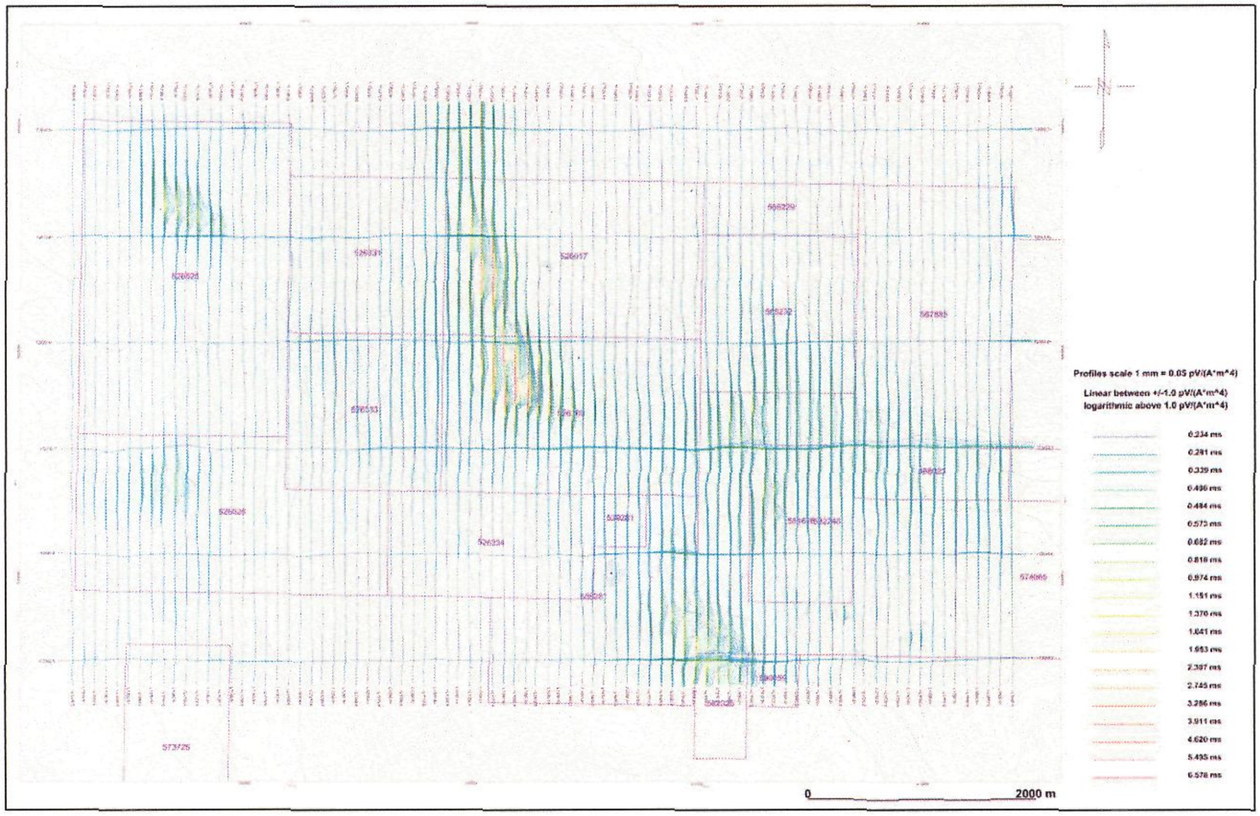
APPENDIX C

VTEM WAVEFORM



APPENDIX D

GEOPHYSICAL MAPS[3]



VTEM dB/dt Profiles for the Captain Property

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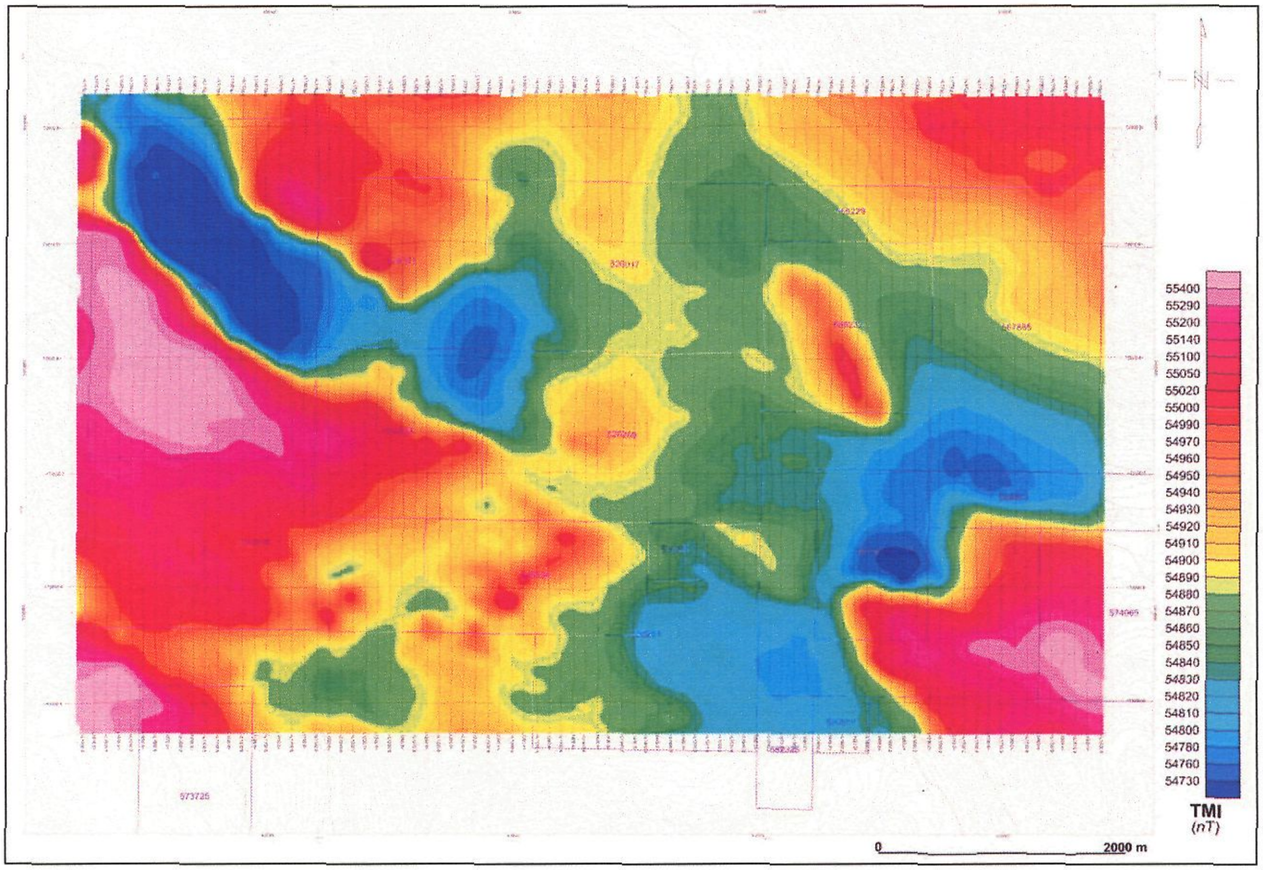
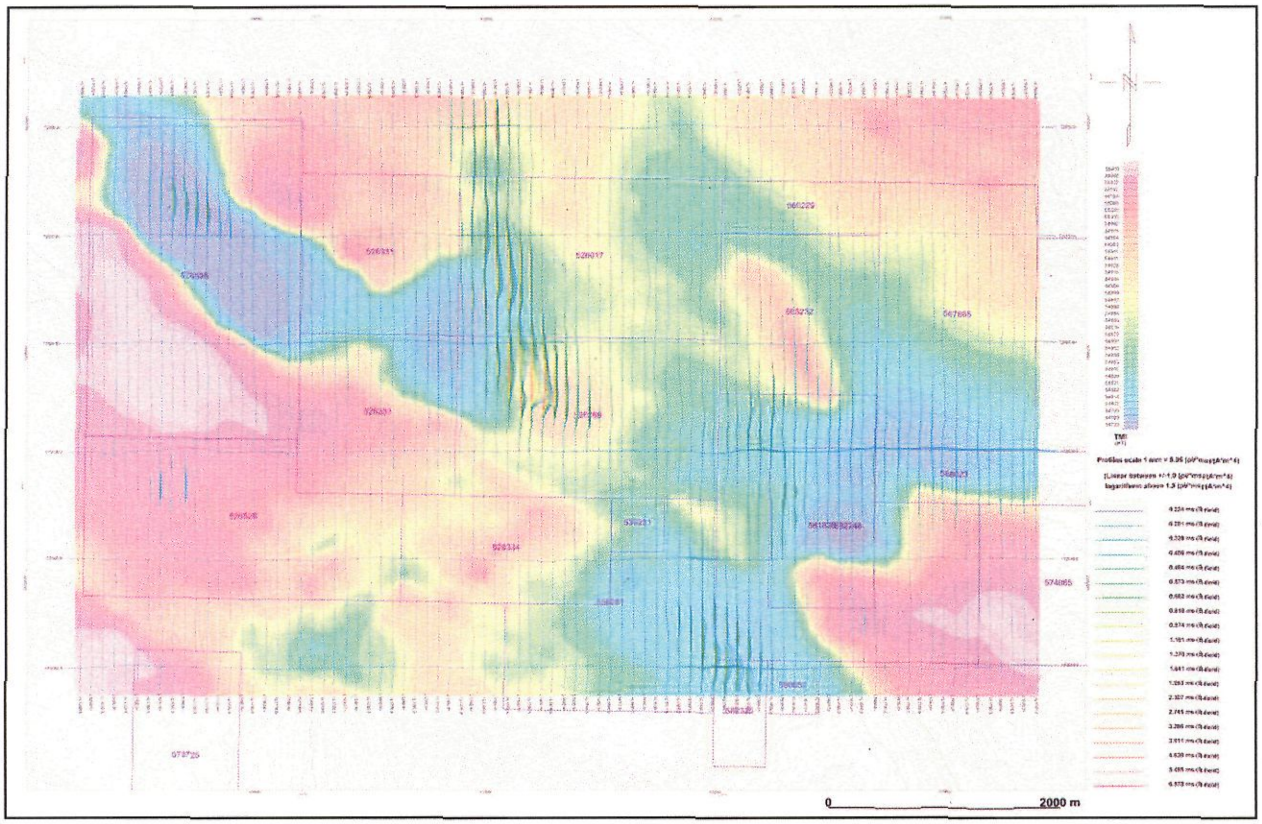
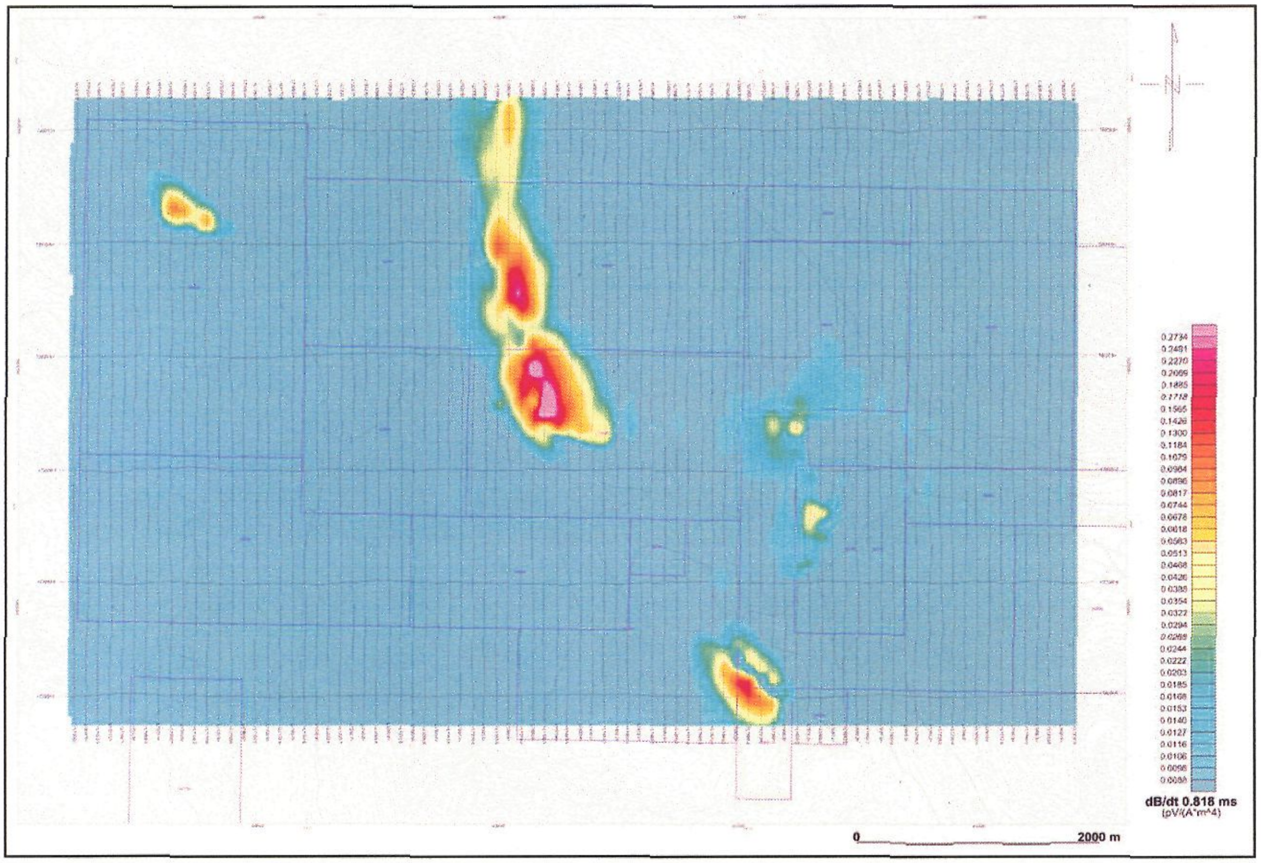
[3] Present maps are a selection of the final geophysical maps. Full size geophysical maps are also available in PDF format on the final DVD.



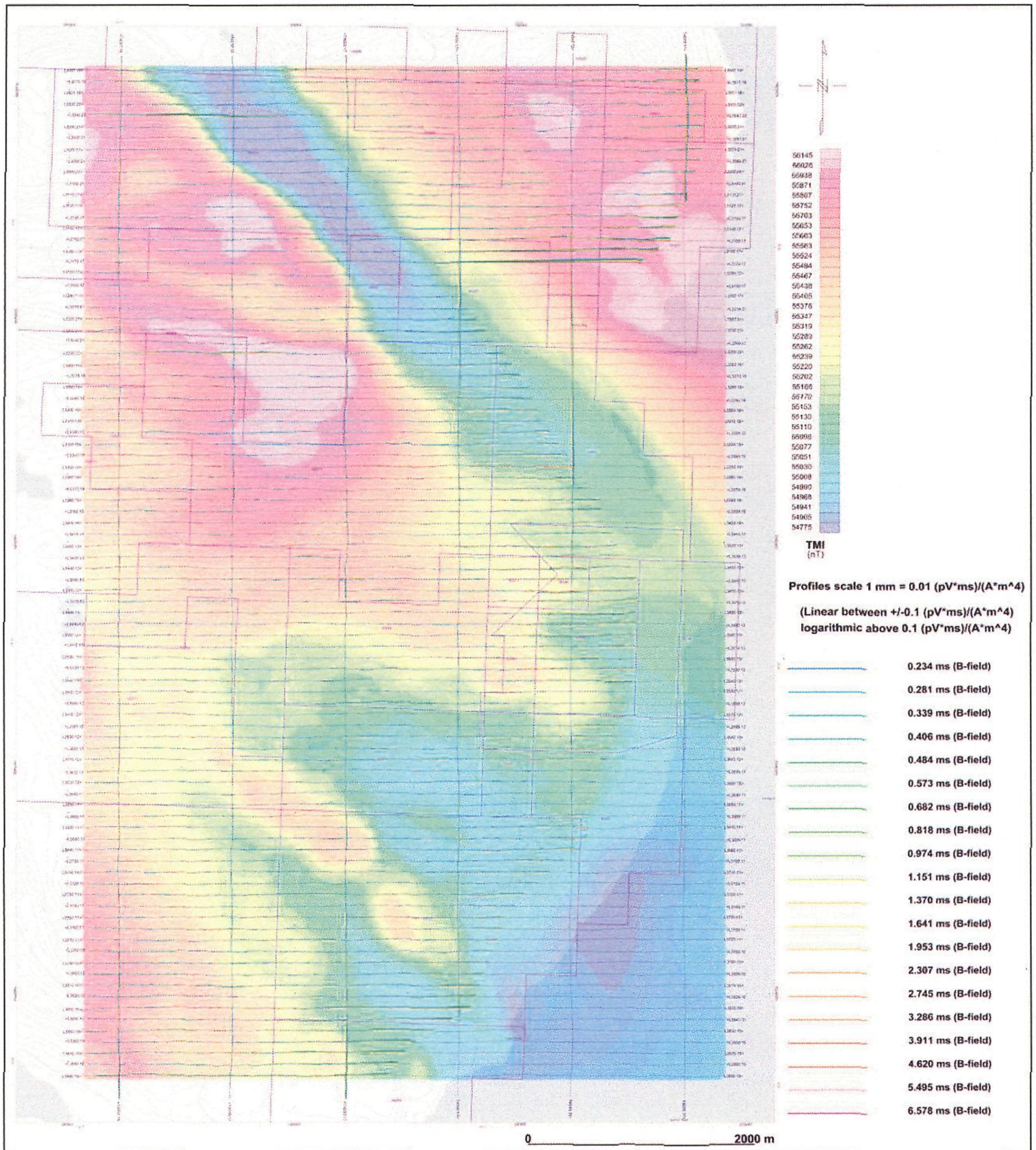
Total Magnetic Intensity (TMI) Grid for the Captain Property



VTEM B-Field Profiles with TMI Color Image for the Captain Property



VTEM dB/dt Grid - Time Gate 0.818 ms for the Captain Property



VTEM B-Field Profiles with TMI Color Image for the Fanny Bay Property

APPENDIX E

GENERALIZED MODELING RESULTS OF THE VTEM-M SYSTEM

Introduction

The VTEM-M system is based on a concentric or central loop design, whereby, the receiver is positioned at the centre of a 18.8 meters diameter transmitter loop that produces a dipole moment up to 292,000 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 3.7 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) or B-field 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.

VTEM-M measurements are made partly during the transmitter On but primarily during the Off-time, when only the secondary fields representing the conductive targets encountered in the ground are present. The secondary fields are displayed both as dB/dt and calculated B-field responses.

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.

General Modeling Concepts

A set of models has been produced for the Geotech VTEM® system with explanation notes (see models C1 to C18). The Maxwell ™ EM modeling program (IMIT Technologies Ltd. Pty, Midland WA, AU) was used to generate the following dB/dt and B-field off-time responses. All assume a conductive plate in an infinitely resistive half-space host rock.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. Only concentric loop systems can map these varieties of target geometries.

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 C-1 & C-2 and C-5 & C-6 at two different depths, all other parameters remaining constant. With this transmitter-receiver geometry, the classic **M** shaped response is generated. Figures C-1 and C-2 show 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. Figures C-5 and C-6 show 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. Figures C-3 & C-4 and C-7 and C-8 show a near surface plate dipping 80° at two different depths. 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 90° to about 30°. The method is not sensitive enough where dips are less than about 30°. For example, for a plate dipping 45°, the minimum shoulder starts to vanish. In Figures C-9 & C-10 and C-11 & C-12, 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.

In the special case where two plates are positioned to represent a synclinal structure. Note that the main characteristic is that 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 Dip

Finally, with thicker, 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-13 & C-14 and C-15 & C-16 show the same prism at the same depths with variable dips. Aside from the expected differences asymmetry prism anomalies show a characteristic change from a double-peaked anomaly to single peak signatures.

I. THIN PLATE

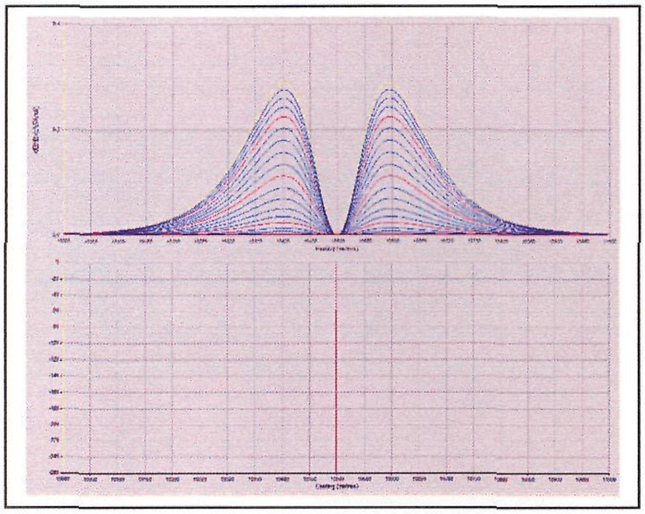


Figure C-1: dB/dt response of a shallow vertical thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

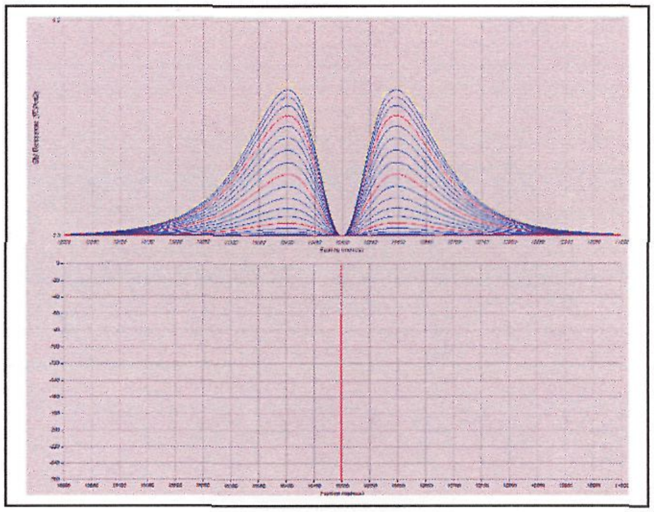


Figure C-2: B-field response of a shallow vertical thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment.

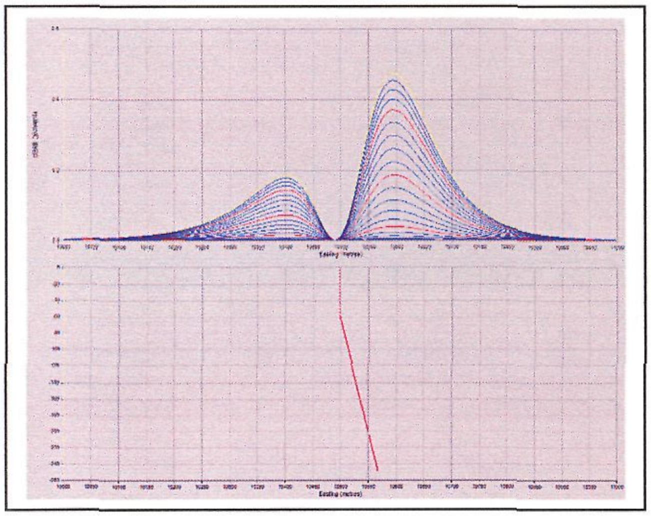


Figure C-3: dB/dt response of a shallow skewed thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

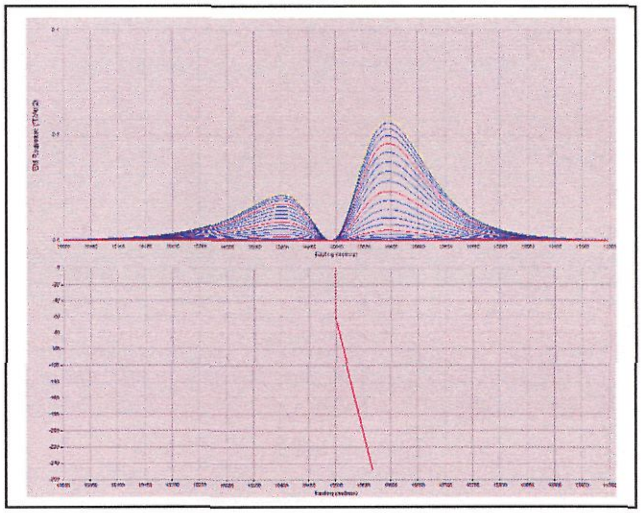
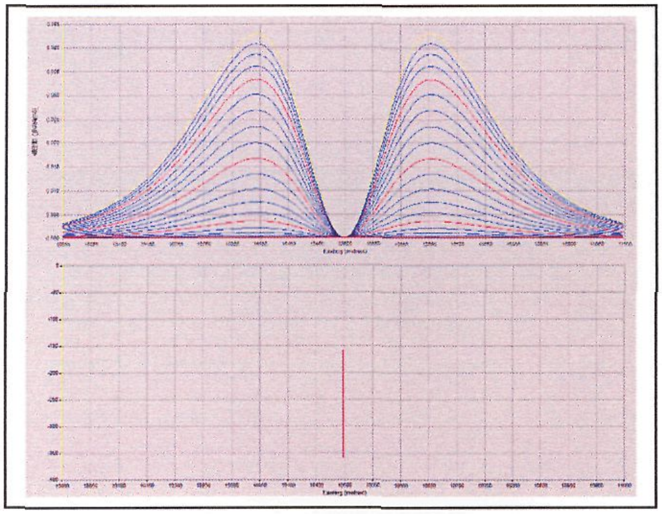


Figure C-4: B-field response of a shallow skewed thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment.



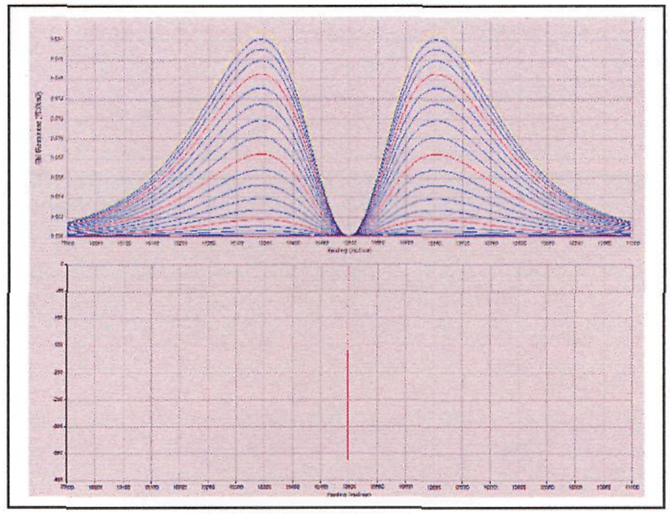
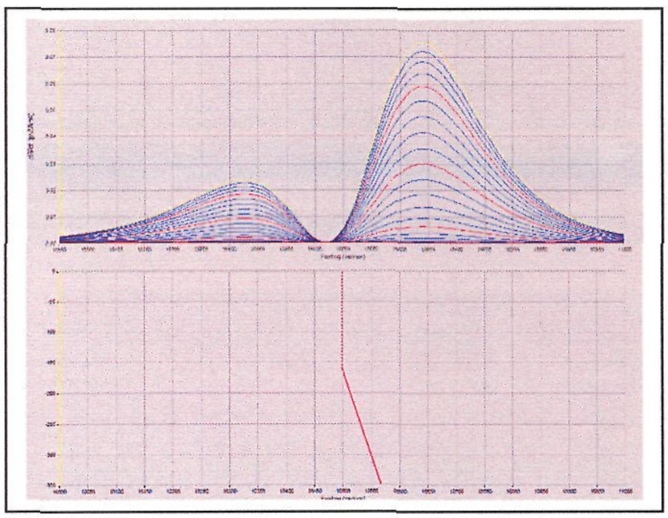


Figure C-5: dB/dt response of a deep vertical thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

Figure C-6: B-Field response of a deep vertical thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment.



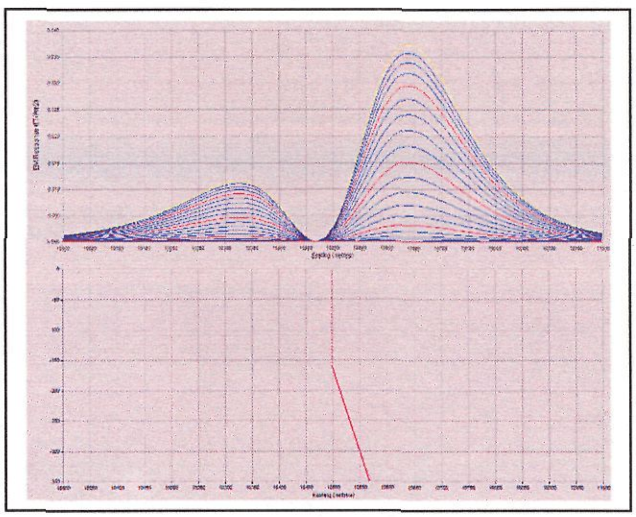


Figure C-7: dB/dt response of a deep skewed thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

Figure C-8: B-field response of a deep skewed thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment.

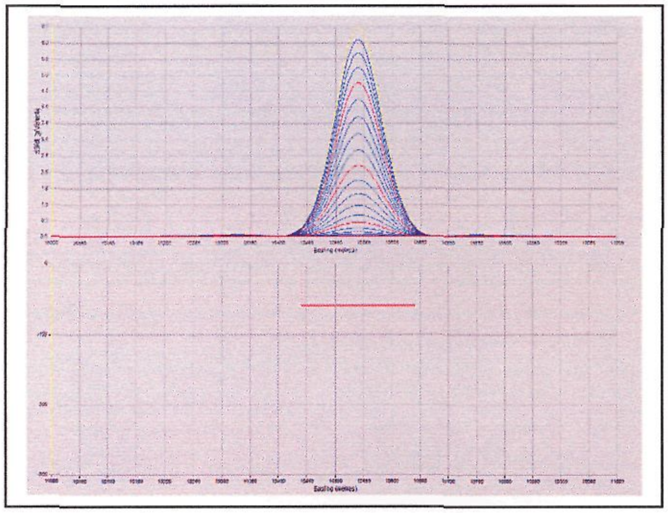


Figure C-9: dB/dt response of a shallow horizontal thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

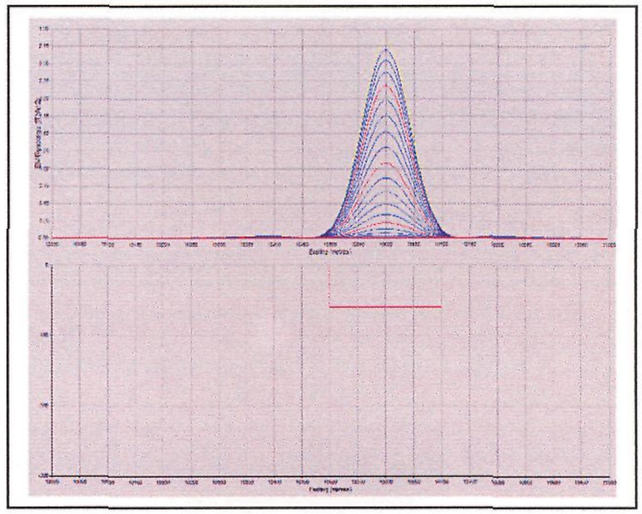


Figure C-10: B-Field response of a shallow horizontal thin plate. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment.

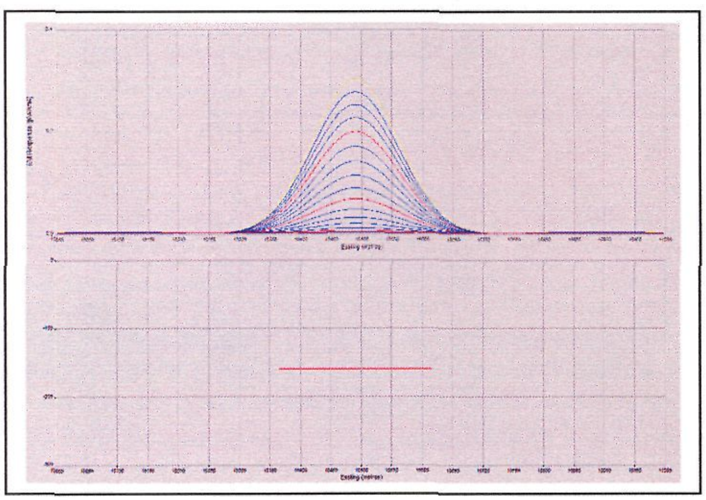


Figure C-11: dB/dt response of a deep horizontal thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

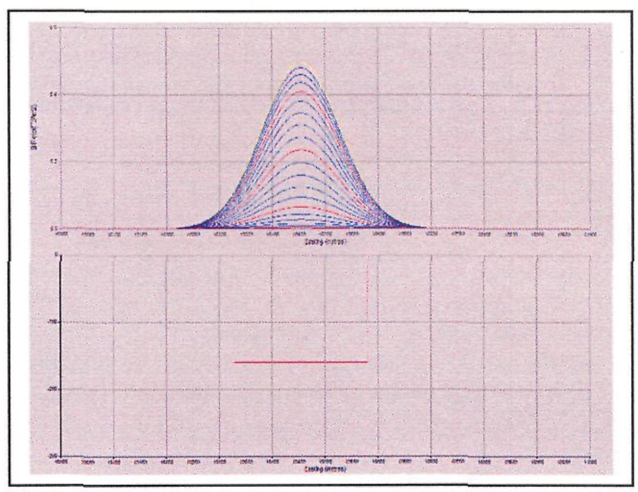


Figure C-12: B-Field response of a deep horizontal thin plate. Depth=200 m, CT=20 S. The EM response is normalized by the dipole moment.

II. THICK PLATE

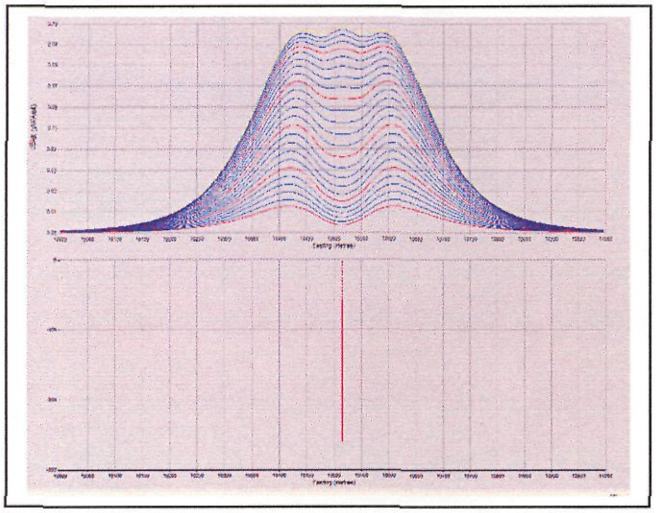


Figure C-13: dB/dt response of a shallow vertical thick plate. Depth=100 m, C=12 S/m, thickness=20 m. The EM response is normalized by the dipole moment and the Rx area.

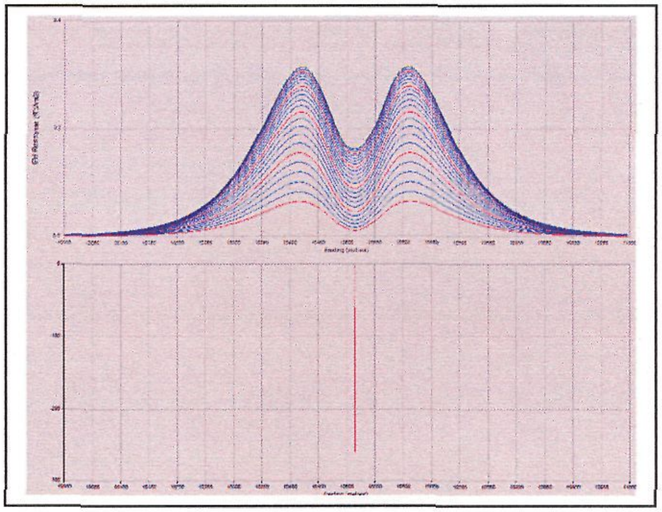


Figure C-14: B-Field response of a shallow vertical thick plate. Depth=100 m, C=12 S/m, thickness= 20 m. The EM response is normalized by the dipole moment.

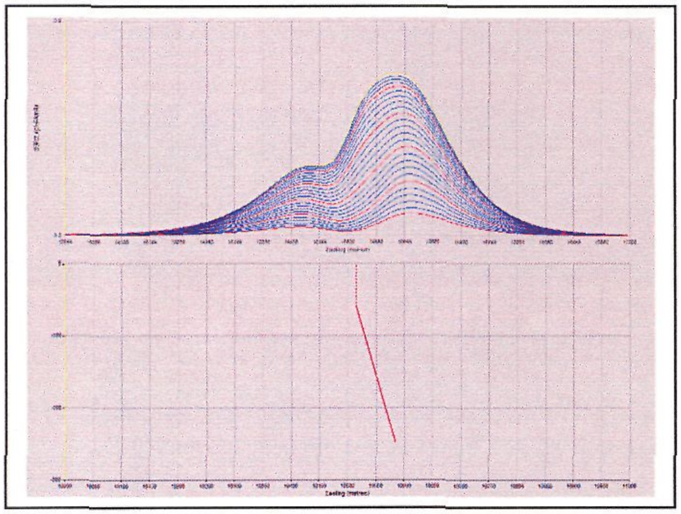


Figure C-15: dB/dt response of a shallow skewed thick plate. Depth=100 m, C=12 S/m, thickness=20 m. The EM response is normalized by the dipole moment and the Rx area.

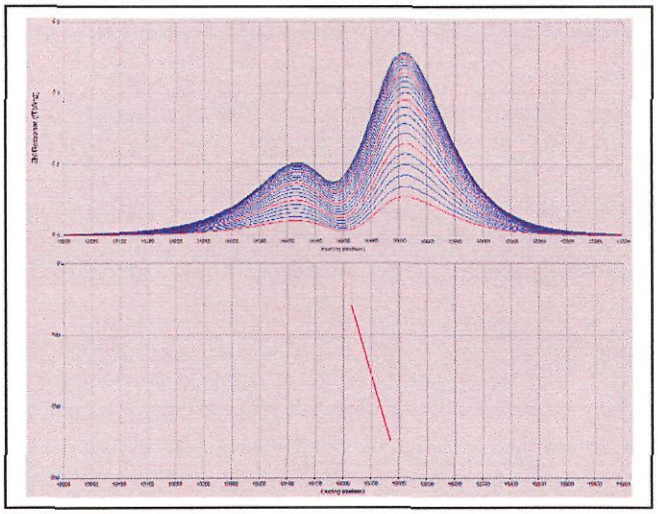


Figure C-16: B-Field response of a shallow skewed thick plate. Depth=100 m, C=12 S/m, thickness=20 m. The EM response is normalized by the dipole moment.

III. MULTIPLE THIN PLATES

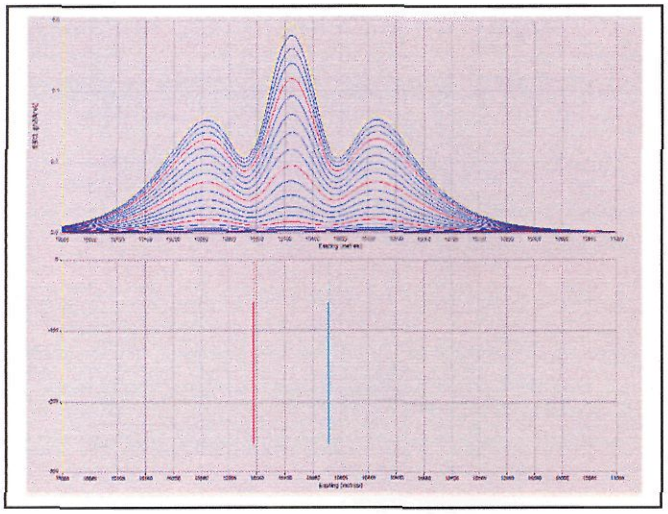


Figure C-17: dB/dt response of two vertical thin plates. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment and the Rx area.

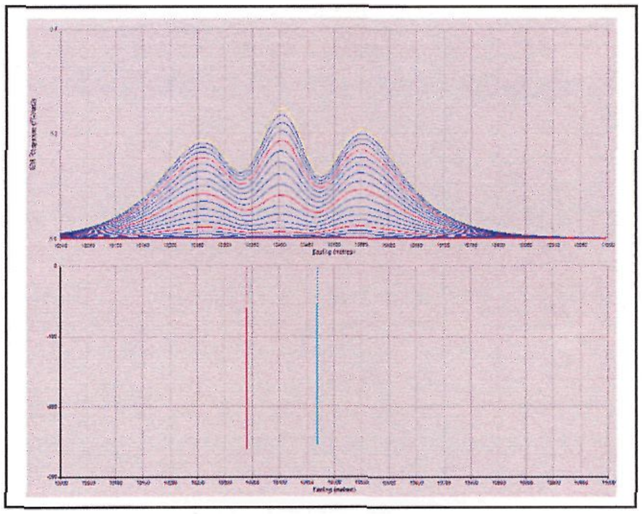


Figure C-18: B-Field response of two vertical thin plates. Depth=100 m, CT=20 S. The EM response is normalized by the dipole moment.

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 color 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 30°. For angles less than 30° to 0°, 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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Roger Barlow
Consultant

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Nasreddine Bournas, P. Geo.
Geophysicist
Geotech Ltd.

January 2009

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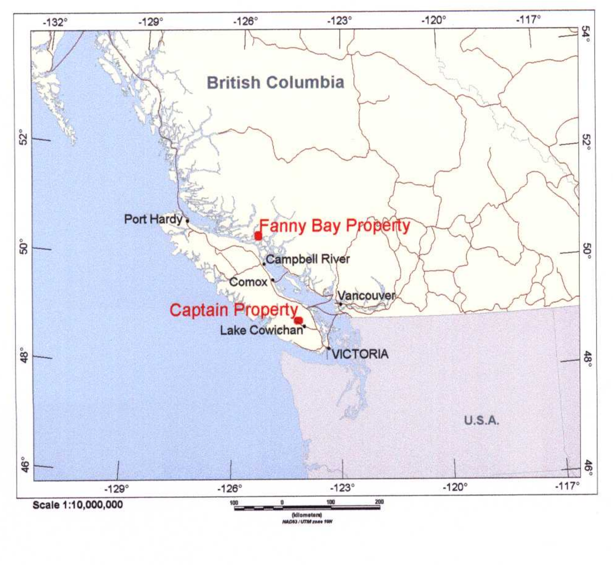

Scale 1:10,000,000

(kilometers)

NAD83 / UTM zone 10N

SURVEY SPECIFICATIONS:

Survey Date: September 5th to 23rd, 2008
Survey Base: Lake Cowichan, British Columbia
Aircraft: Aerospatiale A-Star 350 B3 (C-GTRK)
Nominal Survey Line Spacing: 100 Meters
Nominal Survey Line Direction: N 0° E
Nominal Tie Line Spacing: 1000 Meters
Nominal Tie Line Direction: N 90° E
Nominal Terrain Clearance: 75 Meters where possible
EM Loop: Towed at a mean distance of 32 meters below the Helicopter
Magnetic Sensor: Towed at a mean distance of 11 meters below the Helicopter

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Geotech Time Domain Electromagnetic System (VTEM-M)
Concentric Rx/Tx Geometry
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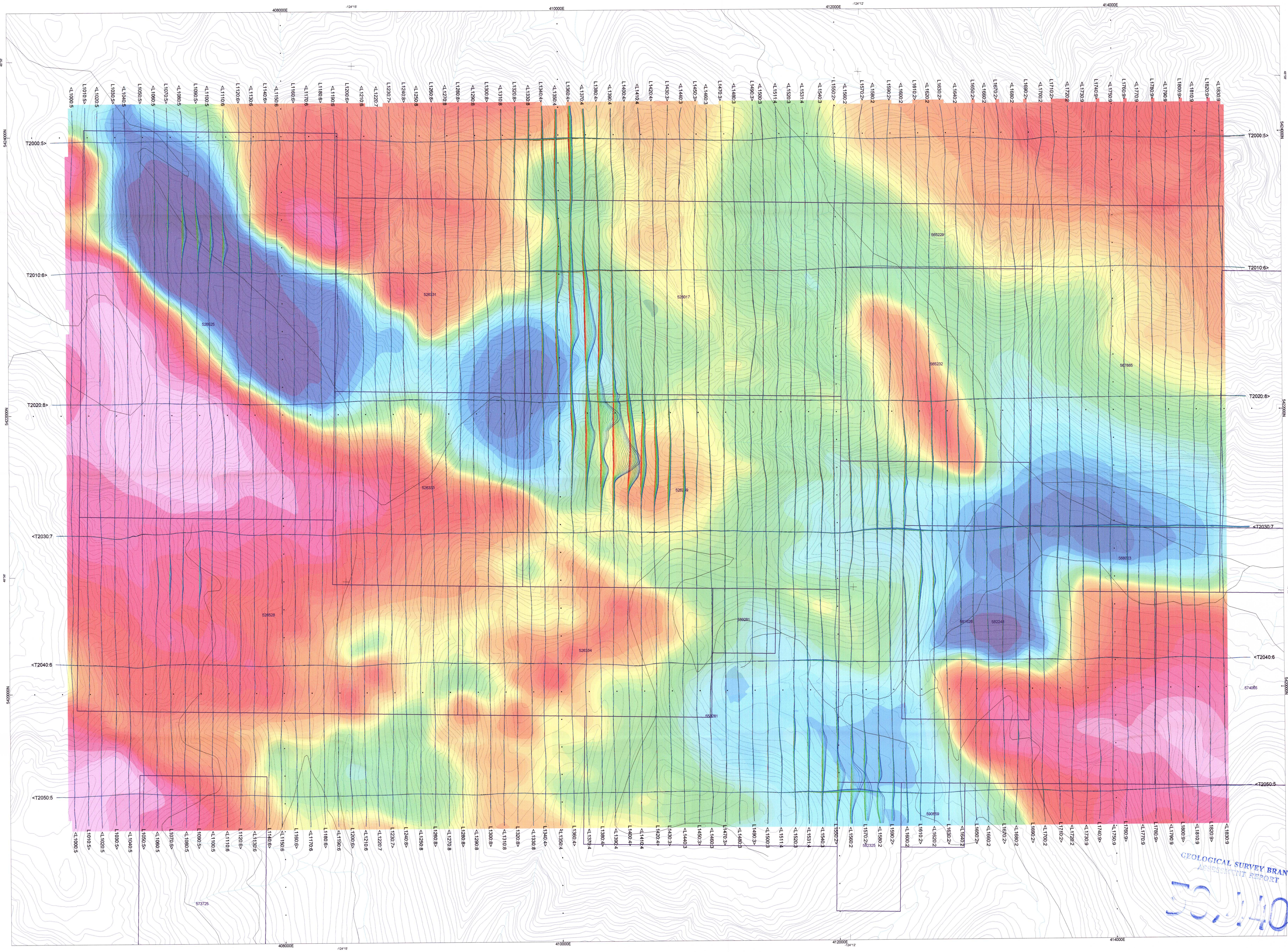
Dipole Moment: 292,000 nIA
Transmitter Wave Form: Trapezoid, Pulse Width 3.7 ms.
Geometrics High Sensitivity Cesium Magnetometer
Mag Resolution: 0.02 nT at 10 samples/sec

MAP PROJECTION

Datum: NAD 83
Projection: Universal Transverse Mercator
Central Meridian: 123°W (Zone 10)
Central Scale Factor: 0.9996
False Easting/Northing: 500,000m/0m
Major Axis: 6378137.000
Eccentricity: 0.081819191
NTS: 092C16



Profiles scale 1 mm = 0.05 (pV*ms)/(A*m^4)

(Linear between +/-1.0 (pV*ms)/(A*m^4)
logarithmic above 1.0 (pV*ms)/(A*m^4)

- 0.234 ms (B-field)
- 0.281 ms (B-field)
- 0.339 ms (B-field)
- 0.406 ms (B-field)
- 0.484 ms (B-field)
- 0.573 ms (B-field)
- 0.682 ms (B-field)
- 0.818 ms (B-field)
- 0.974 ms (B-field)
- 1.151 ms (B-field)
- 1.370 ms (B-field)
- 1.641 ms (B-field)
- 1.953 ms (B-field)
- 2.307 ms (B-field)
- 2.745 ms (B-field)
- 3.286 ms (B-field)
- 3.911 ms (B-field)
- 4.620 ms (B-field)
- 5.495 ms (B-field)
- 6.578 ms (B-field)

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TMI
(nT)

TOPOGRAPHIC LEGEND:

- contours
- Rivers
- Roads
- Lakes
- Wetlands
- Mining Claims

N

Scale 1:10000

100 0 100 200 300 400 500

(meters)

NAD83 / UTM zone 10N

The topographic data base was derived from 1:50000 NRC (Natural Resources Canada) NTDB data
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(www.geocomm.com)(www.geogratis.ca)(http://aardvark.gov.bc.ca/apps/dwds)

G. Santos Geoscience
Captain Property
Lake Cowichan, British Columbia

Geotech VTEM-M System
VTEM B-Field Profiles
Time Gate 0.234 - 6.578 ms
Over Total Magnetic Intensity

Flown and processed by Geotech Ltd.
245 Industrial Parkway North,
Aurora, Ontario, Canada L4G 4C4
www.geotech.ca

January 2009

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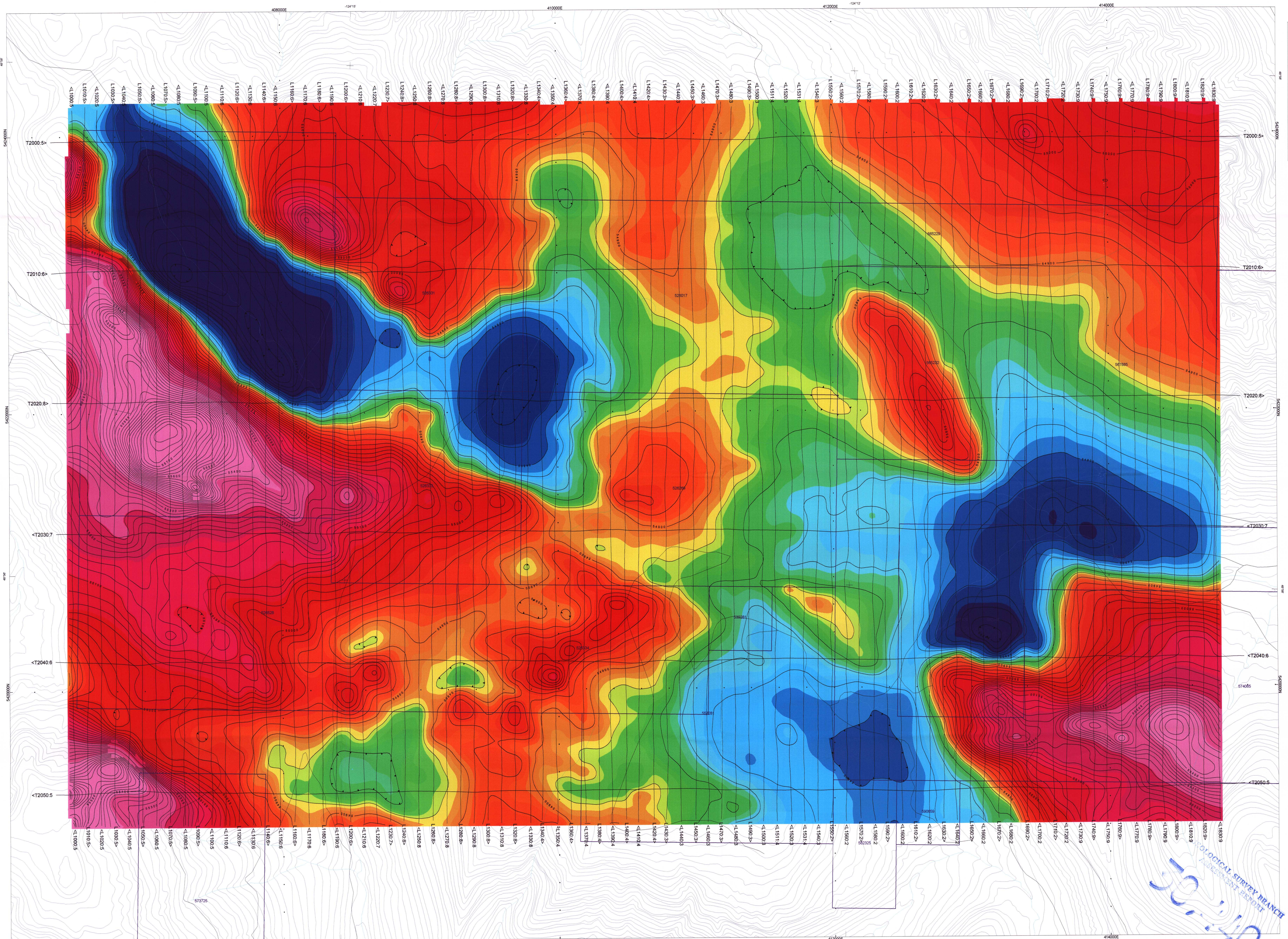

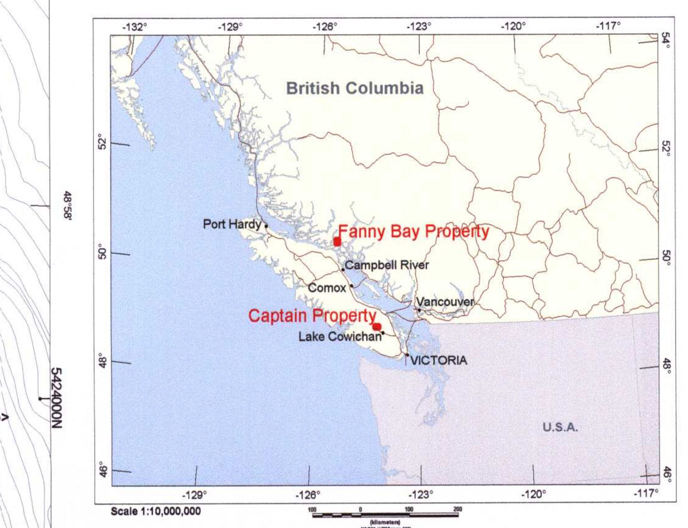

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Major Axis: 6378137.000
Eccentricity: 0.081819191
NTS: 092C16

TMI (nT)

TMI Contour Intervals:
20 nT
100 nT
1000 nT

TOPOGRAPHIC LEGEND:
contours
Rivers
Roads
Lakes
Wetlands
Mining Claims

Scale 1:10000
(meters)
NAD83 / UTM zone 10N

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G. Santos Geoscience
Captain Property
Lake Cowichan, British Columbia

Geotech VTEM-M System
Total Magnetic Intensity

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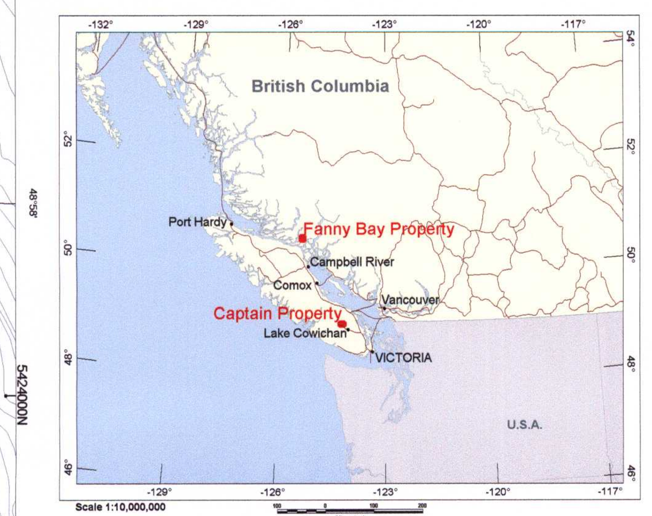

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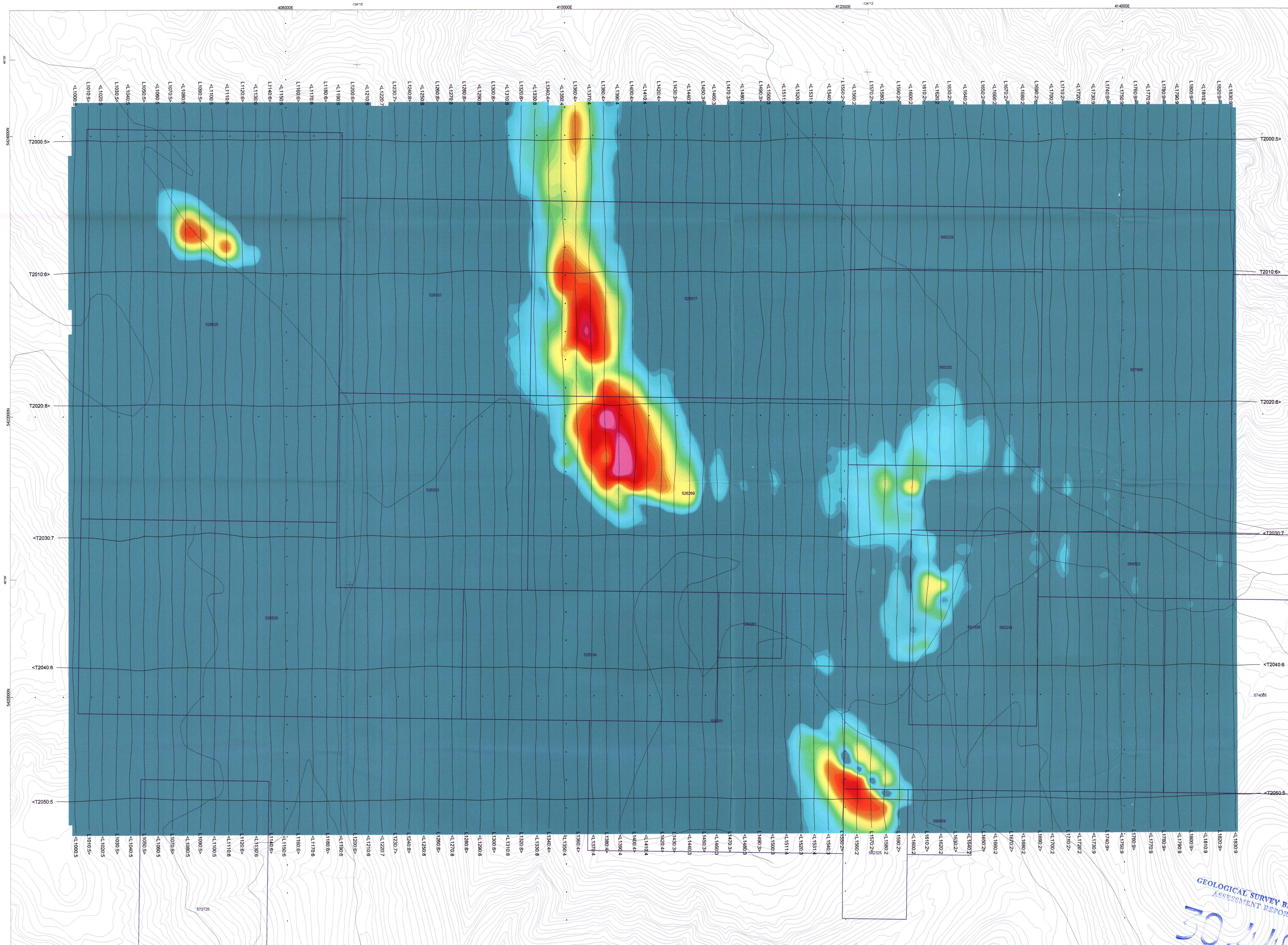

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Mining Claims

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GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT
30,440

G. Santos Geoscience
Captain Property
Lake Cowichan, British Columbia

Geotech VTEM-M System
VTEM dB/dt Time Gate 0.818 ms

Flown and processed by Geotech Ltd.
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Aurora, Ontario, Canada L4G 4C4
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January 2009

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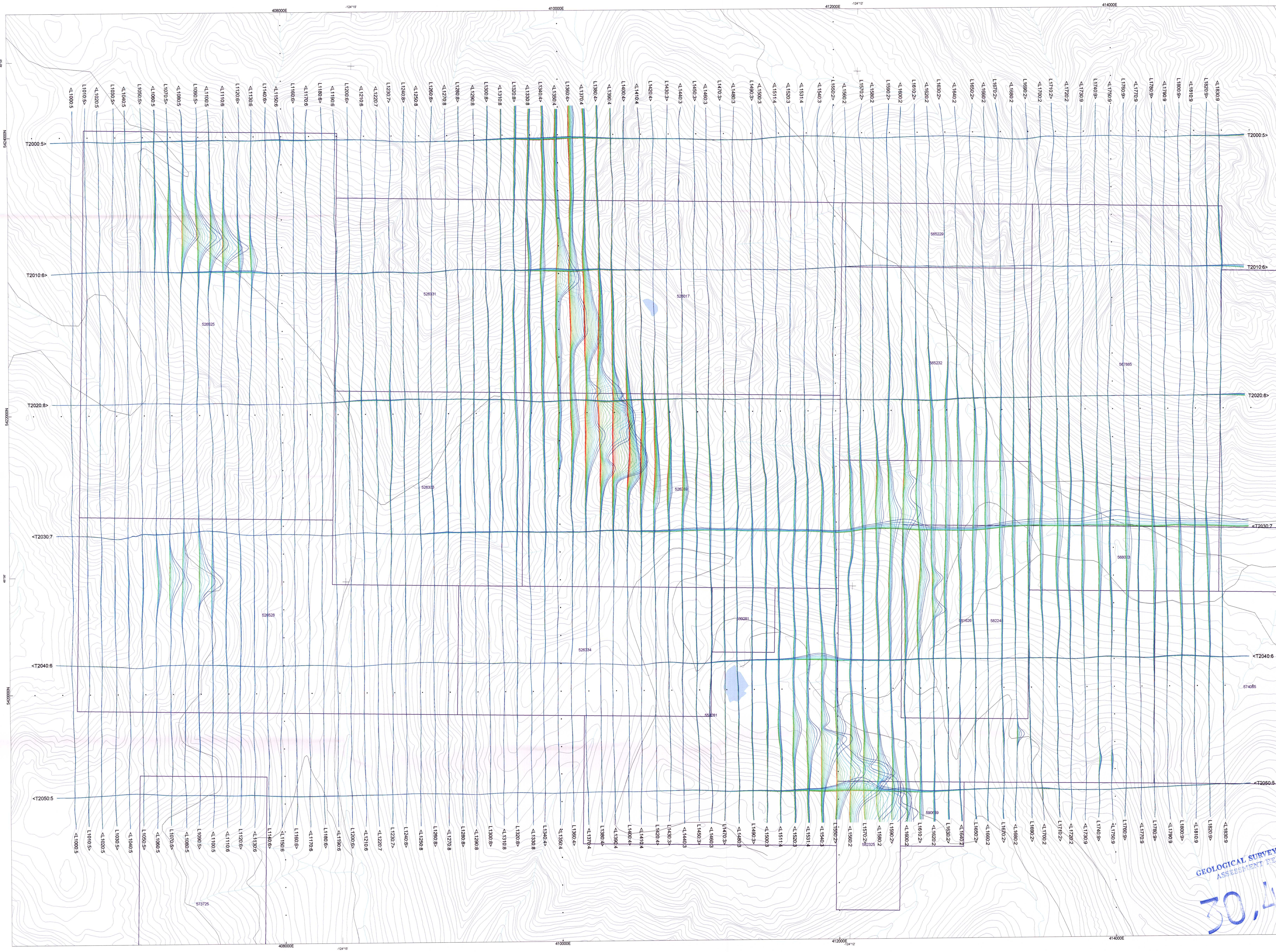

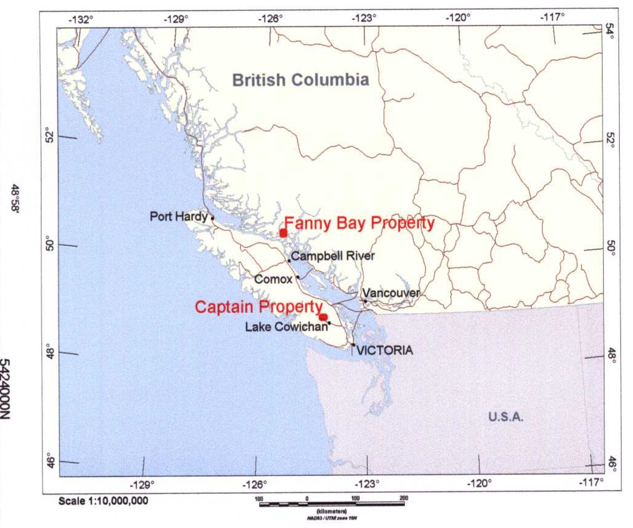

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NAD83 / UTM zone 10N

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