ASSESSMENT REPORT
ON
GEOPHYSICAL WORK
ON THE FOLLOWING CLAIMS

507421-22
508269
508271
508368 [SILVER CROWN 21]
508682 [SILVER CROWN SW]
509362 [SILVER CROWN C1]
509364 [SILVER CROWN C2]

THE

"SILVER CROWN" PROPERTY

STATEMENT OF EXPLORATION EVENT # 4073865

Located
STEWART, BRITISH COLUMBIA
SKEENA MINING DIVISION

56 degrees 07 minutes latitude
129 degrees 56 minutes longitude

N.T.S. 104A011

PROJECT PERIOD January 15, 2006 to March 9, 2006

ON BEHALF OF
TEUTON RESOURCES CORP.
VANCOUVER, B.C.

RECEIVED
JUN 07 2006
Gold Commissioner's Office
VANCOUVER, B.C.

REPORT BY

D. Cremonese, P. Eng.
207-675 W. Hastings St.
Vancouver, B.C.

Date: June 6, 2006

TABLE OF CONTENTS

1. INTRODUCTION

A. Property, Location, Access and Physiography

The property is located about 20 km north of Stewart, British Columbia, between Bear River Ridge and Long Lake. Slopes are moderate on the lower, western slopes of Bear River Ridge, and steep to precipitous in places at higher elevations. Access is by helicopter, although one could drive to within hiking distance of the property using the Big Missouri road network.

Vegetation in the higher portions of the property is generally sparse, with much of the area featuring barren rock, talus slopes or glacial debris. At lower elevations scrub hemlock and balsam occur in patches.

Climate is severe during the winter months with abundant snowfall. Depending upon local weather conditions, ground comes open for work in late June, or early July.

B. Status of Property

Relevant claim information is summarized below:

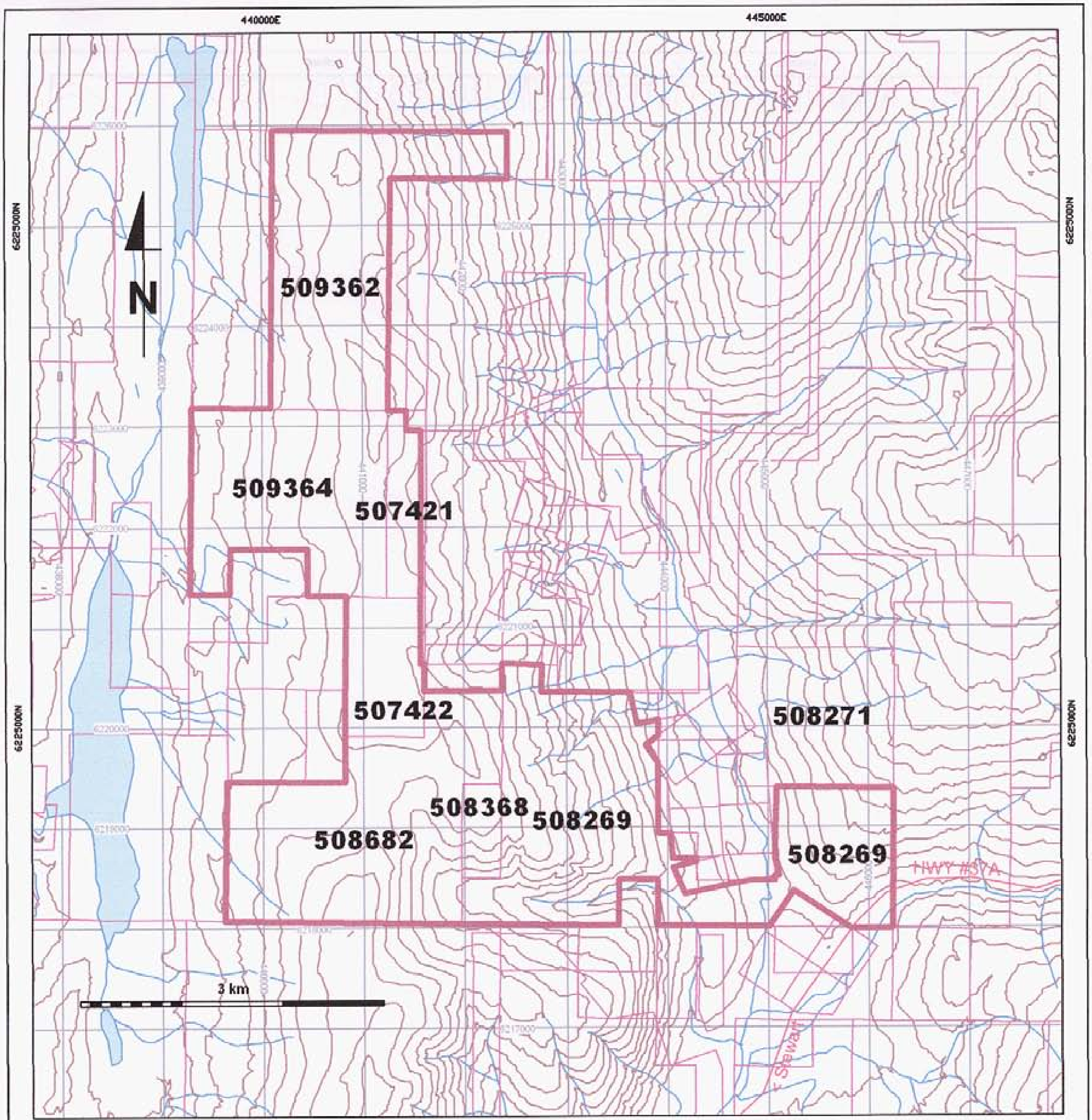
Name	Tenure No.	Area in Hectares
*	507241	72.11
*	507242	108.20
*	508269	613.43
*	508271	216.45
Silver Crown 21	508368	36.08
Silver Crown SW	508682	432.98
Silver Crown C1	509362	378.33
Silver Crown C2	509364	324.48

*These claims do not have a name.

Claim locations are shown on Fig. 2a after government MTRM map 104A011. Fig. 2b shows the location of the 2006 Aeroquest airborne survey grid in relation to claim lines.

The claims are owned 50/50 by Teuton Resources Corp. and Silver Grail Resources Ltd. (formerly Minvita Enterprises Ltd.) of Vancouver, British Columbia.


Yukon
Silver Crown Property
Stewart
Prince Rupert
British
Columbia
Prince George
Vancouver
U. S. A.
0 100 200 300 km
TEUTON RESOURCES CORP. (TUO: TSXV)
SILVER GRAIL RESOURCES LTD. (SVG: TSXV)
SILVER CROWN PROPERTY
2006 Airborne Survey
Location Map
NTS No.: 104A 011
Skeena Mining Division
Date: June 2006
K. Mastalerz
Fig. 1



LEGEND

508234	Silver Crown Property
HWY #37A	Road
	Creek

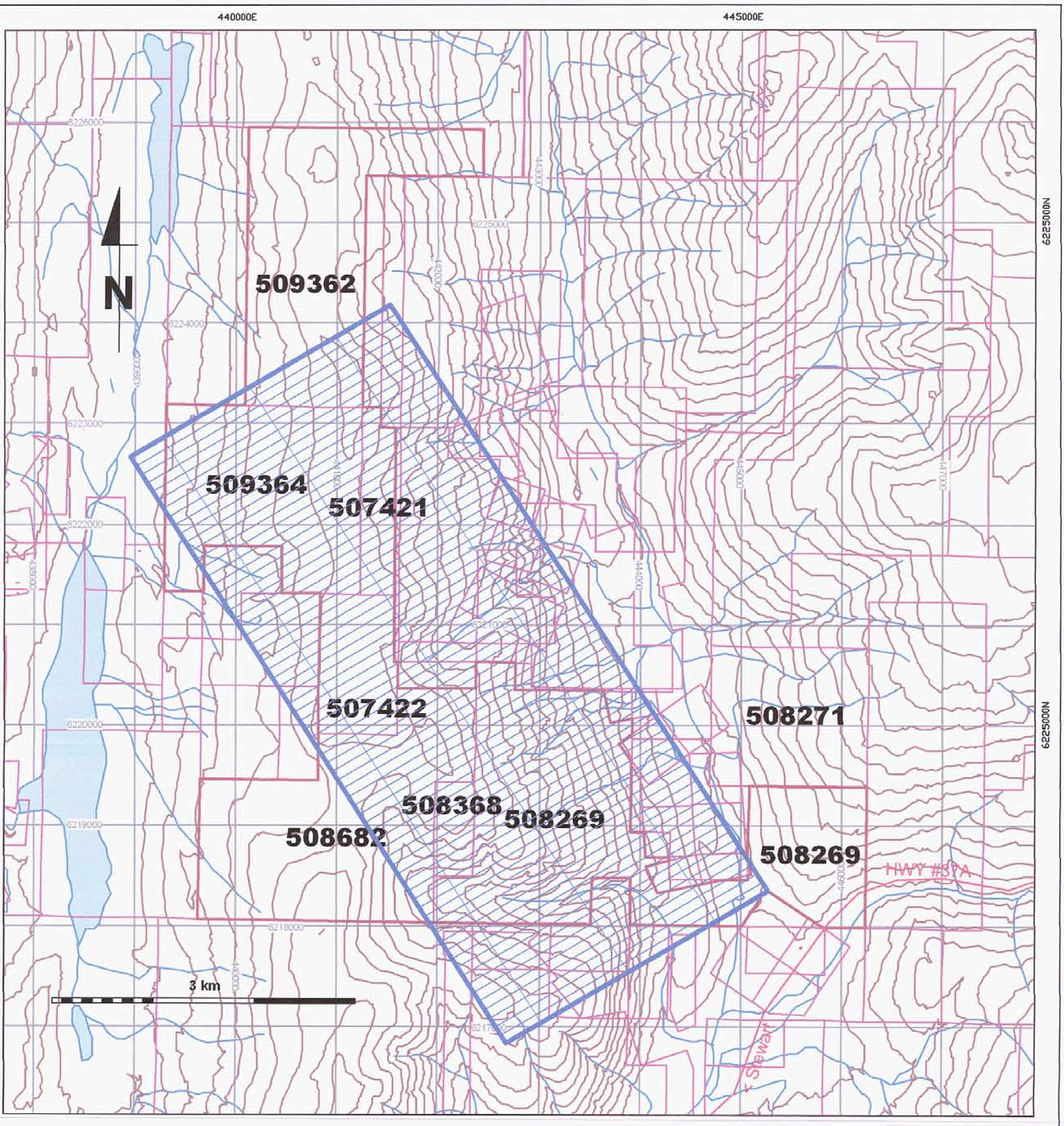
Claim boundaries as of February 2006

TEUTON RESOURCES CORP. (TUO: TSXV)
SILVER GRAIL RESOURCES LTD. (SVG: TSXV)

SILVER CROWN PROPERTY
2006 Airborne Survey

Claim Location Map

NTS No.: 104A 011 Skeena Mining Division	Date: June 2006 *K. Mastalerz*	Fig. 2a



LEGEND

Silver Crown Property

2006 Aeroquest Airborne Survey Grid

Claim boundaries as of February 2006

TEUTON RESOURCES CORP. (TUO: TSXV)
SILVER GRAIL RESOURCES LTD. (SVG: TSXV)

SILVER CROWN PROPERTY

Aeroquest Survey Grid Relative to Claim Boundaries

NTS No.: 104A 011 **Skeena Mining Division**	**Date: June 2006** K. Mastalerz	Fig. 2b

C. History

After the 1919 discovery and subsequent exploitation of the famous Premier mine, located 8km southwest of the Silver Crown property, the surrounding regions were intensively explored. However, the author has not been able to find any early reference to work on the subject property during this period.

In 1956, Henry Hill is reported to have worked on a polymetallic mineral showing on the upper portions of the west slope of Bear River Ridge at an elevation of 1,550 m. In 1965, D. Collison discovered polymetallic vein mineralization in the same area along a strike length of 450m. This showing eventually became known as the Silver Crown, hence the current name of the property.
E.W. Grove describes the Silver Crown showing in detail in Bullet No. 58 (1971). He was of the opinion (private communication wtih D. Cremonese, one of the authors) that the area had some affinities with the Premier mine showings, and as such deserved careful scrutiny. Teuton Resources staked the property and did minor prospecting on it in the early 1980's and carried out an airborne survey over it in 1987.

In 1989, after Teuton allowed the property to lapse, White Channel Resources and thereafter Navarre Resources carried out extensive work on the claims including sampling, geophysical surveying, geological mapping and diamond drilling. Although several narrow high-grade silver-lead-zinc veins were encountered in this work, delineation of larger precious metal bearing structures proved elusive. The claims were eventually dropped and remained open until Teuton Resources picked up the property again in 2003.

D. References

ALLDRICK, D.J.(1984): Geological Setting of the Precious Metals Deposits in the Stewart Area, Paper 84-1, Geological Fieldwork 1983", B.C.M.E.M.P.R.

ALLDRICK, D.J.(1985): "Stratigraphy and Petrology of the Stewart Mining Camp (104B/1E)", p. 316, Paper 85-1, Geological Fieldwork 1984, B.C.M.E.M.P.R.

CREMONESE, D., P.ENG. & MASTALERZ, K.(2006): Assessment Report on Geochemical Work on the following claims, #508267, Silver Crown Property; on file with ARIS, EMPR (BC) #28017

EMPR MAPPLACE;
http://webmap.em.gov.bc.ca/mapplace/minpot/new_xmap.cfm

GROVE, E.W. (1971): Bulletin58, Geology and Mineral Deposits-- Stewart Area. BCMEMPR

GROVE, E.W. (1982): Geological Report and Work Proposal on the Glacier Claims in the Portland Canal Area, Northwestern BC, Private Report for Komody Resources Ltd.

GROVE, E.W. (1982): Unuk River, Salmon River, Anyox Map Areas. Ministry of Energy, Mines and Petroleum Resources, B.C.

GROVE, E.W. (1987): Geology and Mineral Deposits of the Unuk River-Salmon River-Anyox Area, Bulletin 63, BCMEMPR

HERMARY, R.G, WOODS, DENNIS V. (1988); Assessment Report on Geophysical Work on the Silver Crown and Silver Shoes Claims, on file with ARIS, EMPR (BC) #17609

KIKAUKA, A. (2000); Assessment Report on Geological and Geochemical Work on the D 1-6 Claims, Long Lake, Stewart, BC; on file with ARIS, EMPR (BC) #26219

E. Summary of Work Done.

A helicopter borne geophysical survey was carried out over the Silver Crown property by Aeroquest Limited on behalf of Teuton Resources Corp. from March 4-5, 2006.

A total of 258.0 line-kms was flown over a survey grid as delineated in Fig. 2b, with 100m line spacings.

The geophysical crew was stationed out of Stewart, BC and used a contract helicopter supplied by Hi-Wood Helicopters from Oakachoke, Alberta. This particular survey was part of a multi-property survey carried out by Aeroquest on behalf of Teuton from early January to early March, 2006.

Full particulars of the survey are attached to this report as Appendix III, entitled "Report on a Helicopter-Borne AerotTEM II Electromagnetic and Magnetic Survey; Aeroquest Job #05070, Silver Crown Property, Stewart, BC", by Aeroquest Limited of Milton, Ontario.

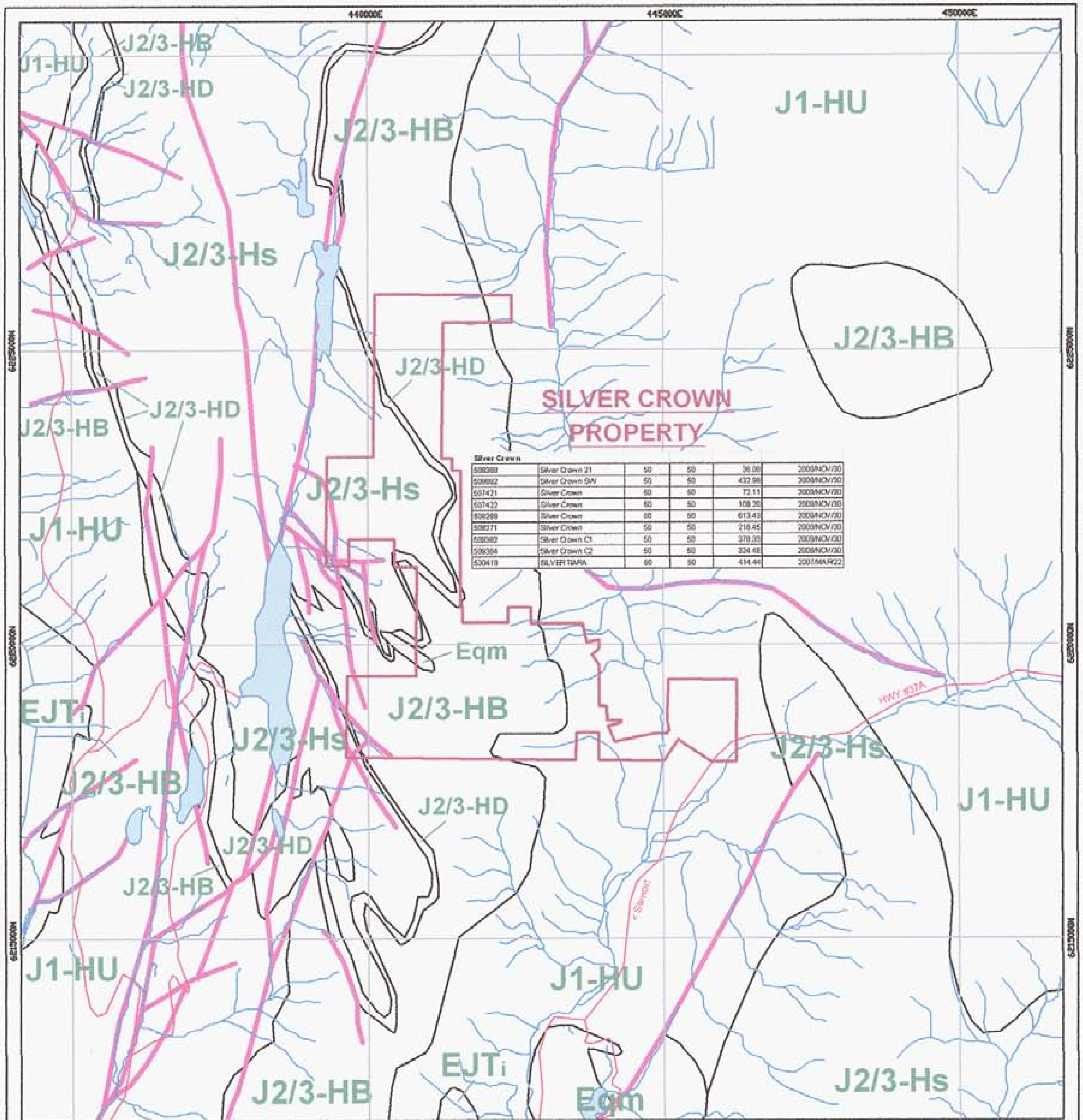
2. TECHNICAL DATA AND INTERPRETATION

A. Geology

The Silver Crown property lies in the central part of a NNW-SSE trending belt of Triassic to Jurassic volcanogenic and sedimentary rocks termed by Grove (1971) as the "Stewart Complex". This large-scale structural-stratigraphic unit is bounded to the west by the Coast Crystalline Belt (predominantly Tertiary plutonic rocks) and to the east by the western edge of the Bowser Basin filled in by a thick sedimentary succession of Middle to Upper Jurassic age.

Most of the Silver Crown Property lies along the western limb of the complex, N-S trending American Creek anticline and at the eastern termination of a complex synclinorium trending NNW-SSE and cored by the rocks of the Salmon River Formation (Fig. 3). The area of the property is underlain by a strongly diversified succession of Lower to Middle Jurassic Hazelton Group rocks, including all of its stratigraphic members. Rocks of the Lower Jurassic Unuk River Formation outcrop in the southeastern part of the property and are represented by andesitic tuffs, agglomerates, minor flows and sedimentary rocks (dominantly argillites and siltstones). Red to green volcaniclastics, comprised of volcanic sandstone, siltstone and argillite of the Betty Creek Formation form a broad N-S striking belt running through the middle and southeastern parts of the property. Felsic and dacitic volcanics, dikes and volcaniclastics of the Mt. Dilworth Formation form a narrow belt in the middle-to-western part of the property. The westernmost portion of the property is underlain by fine-grained, argillitic to silty sediments, minor greywackes and debris flows of the Salmon River Formation. This generally concordant sedimentary-volcanogenic succession has been intruded by small-scale stock of Eocene quartz monzonite (?) in the western part of the property and is cut by numerous NW-SE trending dikes that belong to the Portland Canal dike swarm.

Dips vary considerably over the area of the property. Strata dip generally to the east to south-east at moderate to steep angles in the eastern part of the property, however, local western dips e.g. at Montrose showing) have been recorded as well. Western and north-western dips are predominant, in turn, along the western limb of the American Creek anticline. Intense, tight folding and strong fracturing are common throughout the property. In its western portion the property overlies a complex core zone of a synclinorial unit that adjoins the American Creek anticline from the west. Here dips vary considerably while individual secondary synclines and anticlines plunge towards north and north-west. Numerous, steep faults, predominantly striking NW and N, as well as zones of intense fracturing, cleavage development, brecciation and shearing are common in the property.



Silver Crown

508360	Silver Crown 21	50	50	36.08	2009/NOV/30
508892	Silver Crown SW	50	50	432.98	2009/NOV/30
507421	Silver Crown	60	50	72.11	2009/NOV/30
507422	Silver Crown	60	50	108.36	2009/NOV/30
508369	Silver Crown	60	50	613.43	2009/NOV/30
508371	Silver Crown	50	50	218.45	2009/NOV/30
508382	Silver Crown C1	50	50	378.33	2009/NOV/30
509384	Silver Crown C2	50	50	324.48	2009/NOV/30
530419	SILVER TIARA	60	50	414.44	2007/MAR/22

Legend:

- geological contacts
- faults

Intrusive Rocks:

- Eqm — Quartz Monzonite (Eocene)
- EJTi — Other intrusives; undivided (age unknown)
- road

Layered Rocks:

- J2/3-Hs — Hazelton Group; sediments (undivided)
- J2/3-HD — Hazelton Group; Mt. Dilworth Fm
- J2/3-HB — Hazelton Group; Betty Creek Fm
- J2/3-Hca — Hazelton Group; calc-alkaline volcanics
- J1-HU — Hazelton Group; Unuk River Fm
- lake, creek

TEUTON RESOURCES CORP. (TUO: TSXV)
SILVER GRAIL RESOURCES LTD. (SVG: TSXV)

SILVER CROWN PROPERTY

NTS Nos.: 104A 011 — Skeena Mining Division

REGIONAL GEOLOGY MAP

K. Mactalen	Claims:	Date: June 2006	Fig. 3

Source: BCGS Geology Map (http://webmap.em.gov.bc.ca/mapplace); modified

Local examples of mineralization include quartz-sulfide and quartz carbonate veins, disseminated to semi-massive sulfide predominantly pyritic) zones, silicified replacement zones, stringers to semi-massive sulfides associated with shear zones and felsic dikes, and impregnations. The most common ore minerals encountered on the property are pyrite, sphalerite, galena, chalcopyrite and malachite, with less common bornite and tetrahedrite. Barite is found locally in the western part of the property.

Regional geology is presented in Fig. 3.

B. Geophysics

Geophysical data related to the 2006 helicopter-borne EM and Mag survey over the Silver Crown property is presented herein in Appendix III: "Report on a Helicopter-Borne AerotTEM II Electromagentic and Magnetic Survey", by Aeroquest Limited of Milton, Ontario.

Prior to the completion of the Aeroquest report, Aeroquest chief geophysicist Jonathan Rudd met with the author and Teuton geologist K. Mastalerz, Ph.D., in Teuton's Vancouver office to review data from previous work on the property so as to provide the proper context for interpretation of survey data.

During this visit, the cluster of anomalous EM responses in the northwestern corner of the survey grid was discussed in some detail. Dr. Rudd was of the opinion that the character of the anomalies suggested they could be due to surficial effects possibly associated with valley moraine. However, he emphasized, the only way to ascertain the true source of the anomalies was by ground-truthing.

C. Discussion

The author concurs with the presentation of results by Aeroquest geophysicist Gord Smith as detailed in the Aeroquest report in Appendix III.

D. Conclusions

Only one area of the survey grid, the northwestern corner, showed any significant EM responses and these have been tentatively interpreted as likely due to surficial effects.

The magnetic data clearly defines the northwesterly-trending fabric of the regional geologic units and may be useful in defining contacts and shear zones.

In order to determine the source of the anomalous responses, the author recommends a follow-up program of ground-truthing the various conductors as delineated in the Aeroquest report. Favourable targets identified by such work should be mapped, trenched (if possible) and comprehensively sampled.

Respectfully submitted,

D. Cremonese, P.Eng.
June 6, 2006

APPENDIX I - WORK COST STATEMENT

Aeroquest Limited Geophysical Survey: March 3, 2006 258 line-km & $117.70/line-km	$	30,367
Report and map preparation, compilation and research D. Cremonese, P.Eng., 1.0 days @ $400/day	$	400
Draughting–	$	240
TOTAL	**$**	**31,007**

Allocation:

Amount filed per Event# 4073865 on March 9, 2006 $ 27,140

Please adjust PAC withdrawals accordingly, applying any balance remaining to the PAC Account of Teuton Resources Corp.

*Additional items such as food/accommodation/fuel charges have not been billed by Aeroquest as of the date of this report. Because precise figures are not known, these items have not been included in the work cost statement.

APPENDIX II -CERTIFICATE OF AUTHOR

I, Dino M. Cremonese, do hereby certify that:

1. I am a mineral property consultant with an office at Suite 207-675 W. Hastings, Vancouver, B.C.

2. I am a graduate of the University of British Columbia (B.A.Sc. in metallurgical engineering, 1972, and L.L.B., 1979).

3. I am a Professional Engineer registered with the Association of Professional Engineers of the Province of British Columbia as a resident member, #13876.

4. I have practiced my profession since 1979.

5. This report is based upon the 2006 Aeroquest airborne survey over the Silver Crown property.

6. I am a principal of Teuton Resources Corp. and Silver Grail Resources Ltd., owner of the Silver Crown property. This report is for assessment report only and does not purport to be an independent assessment of the merits of the property.

Dated at Vancouver, B.C. this 6th day of June, 2006.

D. Cremonese, P.Eng.

APPENDIX III

REPORT ON A HELICOPTER-BORNE AEROTEM II ELECTROMAGENETIC AND MAGNETIC SURVEY

Aeroquest Job #05070
Silver Crown Property
Stewart, BC

Aeroquest Limited of Milton, Ontario.

March, 2006

Report on a Helicopter-Borne AeroTEM© II Electromagnetic and Magnetic Survey

Aeroquest Job # 05070

Silver Crown property

Stewart, British Columbia

NTS 104A04

for

Teuton Resources Corporation

207-675 West Hastings Street.

VANCOUVER

British Columbia

CANADA, V6B 1N2

by

AEROQUEST LIMITED

4-845 Main Street East

Milton, Ontario, L9T 3Z3

Tel: (905) 693-9129 Fax: (905) 693-9128

www.aeroquestsurveys.com

March, 2006

1. TABLE OF CONTENTS

1.1. List of Figures

1.2. Appendices

1.3. Maps (1:10,000)

The report includes a set of three (3) geophysical maps plotted at a scale of 1:10,000. The survey area is covered by one (1) map plate. Three (3) geophysical data products are presented for each Plate (listed below).

- Map 1: Coloured Total Magnetic Intensity (TMI) with line contours and EM anomalies
- Map 2: Coloured Tilt Derivative of the TMI with line contours and EM anomalies
- Map 3: AeroTEM Off-Time Profiles (Z5-Z15) and EM anomalies

2. INTRODUCTION

This report describes a helicopter-borne geophysical survey carried out on behalf of Teuton Resources Corp. on the Silver Crown property, British Columbia. The principal geophysical sensor is Aeroquest's exclusive AeroTEM II time domain helicopter electromagnetic system which is employed in conjunction with a high-sensitivity cesium vapour magnetometer. Ancillary equipment includes a real-time differential GPS navigation system, radar altimeter, digital video acquisition system, and a base station magnetometer. Full-waveform streaming EM data is recorded at 38,400 samples per second. The streaming data comprise the transmitted waveform, and the X component and Z component of the resultant field at the receivers. A secondary acquisition system (RMS) records the ancillary data.

The total line kilometre flown is totaled at 258 km. The survey flying described in this report took place on March 4th and 5th, 2006.

Bedrock EM anomalies were auto-picked from the Z-component on-time data and graded according to the 'off-time' conductance. These anomalies were then review by hand and classified for presentation on the maps. This report describes the survey logistics, the data processing, presentation, and provides a brief interpretation of the results.

3. SURVEY AREA

The Silver Crown property of Teuton Resources Corp. is located approx. 20Km north of Stewart, BC. Figure 2. Access to the property is available exclusively by helicopter. The helicopter was provided by Hi-Wood helicopters, Oakachoke, Alberta. The field crew were based in Stewart at the King Edward Hotel. The helicopter and geophysical equipment were staged out of Stewart Airport, Stewart, B.C.

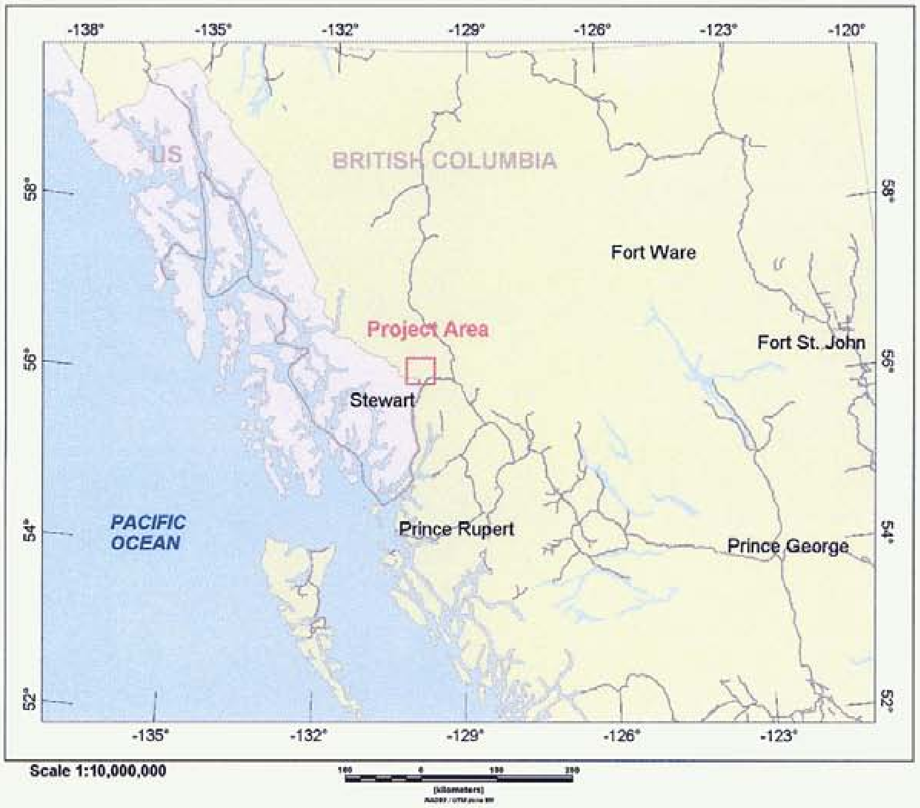


Figure 1. Regional location map of the Property area

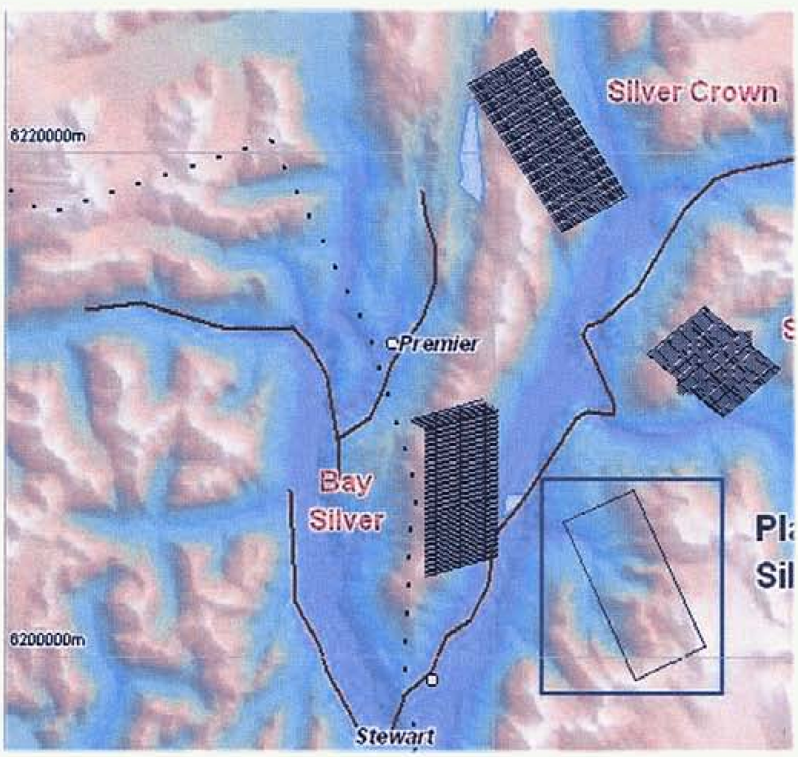


Figure 2. Location of the Silver Crown property.

4. REGIONAL GEOLOGY and EXPLORATION (from Teuton Resources web site)

(no information available)

5. SURVEY SPECIFICATIONS AND PROCEDURES

5.1. Flight Specifications

The survey specifications are summarised in the following table:

Block Name	Line Spacing (m)	Line direction	Survey Coverage (line-km)	Dates Flown
Silver Crown	100	NE-SW (060)	258	March 4th and 5th, 2006

The survey coverage was calculated by adding up the along-line distance of the survey lines and control (tie) lines as presented in the final Geosoft database. The survey was flown with a line spacing of 100 m. The control (tie) lines were flown perpendicular to the survey lines with a spacing of 1 km.

The nominal EM bird terrain clearance is 30m (98 ft), but can be higher in more rugged terrain. The magnetometer sensor is mounted in a smaller bird connected to the tow rope 15 metres above the EM bird and 18.5 metres below the helicopter (Figure 4). Nominal survey speed over relatively flat terrain is 75 km/hr and is generally lower in rougher terrain. Scan rates for ancillary data acquisition is 0.1 second for the magnetometer and altimeter, and 0.2 second for the GPS determined position. The EM data is acquired as a data stream at a sampling rate of 38,400 samples per second and is processed to generate final data at 10 samples per second. The 10 samples per second translates to a geophysical reading about every 1.5 to 2.5 metres along the flight path.

5.2. Navigation

Navigation is carried out using a GPS receiver, an AGNAV2 system for navigation control, and an RMS DGR-33 data acquisition system which records the GPS coordinates. The x-y-z position of the aircraft, as reported by the GPS, is recorded at 0.2 second intervals. The system has a published accuracy of under 3 metres. A recent static ground test of the Mid-Tech WAAS GPS yielded a standard deviation in x and y of under 0.6 metres and for z under 1.5 metres over a two-hour period.

5.3. System Drift

Unlike frequency domain electromagnetic systems, the AeroTEM© II system has negligible drift due to thermal expansion. The operator is responsible for ensuring the instrument is properly warmed up prior to departure and that the instruments are operated properly throughout the flight. The operator maintains a detailed flight log during the survey noting the times of the flight and any unusual geophysical or topographic features. Each flight included at least two high elevation 'background' checks. During the high elevation checks, an internal 5 second wide calibration pulse in all EM channels was generated in order to ensure that the gain of the system remained constant and within specifications.

5.4. Field QA/QC Procedures

On return of the pilot and operator to the base, usually after each flight, the ProtoDAS streaming EM data and the RMS data are carried on removable hard drives and FlashCards, respectively and transferred to the data processing work station. At the end of each day, the base station magnetometer data on FlashCard is retrieved from the base station unit.

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

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

6. AIRCRAFT AND EQUIPMENT

6.1. Aircraft

A Eurocopter (Aerospatiale) AS350B2 "A-Star" helicopter - registration C-GPTY used as survey platform. The helicopter was owned and operated by Hi-Wood Helicopters, Oakachoke, Alberta.. Installation of the geophysical and ancillary equipment was carried out by Aeroquest Limited in Stewart and ferried to the survey area. The survey aircraft was flown at a nominal terrain clearance of 180 feet (55 m).

Figure 3. Survey Helicopter C-GPTY

Figure 4. The magnetometer bird (A) and AeroTEM II EM bird (B)

6.2. Magnetometer

The Aeroquest airborne survey system employs the Geometrics G-828 cesium vapour magnetometer sensor installed in a two metre towed bird airfoil attached to the main tow line, 15 metres below the helicopter. The sensitivity of the magnetometer is 0.001 nanoTesla at a 0.1 second sampling rate. The nominal ground clearance of the magnetometer bird is 48.5 metres (170 ft.). The magnetic data is recorded at 10Hz by the RMS DGR-33.

6.3. Electromagnetic System

The electromagnetic system is an Aeroquest AeroTEM II time domain towed-bird system. The current AeroTEM© transmitter dipole moment is 38.8 kNIA. The AeroTEM© bird is towed 33.5 m (110 ft) below the helicopter. More technical details of the system may be found in Appendix 4.

The wave-form is triangular with a symmetric transmitter on-time pulse of approximately1.1 ms and a base frequency of 150 Hz. The current alternates polarity every on-time pulse. During every Tx on-off cycle (300 per second), 128 contiguous channels of raw x and z component (and a transmitter current monitor) of the received waveform are measured. Each channel width is 26.06 microseconds starting at the beginning of the transmitter pulse. This 128 channel data is referred to as the raw streaming data.

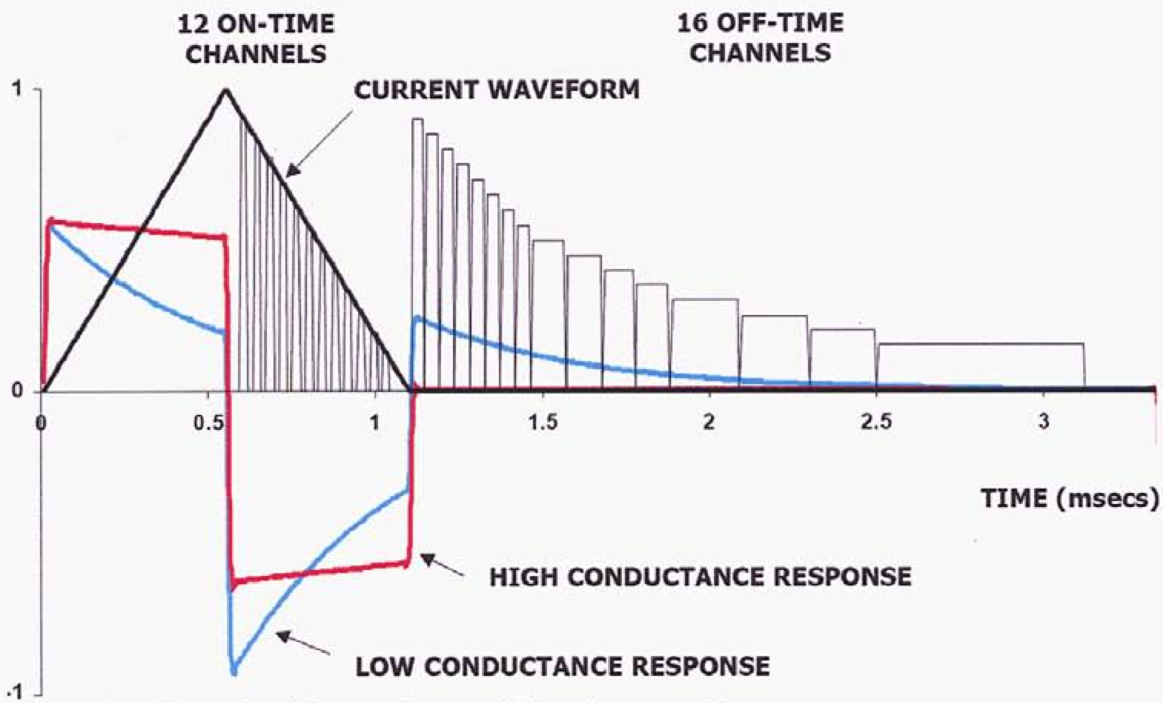


Figure 5. Schematic of Transmitter and Receiver waveforms

6.4. PROTODAS Acquisition System

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

Channel	Width	Gate	Start(μs)	Stop(μs)	Mid(μs)	Width(μs)
1 ON	1	25	651.0	677.1	664.1	26.04
2 ON	1	26	677.1	703.1	690.1	26.04
3 ON	1	27	703.1	729.2	716.1	26.04
4 ON	1	28	729.2	755.2	742.2	26.04
5 ON	1	29	755.2	781.3	768.2	26.04
6 ON	1	30	781.3	807.3	794.3	26.04
7 ON	1	31	807.3	833.3	820.3	26.04

8 ON	1	32	833.3	859.4	846.4	26.04
9 ON	1	33	859.4	885.4	872.4	26.04
10 ON	1	34	885.4	911.5	898.4	26.04
11 ON	1	35	911.5	937.5	924.5	26.04
12 ON	1	36	937.5	963.5	950.5	26.04
13 ON	1	37	963.5	989.6	976.6	26.04
14 ON	1	38	989.6	1015.6	1002.6	26.04
15 ON	1	39	1015.6	1041.7	1028.6	26.04
16 ON	1	40	1041.7	1067.7	1054.7	26.04
0 OFF	1	44	1145.8	1171.9	1158.9	26.04
1 OFF	1	45	1171.9	1197.9	1184.9	26.04
2 OFF	1	46	1197.9	1224.0	1210.9	26.04
3 OFF	1	47	1224.0	1250.0	1237.0	26.04
4 OFF	1	48	1250.0	1276.0	1263.0	26.04
5 OFF	1	49	1276.0	1302.1	1289.1	26.04
6 OFF	1	50	1302.1	1328.1	1315.1	26.04
7 OFF	1	51	1328.1	1354.2	1341.1	26.04
8 OFF	1	52	1354.2	1380.2	1367.2	26.04
9 OFF	1	53	1380.2	1406.3	1393.2	26.04
10 OFF	1	54	1406.3	1432.3	1419.3	26.04
11 OFF	1	55	1432.3	1458.3	1445.3	26.04
12 OFF	1	56	1458.3	1484.4	1471.4	26.04
13 OFF	4	57	1484.4	1588.5	1536.5	104.17
14 OFF	8	61	1588.5	1796.9	1692.7	208.33
15 OFF	16	69	1796.9	2213.5	2005.2	416.67
16 OFF	32	85	2213.5	3046.9	2630.2	833.33

6.5. RMS DGR-33 Acquisition System

In addition to the magnetics, altimeter and position data, six channels of real time processed off-time EM data in the Z direction and one in the X direction are recorded by the RMS DGR-33 acquisition system at 10 samples per second and plotted real-time on the analogue chart recorder. These channels are derived by a binning, stacking and filtering procedure on the raw streaming data. The primary use of the RMS EM data (Z1 to Z6, X1) is to provide for real-time QA/QC on board the aircraft.

The channel window timing of the RMS DGR-33 6 channel system is described in the table below.

RMS Channel	Start time (microsec)	End time (microsec)	Width (microsec)	Streaming Channels	Noise tolerance
Z1, X1	1269.8	1322.8	52.9	48-50	20 ppb
Z2	1322.8	1455.0	132.2	50-54	20 ppb
Z3	1428.6	1587.3	158.7	54-59	15 ppb
Z4	1587.3	1746.0	158.7	60-65	15 ppb
Z5	1746.0	2063.5	317.5	66-77	10 ppb
Z6	2063.5	2698.4	634.9	78-101	10 ppb

6.6. Magnetometer Base Station

The base magnetometer was a Geometrics G858 magnetometer with a built in GPS receiver and external GPS antenna. Data logging and UTC time syncronistation was carried out within the magnetometer, with the GPS providing the timing signal. The data logging was configured to measure at 1.0 second intervals. Digital recording resolution was 0.001 nT. The sensor was placed on a tripod in an area of low magnetic gradient and free of cultural noise sources. A continuously updated display of the base station values was available for viewing and regularly monitored to ensure acceptable data quality and diurnal variation.

6.7. Radar Altimeter

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

6.8. Video Tracking and Recording System

A high resolution digital colour 8mm video camera is used to record the helicopter ground flight path along the survey lines. The video is digitally annotated with GPS position and time and can be used to verify ground positioning information and cultural causes of anomalous geophysical responses.

6.9. GPS Navigation System

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

Survey co-ordinates are set up prior to the survey and the information is fed into the airborne navigation system. The co-ordinate system employed in the survey design was WGS84 [World] using the UTM zone 10N projection. The real-time differentially corrected GPS positional data was recorded by the RMS DGR-33 in geodetic coordinates (latitude and longitude using WGS84) at 0.2 s intervals.

6.10. Digital Acquisition System

The AeroTEM© received waveform (Figure 5) sampled during on and off-time at 128 channels per decay, 300 times per second, was logged by the proprietary AERODAS data acquisition system. The channel sampling commences at the start of the Tx cycle and the width of each channel is 26.04 microseconds. The streaming data was recorded on a removable hard-drive and was later backed-up onto DVD-ROM from the field processing computer.

The RMS Instruments DGR-33A data acquisition system (was used to collect and record the analogue data stream, i.e. the positional and secondary geophysical data, including processed 6 channel EM, magnetics, radar altimeter, GPS position, and time. The data was recorded on 128Mb capacity FlashCard. The RMS output was also directed to a thermal chart recorder for on-board real-time QA/QC.

Figure 6. The AeroTEM II Instrument Rack

7. PERSONNEL

The following Aeroquest personnel were involved in the project:

- Manager of Operations: Bert Simon
- Manager of Processing and Interpretation: Jonathan Rudd
- Field Data Processors: Chris Kahue
- Field Operators: Victor Shevchenko
- Data Interpretation and Reporting: Jonathan Rudd, Gord Smith

The survey pilot, Paul Kendal was employed directly by the helicopter operator – Hi-Wood Helicopters Ltd.

8. DELIVERABLES

The report includes a set of three (3) geophysical maps plotted at a scale of 1:10,000. The survey area is covered by one (1) map plate. Three (3) geophysical data products are presented for each Plate (listed below).

- Map 1: Coloured Total Magnetic Intensity (TMI) with line contours and EM anomalies
- Map 2: Coloured Tilt Derivative of the TMI with line contours and EM anomalies
- Map 3: AeroTEM Off-Time Profiles (Z5-Z15) and EM anomalies

All the maps show flight path trace, skeletal topography, and conductor picks represented by an anomaly symbol classified according to calculated off-time conductance. The anomaly symbol is accompanied by postings denoting the calculated off-time conductance, a thick or thin classification and an anomaly identifier label. The anomaly symbol legend is given in the margin of the maps. The magnetic field data is presented as superimposed line contours with a minimum contour interval of 5nT. Bold contour lines are separated by 250nT.

The geophysical profile data is archived digitally in a Geosoft GDB binary format database. A description of the contents of the individual channels in the database can be found in Appendix 3. A copy of this digital data is archived at the Aeroquest head office in Milton.

9. DATA PROCESSING AND PRESENTATION

All in-field and post-field data processing was carried out using Aeroquest proprietary data processing software, and Geosoft Oasis montaj software. Maps were generated using a 42-inch wide Hewlett Packard ink-jet plotter.

9.1. Base Map

The geophysical maps accompanying this report are based on positioning in the NAD83 datum. The survey geodetic GPS positions have been projected using the Universal Transverse Mercator projection in Zone 9 north. A summary of the map datum and projection specifications is given following:

- Ellipse: GRS 1980
- Ellipse major axis: 6378137m eccentricity: 0.081819191
- Datum: North American 1983 - Canada Mean
- Datum Shifts (x,y,z) : 0, 0, 0 metres
- Map Projection: Universal Transverse Mercator Zone 9
- Central Scale Factor: 0.9996
- False Easting, Northing: 500,000m, 0m

For reference, the latitude and longitude in NAD83 are also noted on the maps. The skeletal topography was derived from the Federal Government's 1: 50,000 NTS map series.

9.2. Flight Path & Terrain Clearance

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

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

9.3. Electromagnetic Data

The raw streaming data, sampled at a rate of 46,080 Hz (256 channels, 180 times per second) was reprocessed using a proprietary software algorithm developed and owned by Aeroquest Limited. Processing involves the compensation of the X and Z component data for the primary field waveform. Coefficients for this compensation for the system transient are determined and applied to the stream data. The stream data are then pre-filtered, stacked, binned to the 33 on and off-time channels and checked for the effectiveness of the compensation and stacking processes. The stacked data is then filtered, leveled and split up into the individual line segments. The filtering of the stacked data is designed to remove or minimize high frequency noise that can not be sourced from the geology. Further base level adjustments may be carried out at this stage.

The final field processing step was to merge the processed EM data with the other data sets into a Geosoft GDB file. The EM fiducial is used to synchronize the two datasets. The processed channels are presented in a Geosoft "array" channel format in the final GDB (Appendix 2) and are labeled in the database as Zon, Zoff, Xon, and Xoff.

Apparent bedrock EM anomalies were interpreted with the aid of an auto-pick from positive peaks and troughs in the on-time Z channel responses correlated with X channel responses. The auto-picked anomalies were reviewed and edited by a geophysicist on a line by line basis to discriminate between bedrock and conductive overburden sources as well as to determine the source type response (thin vs. thick – discussed later). Anomaly picks locations were migrated and removed as required. This process ensures the optimal representation of the conductor centres on the maps.

At each conductor pick, estimates of the on-time and off-time conductance have been generated based on calculation of the decay constant (tau) of the EM decay curves for those data points along the line where the response amplitude is sufficient to yield an acceptable estimate. Only channels that had a minimum response of 15 nT/s were included in the tau calculation. A minimum of three channels responding above the 15 nT/s threshold were required to produce an acceptable tau estimate. The tau values were then windowed to exclude any values that had a correlation-coefficient less than 97%.

Conductance values (in Siemens) were then directly calculated from tau values at each conductor pick. Each conductor pick was then classified according to a set of seven ranges of calculated off-time conductance values as indicated on the map legends (Figure 7). Each symbol is also given an identification letter label, unique to each flight line. Conductor picks that did not yield an acceptable estimate of off-time conductance were assigned a 'null' conductance value of "0.01", thus plotting as a low conductance source on the maps.

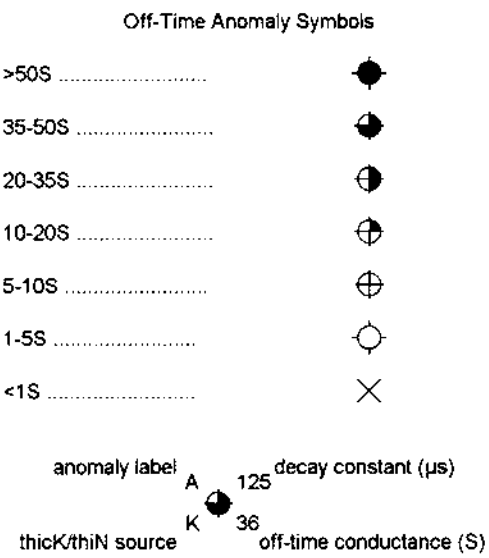


Figure 7. AcroTEM classified anomaly symbols.

9.4. Magnetic Data

Prior to any leveling the magnetic data was subjected to a lag correction of -0.1 seconds and a spike removal filter. The filtered aeromagnetic data were then corrected for diurnal variations using the magnetic base station and the intersections of the tie lines. No corrections for the regional reference field (IGRF) were applied. The corrected profile data were interpolated on to a grid using a random grid technique with a grid cell size of 20 metres. The final leveled TMI grid provided the basis for threading the presented contours which have a minimum contour interval of 5 nT.

In order to map shallow basement response a 'tilt' derivative product was calculated from the TMI grid. The Tilt Derivative (TDR) of the TMI enhances smaller wavelength magnetic features which define shallow basement structures as well as potential mineral exploration targets.

The TDR is defined as:

$$TDR = \arctan(VDR/THDR)$$

where VDR and THDR are first vertical and total horizontal derivatives, respectively, of the total magnetic intensity T.

$VDR = dT/dz$
$THDR = sqrt((dT/dx)^2 + (dT/dy)^2)$

Due to the nature of the arctan trigonometric function in the filter, all amplitudes are restricted to $+\pi/2$ and $-\pi/2$ radians. This gives the Tilt derivative the added advantage of acting like an automatic gain control (AGC) filter. The calculated TDR grid is presented a colour sun-shaded image (illumination from the north-northeast). Line contours are also overlain which have a minimum contour interval of 0.5 radians.

10. Results and Interpretation

The survey was successful in mapping the magnetic and conductive properties of the geology throughout the survey area. The following is a brief summary of the results. For a detailed interpretation of the survey data please contact Aeroquest Limited.

10.1. Magnetic Response

The magnetic data provide a high resolution map of the distribution of the magnetic mineral content of the survey area.

The magnetic data ranges from lows of 56358 nT to highs of up to 56928 nT with an average background of 56735 nT. Total Magnetic Field and Tilt Derivative features are illustrated in Figures 8 (a) and (b).

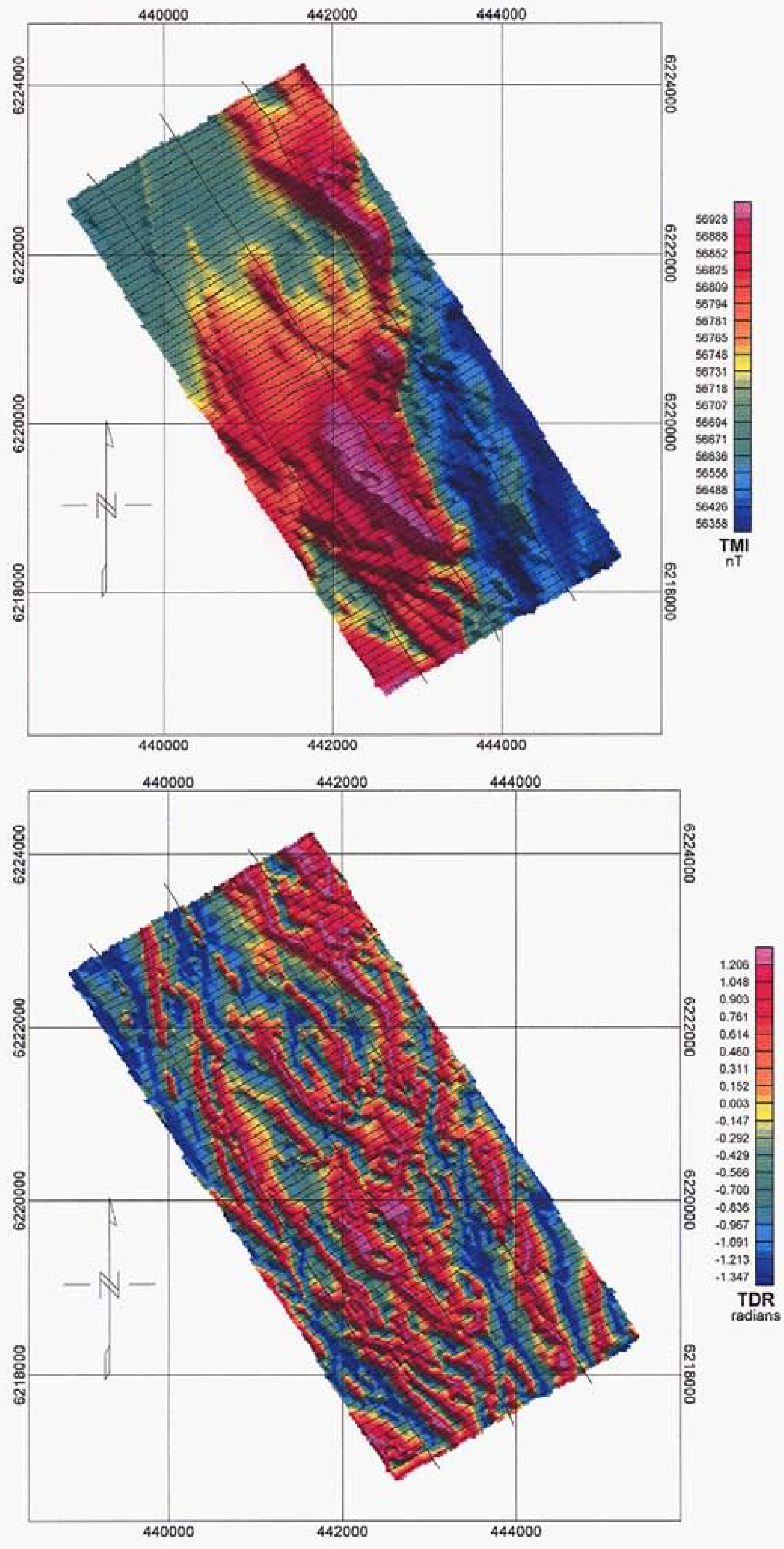


Figure 8. A. Shaded TMI colour map. B. Shaded TILT derivative magnetics.

10.2. EM Anomalies – General Comments

The EM anomalies on the maps are classified by conductance (as described earlier in the report) and also by the thickness of the source. A thin, vertically orientated source produces a double peak anomaly in the z-component response and a positive to negative crossover in the x-component response (Figure 9). For a vertically orientated thick source (say, greater than 10m), the response is a single peak in the z-component response and a negative to positive crossover in the x-component response (Figure 10). Because of these differing responses, the AeroTEM system provides discrimination of thin and thick sources and this distinction is indicated on the EM anomaly symbols (N = thin and K = thick). Where multiple, closely spaced conductive sources occur, or where the source has a shallow dip, it can be difficult to uniquely determine the type (thick vs. thin) of the source

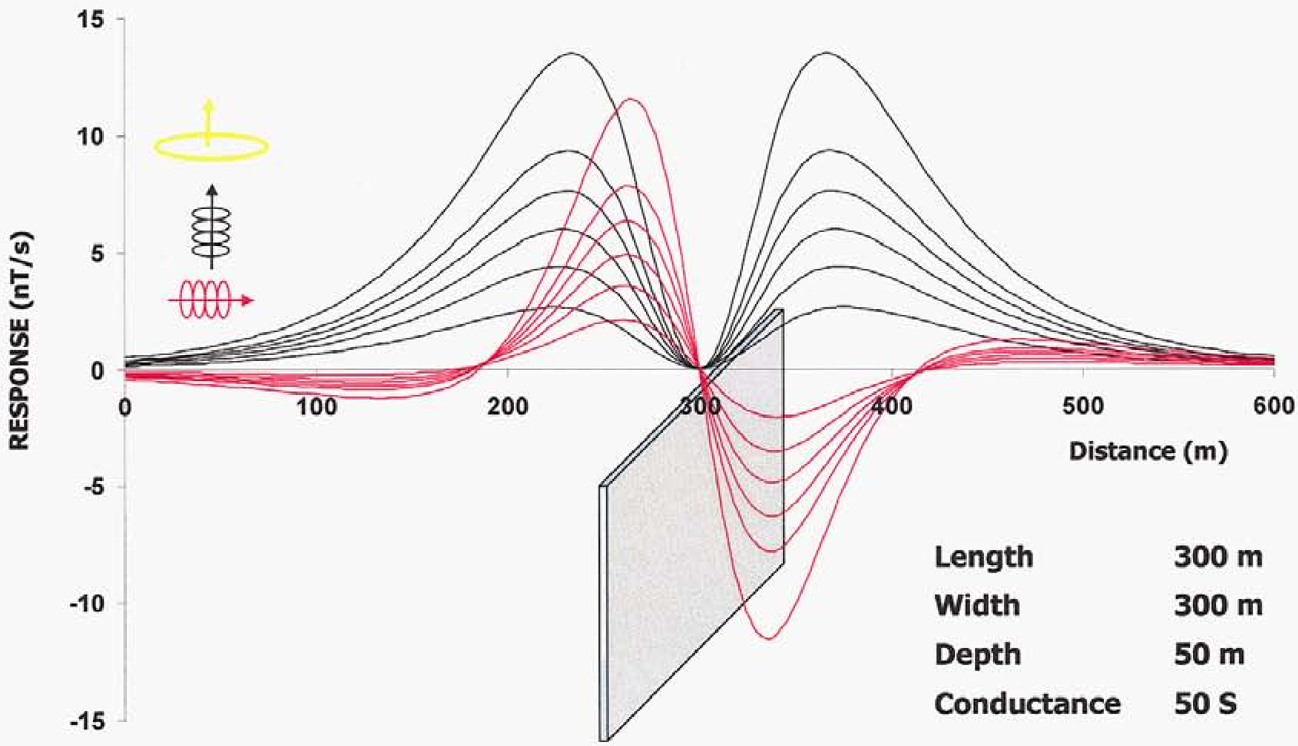


Figure 9. AeroTEM response to a 'thin' vertical conductor.

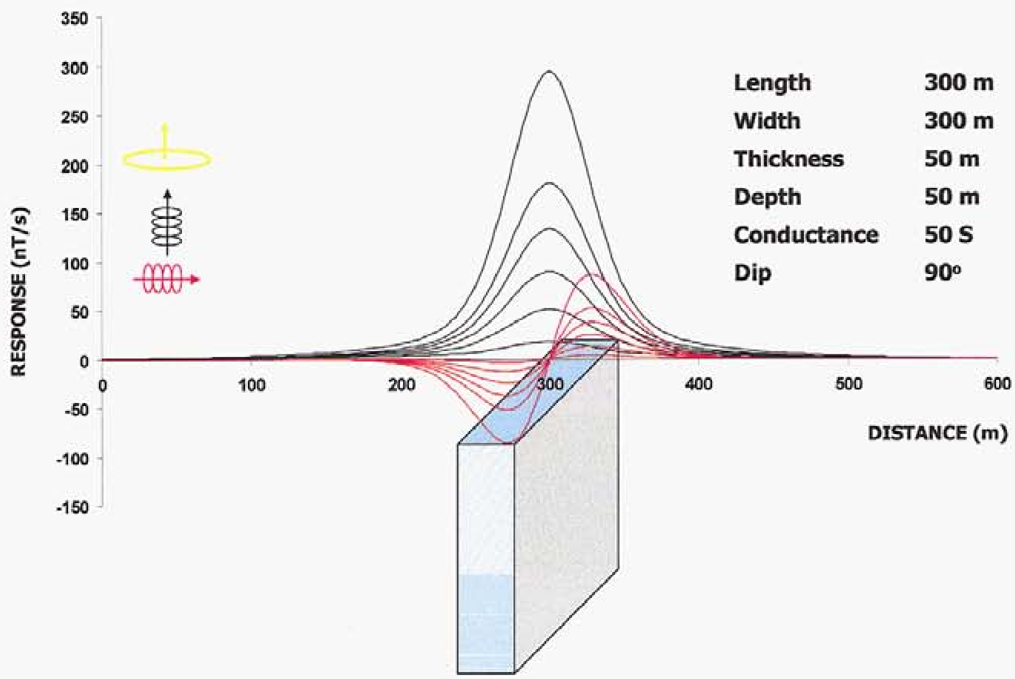


Figure 10. AeroTEM response for a 'thick' vertical conductor.

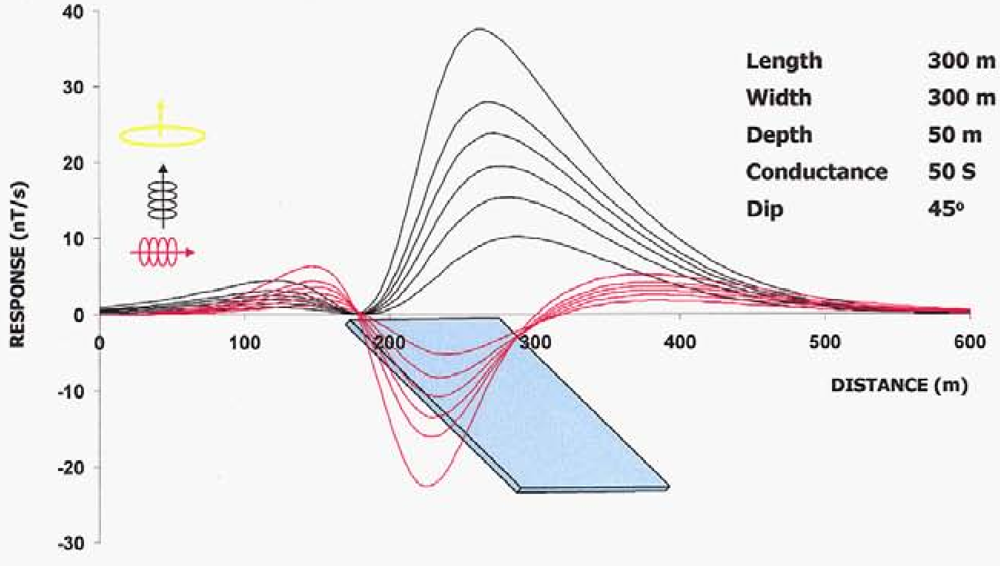


Figure 11. AeroTEM response over a 'thick' dipping conductor.

(Figure 11). In these cases both possible source types may be indicated by picking both thick and thin response styles. For shallow dipping conductors the 'thin' (N) pick will be located over the top edge of the source, whereas the 'thick' (K) pick will fall over the downdip 'heart' of the anomaly.

10.3. EM Response

All anomalies indicated on the maps and should be reviewed in conjunction with available geological or geochemical information. The 'thick' and 'thin' response styles must also be considered when analyzing the interpreted picks and prioritizing for follow-up. The highest priority EM targets should then be subjected to quantitative modeling prior to drill testing to determine the azimuth and dip of the source. Figure 12 illustrates the Z coil response (off-time) from channels 5 through 15 for this area.

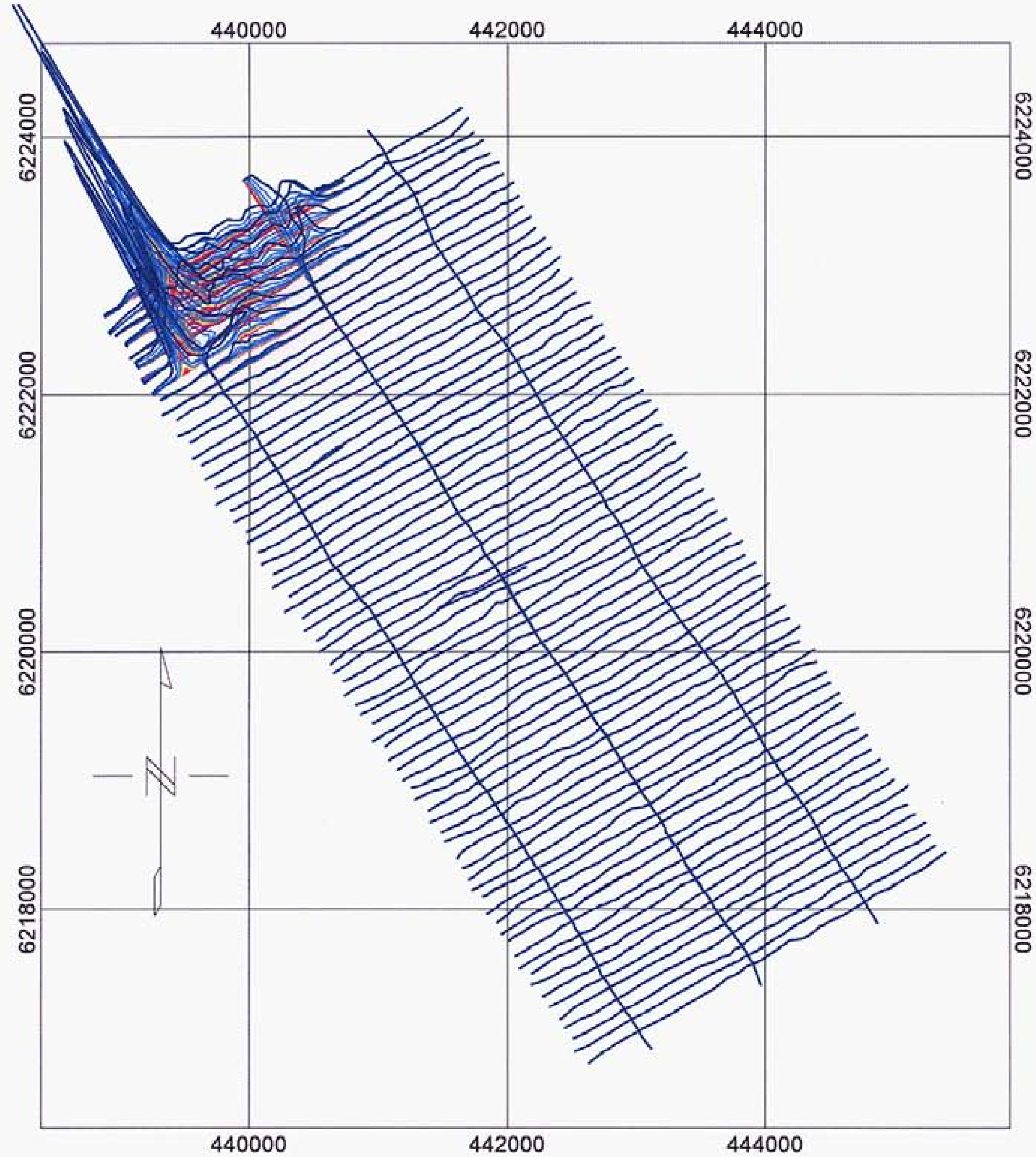


Figure 12 Off-time EM response over the survey area (Z coil, channels 5 through 15).

Respectfully submitted,

Gord Smith
Aeroquest Limited
April, 2006

APPENDIX 1 – PROJECT CORNER COORDINATES

The Silver Crown Survey Block has a boundary which is defined in the following table. All geophysical data presented in this report have been windowed to this outline. Positions are in UTM Zone 9 – NAD83.

Easting (m)	Northing (m)
438957.6	**6222676.8**
441555.7	**6224176.8**
445292.0	**6218357.4**
442693.9	**6216857.4**

APPENDIX 2 - Description of Database Fields

The GDB file is a Geosoft binary database. In the database, the Survey lines and Tie Lines are prefixed with an "L" for "Line" and "T" for "Tie".

Database (SilverCrown_Final_Client.gdb):

Column	Units	Description
Emfid		AERODAS Fiducial
utctime	hh:mm:ss.ss	UTC time
X	m	UTM Easting (NAD83, zone 9N)
Y	m	UTM Northing (NAD83, zone 9N)
Lat_wgs84	dd.dddddd	Raw WGS84 Latitude
Long_wgs84	dd.dddddd	Raw WGS84 Longitude
bheight	m	Terrain clearance of EM bird
Galtf	m	GPS altitude (WGS 84)
Dtmf	m	Digital Terrain Model
Magf	nT	Final leveled total magnetic intensity
basemagf	nT	Base station total magnetic intensity
Pwrline		Powerline monitor
Flight		Flight number
ZOn	nT/s	Processed Streaming On-Time Z component Channels 1-15
Zoff	nT/s	Processed Streaming Off-Time Z component Channels 1-16
XOn	nT/s	Processed Streaming On-Time X component Channels 1-15
XOff	nT/s	Processed Streaming Off-Time X component Channels 1-16
Anom_ID		Thick (K) or Thin (T) identifier
Anom_labels		Letter label of conductor pick (A,B,C, etc.)
On_tau	microseconds	On-time Decay constant at conductor pick
Off_tau	microseconds	Off-time Decay constant at conductor pick
On_con	S	On-time conductance
off_con	S	Off-time conductance
Grade		Classification from 1-7 based on conductance of conductor pick

APPENDIX 3: AeroTEM Design Considerations

Design Considerations

Helicopter-borne EM systems offer an advantage that cannot be matched from a fixed-wing platform. The ability to fly at a slower speed and collect data with high spatial resolution, and with great accuracy, means that helicopter EM systems provide more detail than any other EM configuration, airborne or ground-based. Spatial resolution is especially important in areas of complex geology and in the search for discrete conductors. With the advent of helicopter-borne high-moment time domain EM systems the fixed-wing platforms are losing their *only* advantage – depth penetration.

Advantage 1 – Spatial Resolution

The AeroTEM system is specifically designed to have a small footprint. This is accomplished through the use of concentric transmitter-receiver coils and a relatively small diameter transmitter coil (5 m). The result is a highly focused exploration footprint, which allows for more accurate "mapping" of discrete conductors. Consider the transmitter primary field images shown in Figure 1, for AeroTEM versus a fixed-wing transmitter. The footprint of AeroTEM at the earth's surface is The footprint of a fixed-wing system is roughly 150 m roughly 50 m on either side of transmitter. on either side of the transmitter.

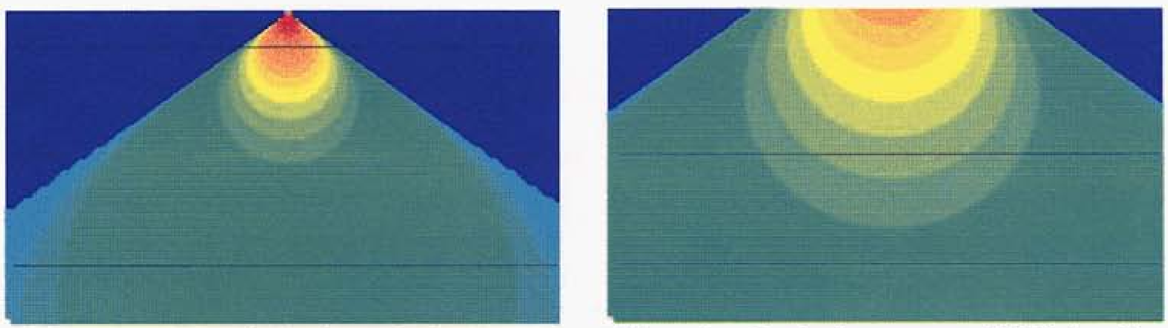


Figure 1. A comparison of the footprint between AeroTEM and a fixed-wing system, highlights the greater resolution that is achievable with a transmitter located closer to the earth's surface. The AeroTEM footprint is one third that of a fixed-wing system and is symmetric, while the fixed-wing system has even lower spatial resolution along the flight line because of the separated transmitter and receiver configuration.

At first glance one may want to believe that a transmitter footprint that is distributed more evenly over a larger area is of benefit in mineral exploration. In fact, the opposite is true; by energizing a larger surface area, the ability to energize and detect discrete conductors is reduced. Consider, for example, a comparison between AeroTEM and a fixed-wing system over the Mesamax Deposit (1,450,000 tonnes of 2.1% Ni, 2.7% Cu, 5.2 g/t Pt/Pd). In a test survey over three flight lines spaced 100 m apart, AeroTEM detected the Deposit on all three flight lines. The fixed-wing system detected the Deposit only on two flight lines. In exploration programs that seek to expand the flight line spacing in an effort to reduce the cost of the airborne survey, discrete conductors such as the Mesamax Deposit can go undetected. The argument often put forward in favor of using fixed-wing systems is that because of their larger footprint, the flight line spacing can indeed be widened. Many fixed-wing surveys are flown at 200 m or 400 m. Much of the survey work performed by Aeroquest has been to survey in areas that were previously flown at these wider line spacings. One of the reasons for AeroTEM's impressive discovery record has been the strategy of flying closely spaced lines and finding all the discrete near-surface conductors. These higher resolution surveys are being flown within existing mining camps, areas that improve the chances of discovery.

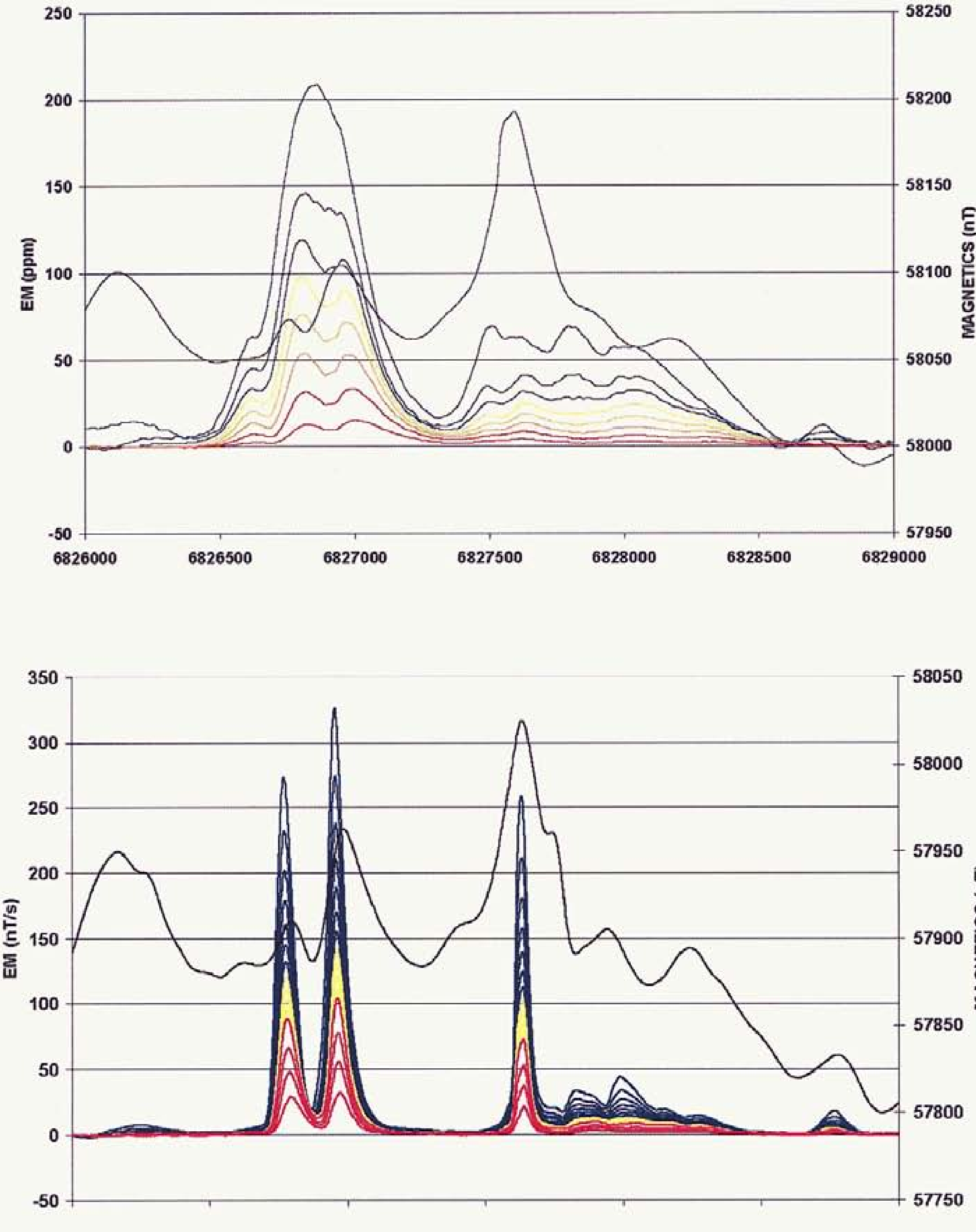


Figure 2. Fixed-wing (upper) and AeroTEM (lower) comparison over the eastern limit of the Mesamax Deposit, a Ni-Cu-PGE zone located in the Raglan nickel belt and owned by Canadian Royalties. Both systems detected the Deposit further to the west where it is closer to surface.

The small footprint of AeroTEM combined with the high signal to noise ratio (S/N) makes the system more suitable to surveying in areas where local infrastructure produces electromagnetic noise, such as power lines and railways. In 2002 Aeroquest flew four exploration properties in the Sudbury Basin that were under option by FNX Mining Company Inc. from Inco Limited. One such property, the Victoria Property, contained three major power line corridors.

The resulting AeroTEM survey identified all the known zones of Ni-Cu-PGE mineralization, and detected a response between two of the major power line corridors but in an area of favorable geology. Three boreholes were drilled to test the anomaly, and all three intersected sulphide. The third borehole encountered 1.3% Ni, 6.7% Cu, and 13.3 g/t TPMs over 42.3 ft. The mineralization was subsequently named the Powerline Deposit.

The success of AeroTEM in Sudbury highlights the advantage of having a system with a small footprint, but also one with a high S/N. This latter advantage is achieved through a combination of a high-moment (high signal) transmitter and a rigid geometry (low noise). Figure 3 shows the Powerline Deposit response and the response from the power line corridor at full scale. The width of power line response is less than 75 m.

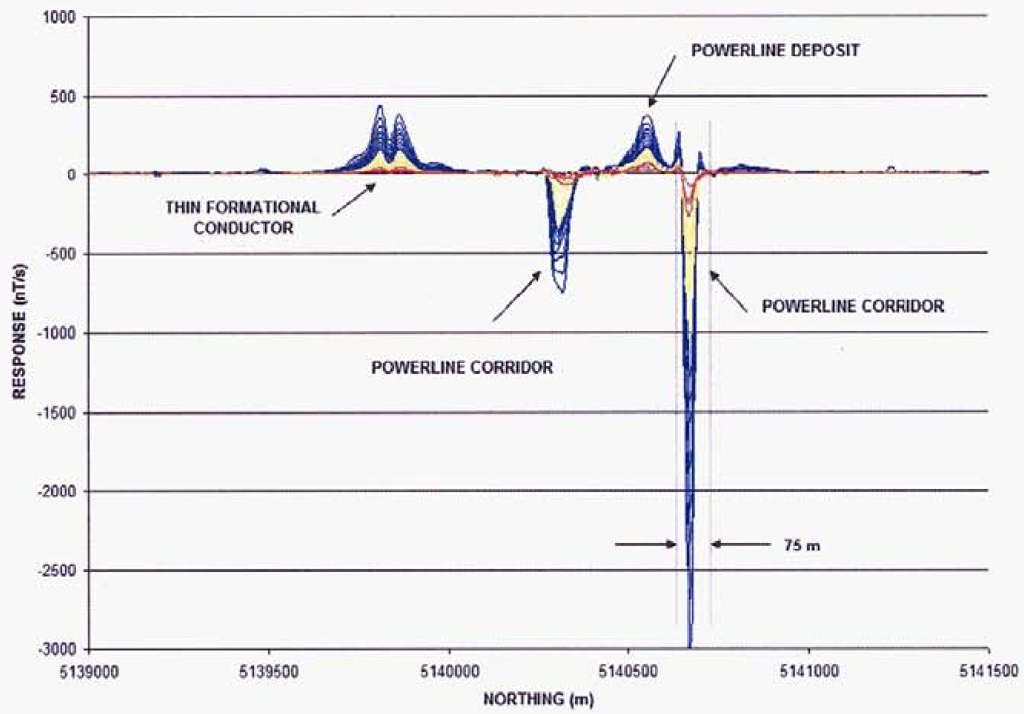


Figure 3. The Powerline Deposit is located between two major power line corridors, which make EM surveying problematic. Despite the strong response from the power line, the anomaly from the Deposit is clearly detected. Note the thin formational conductor located to the south. The only way to distinguish this response from that of two closely spaced conductors is by interpreting the X-axis coil response.

Advantage 2 – Conductance Discrimination

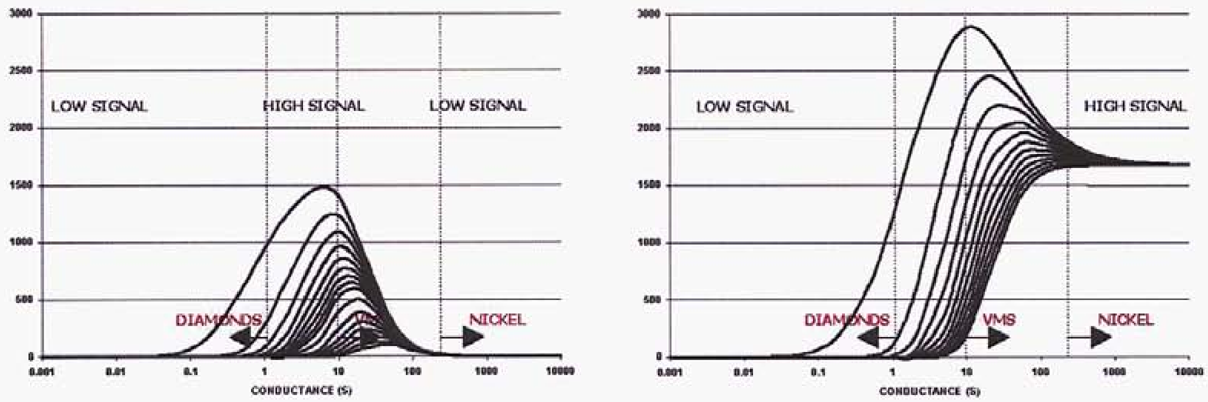
The AeroTEM system features full waveform recording and as such is able to measure the on-time response due to high conductance targets. Due to the processing method (primary field removal), there is attenuation of the response with increasing conductance, but the AeroTEM on-time measurement is still superior to systems that rely on lower base frequencies to detect high conductance targets, but do not measure in the on-time.

The peak response of a conductive target to an EM system is a function of the target conductance and the EM system base frequency. For time domain EM systems that measure only in the off-time, there is a drop in the peak response of a target as the base frequency is lowered for all conductance values below the peak system response. For example, the AeroTEM peak response occurs for a 10 S conductor in the early off-time and 100 S in the late off-time for a 150 Hz base frequency. Because base frequency and conductance form a linear relationship when considering the peak response of any EM system, a drop in base frequency of 50% will double the conductance at which an EM system shows its peak response. If the base frequency were lowered from 150 Hz to 30 Hz there would be a fivefold increase in conductance at which the peak response of an EM occurred.

However, in the search for highly conductive targets, such as pyrrhotite-related Ni-Cu-PGM deposits, a fivefold increase in conductance range is a high price to pay because the signal level to lower conductance targets is reduced by the same factor of five. For this reason, EM systems that operate with low base frequencies are not suitable for general exploration unless the target conductance is more than 100 S, or the target is covered by conductive overburden.

Despite the excellent progress that has been made in modeling software over the past two decades, there has been little work done on determining the optimum form of an EM system for mineral exploration. For example, the optimum configuration in terms of geometry, base frequency and so remain unknown. Many geophysicists would argue that there is no single ideal configuration, and that each system has its advantages and disadvantages. We disagree.

When it comes to detecting and discriminating high-conductance targets, it is necessary to measure the pure inphase response of the target conductor. This measurement requires that the measured primary field from the transmitter be subtracted from the total measured response such that the secondary field from the target conductor can be determined. Because this secondary field is in-phase with the transmitter primary field, it must be made while the transmitter is turned on and the transmitter current is changing. The transmitted primary field is several orders of magnitude larger than the secondary field. AeroTEM uses a bucking coil to reduce the primary field at the receiver coils. The only practical way of removing the primary field is to maintain a rigid geometry between the transmitter, bucking and receiver coils. This is the main design consideration of the AeroTEM airframe and it is the only time domain airborne system to have this configuration.



The off-time AeroTEM response for the 16 channel configuration.

The on-time response assuming 100% removal of the measured primary field.

Figure 4. The off-time and on-time response nomogram of AeroTEM for a base frequency of 150 Hz. The on-time response is much stronger for higher conductance targets and this is why on-time measurements are more important than lower frequencies when considering high conductance targets in a resistive environment.

Advantage 3 – Multiple Receiver Coils

AeroTEM employs two receiver coil orientations. The Z-axis coil is oriented parallel to the transmitter coil and both are horizontal to the ground. This is known as a maximum coupled configuration and is optimal for detection. The X-axis coil is oriented at right angles to the transmitter coil and is oriented along the line-of-flight. This is known as a minimum coupled configuration, and provides information on conductor orientation and thickness. These two coil configurations combined provide important information on the position, orientation, depth, and thickness of a conductor that cannot be matched by the traditional geometries of the HEM or fixed-wing systems. The responses are free from a system geometric effect and can be easily compared to model type curves in most cases. In other words, AeroTEM data is very easy to interpret. Consider, for example, the following modeled profile:

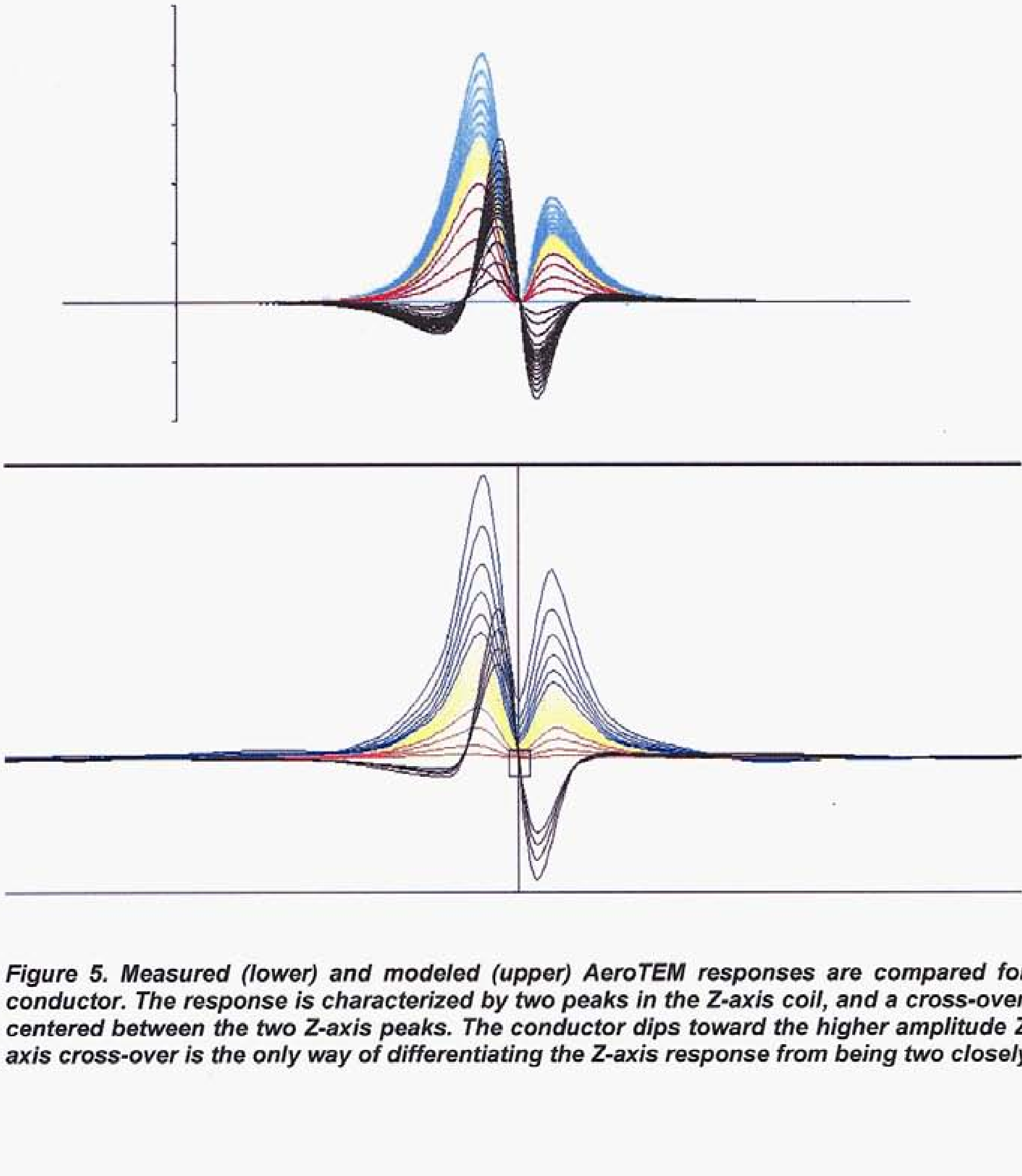


Figure 5. Measured (lower) and modeled (upper) AeroTEM responses are compared for a thin steeply dipping conductor. The response is characterized by two peaks in the Z-axis coil, and a cross-over in the X-axis coil that is centered between the two Z-axis peaks. The conductor dips toward the higher amplitude Z-axis peak. Using the X-axis cross-over is the only way of differentiating the Z-axis response from being two closely spaced conductors.

HEM versus AeroTEM

Traditional helicopter EM systems operate in the frequency domain and benefit from the fact that they use narrowband as opposed to wide-band transmitters. Thus all of the energy from the transmitter is concentrated in a few discrete frequencies. This allows the systems to achieve excellent depth penetration (up to 100 m) from a transmitter of modest power. The Aeroquest Impulse system is one implementation of this technology.

The AeroTEM system uses a wide-band transmitter and delivers more power over a wide frequency range. This frequency range is then captured into 16 time channels, the early channels containing the high frequency information and the late time channels containing the low frequency information down to the system base frequency. Because frequency domain HEM systems employ two coil configurations (coplanar and coaxial) there are only a maximum of three comparable frequencies per configuration, compared to 16 AeroTEM off-time and 12 AeroTEM on-time channels.

Figure 6 shows a comparison between the Dighem HEM system (900 Hz and 7200 Hz coplanar) and AeroTEM (Zaxis) from surveys flown in Raglan, in search of highly conductive Ni-Cu-PGM sulphide. In general, the AeroTEM peaks are sharper and better defined, in part due to the greater S/N ratio of the AeroTEM system over HEM, and also due to the modestly filtered AeroTEM data compared to HEM. The base levels are also better defined in the AeroTEM data. AeroTEM filtering is limited to spike removal and a 5-point smoothing filter. Clients are also given copies of the raw, unfiltered data.

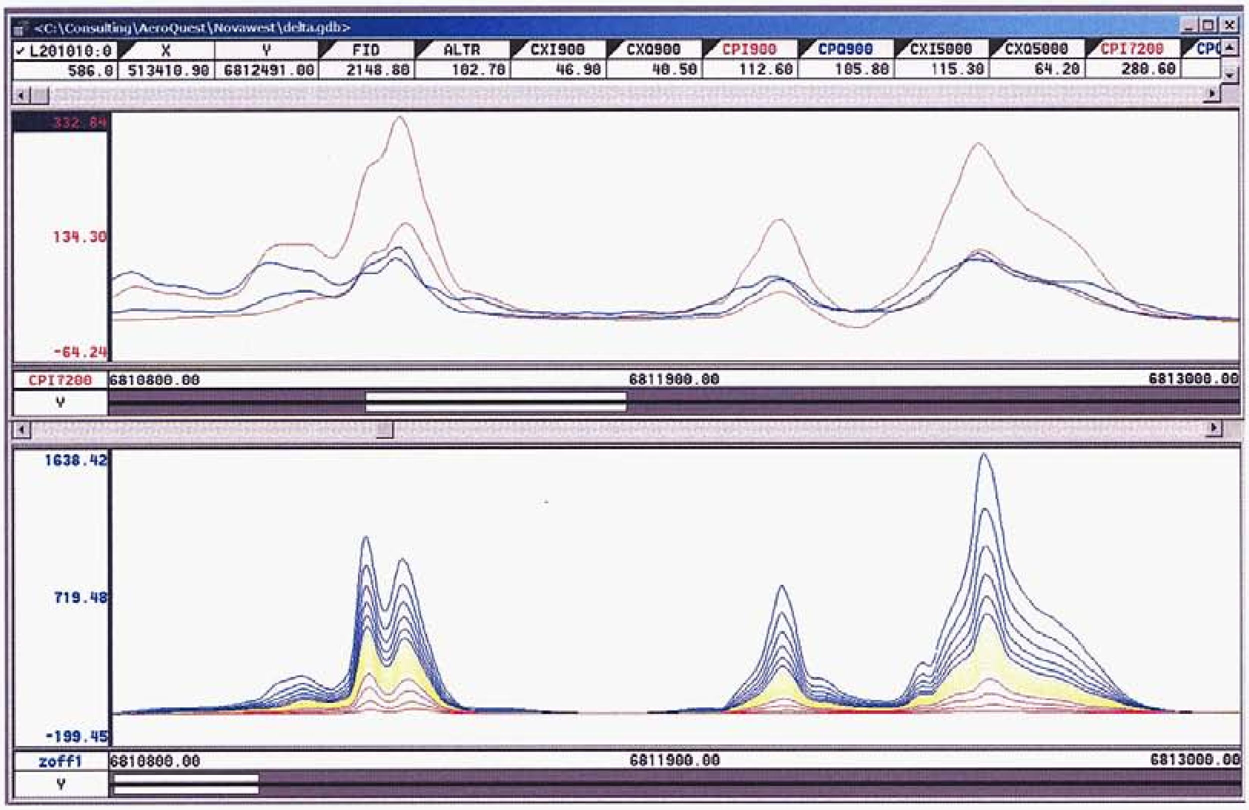


Figure 6. Comparison between Dighem HEM (upper) and AeroTEM (lower) surveys flown in the Raglan area. The AeroTEM responses appear to be more discrete, suggesting that the data is not as heavily filtered as the HEM data. The S/N advantage of AeroTEM over HEM is about 5:1.

Aeroquest Limited is grateful to the following companies for permission to publish some of the data from their respective surveys: Wolfden Resources, FNX Mining Company Inc, Canadian Royalties, Nova West Resources, Aurogin Resources, Spectrem Air. Permission does not imply an endorsement of the AeroTEM system by these companies.

APPENDIX 4: AeroTEM Instrumentation Specification Sheet

AEROTEM Helicopter Electromagnetic System

System Characteristics

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

Receiver

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

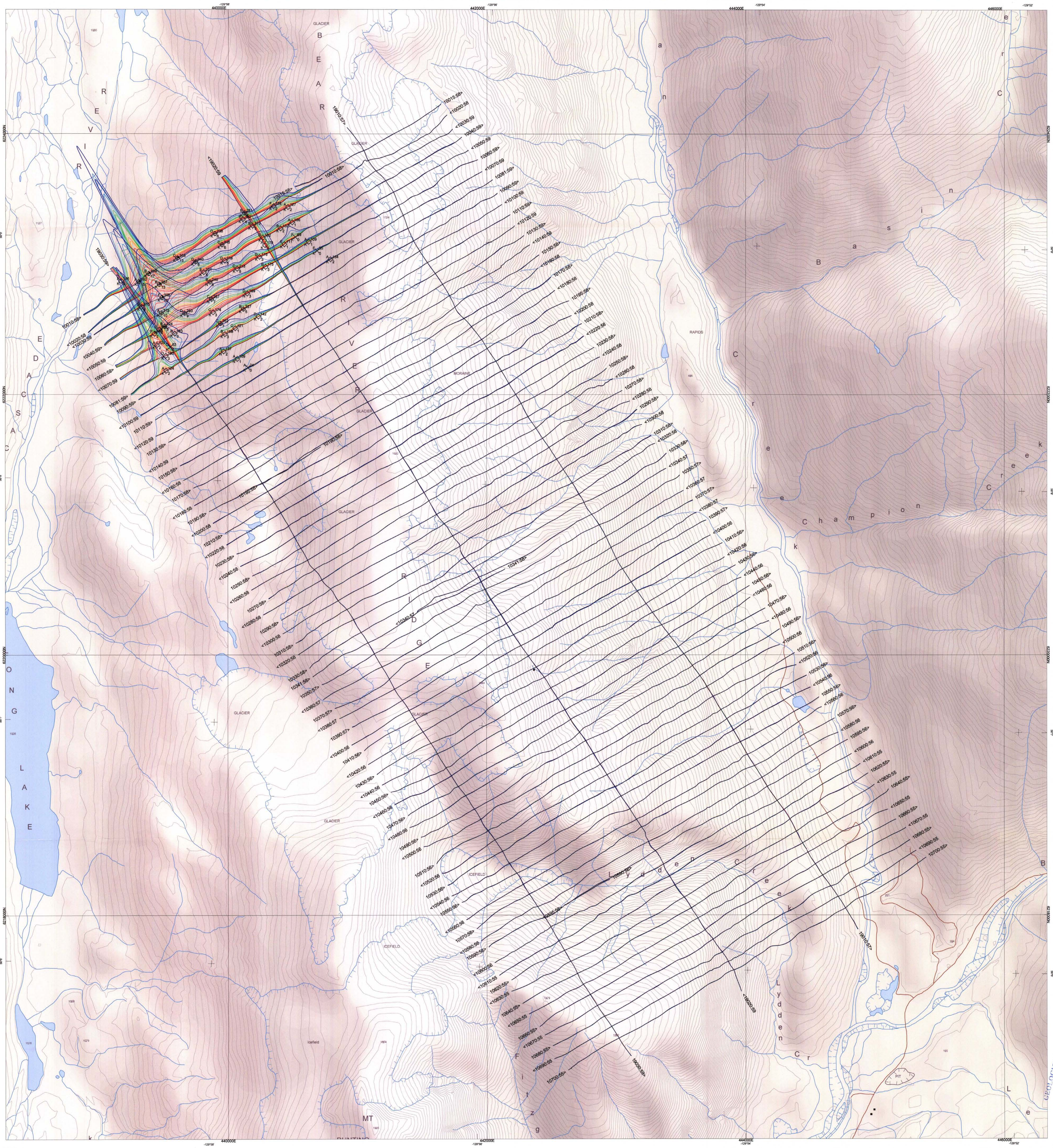
Display & Acquisition

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

System Considerations

Comparing a fixed-wing time domain transmitter with a typical moment of 500,000 NIA flying at an altitude of 120 m with a Helicopter TDEM at 30 m, notwithstanding the substantial moment loss in the airframe of the fixed wing, the same penetration by the lower flying helicopter system would only require a sixty-fourth of the moment. Clearly the AeroTEM system with nearly 40,000 NIA has more than sufficient moment. The airframe of the fixed wing presents a response to the towed bird, which requires dynamic compensation. This problem is non-existent for AeroTEM since transmitter and receiver positions are fixed. The AeroTEM system is completely portable, and can be assembled at the survey site within half a day.

Tel: +1 905 878-5616. Fax: +1 905 876-0193.
Email: sales@aeroquestsurveys.com

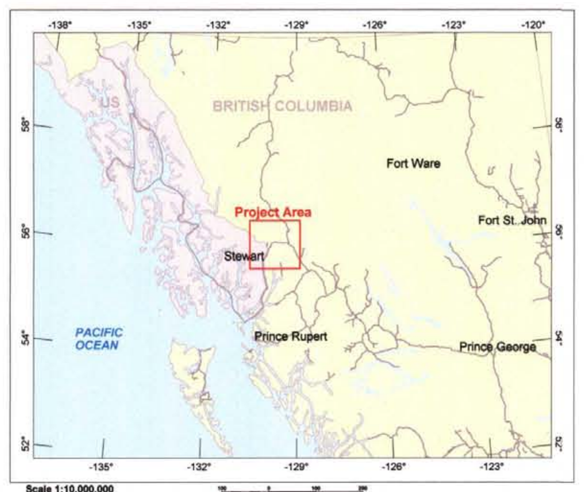


Grid North
NAD83-Zone9

The topographic data base was based on 1:20000 BC TRIM data supplied by the client.

Inset data derived from Natural Resources Canada 'Atlas of Canada Base Maps'

This map accompanies the technical report entitled 'Report on a Helicopter-Borne Magnetic and Electromagnetic Survey, Stewart Area, British Columbia', by Aeroquest Limited, April 2006



AeroTEM Profiles

positive excursion to top and right, 1mm=20nT/s

- Z5 Off-Time Channel
- Z6 Off-Time Channel
- Z7 Off-Time Channel
- Z8 Off-Time Channel
- Z9 Off-Time Channel
- Z10 Off-Time Channel
- Z11 Off-Time Channel
- Z12 Off-Time Channel
- Z13 Off-Time Channel
- Z14 Off-Time Channel
- Z15 Off-Time Channel

Off-Time Anomaly Symbols

>50S	●
35-50S	◕
20-35S	half-filled
10-20S	quarter-filled
5-10S	⊕
1-5S	◇
<1S	×

anomaly label A, decay constant (µs) 125, thicK/thiN source K, off-time conductance (S) 36

SURVEY SPECIFICATIONS:
Survey flown: 4-5 March, 2006
Traverse line spacing: 100 metres
Traverse line direction: NE-SW (60°)
Nominal EM bird height: 30 metres
Aircraft: Aerospatiale A-Star 350BA (C-GMBC)

INSTRUMENTATION:
Data acquisition: ADAS & RMS DGR-33
Magnetometer: Geometrics G-823A cesium vapour
Installation: Towed bird 17 m above EM bird
Sensitivity: .001 nanoTesla
Electromagnetics: AeroTEM II System (ECHO)
Configuration: Towed bird

NAVIGATION:
Navigation: Differential Global Positioning System (DGPS)
Navigation equipment: AGNAV with MID-TECH RX400p receiver
Radar Altimeter: Terra TRA3000/TRI-30

DATA PROCESSING
Magnetics: diurnal, tieline and micro-leveling corrections

POSITIONING
Datum: NAD83
Major Axis: 6378137.000
Eccentricity: 0.081819191

MAP PROJECTION
Projection: Universal Transverse Mercator
Central Meridian: 129°W (Zone 9)
Central Scale Factor: 0.9996
False Easting/Northing: 500,000m/0m

scale 1:10,000

200 0 200 400 600 metres

NAD83 / UTM zone 9N

Teuton Resources Corporation
Stewart Area, British Columbia

AEROTEM OF-TIME PROFILES

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AEROQUEST LIMITED
4-845 Main St. East
Milton, Ont., CANADA L9T 3Z3
Tel: (905) 693-9129 Fax: (905) 693-9128
www.aeroquestsurveys.com

April 2006

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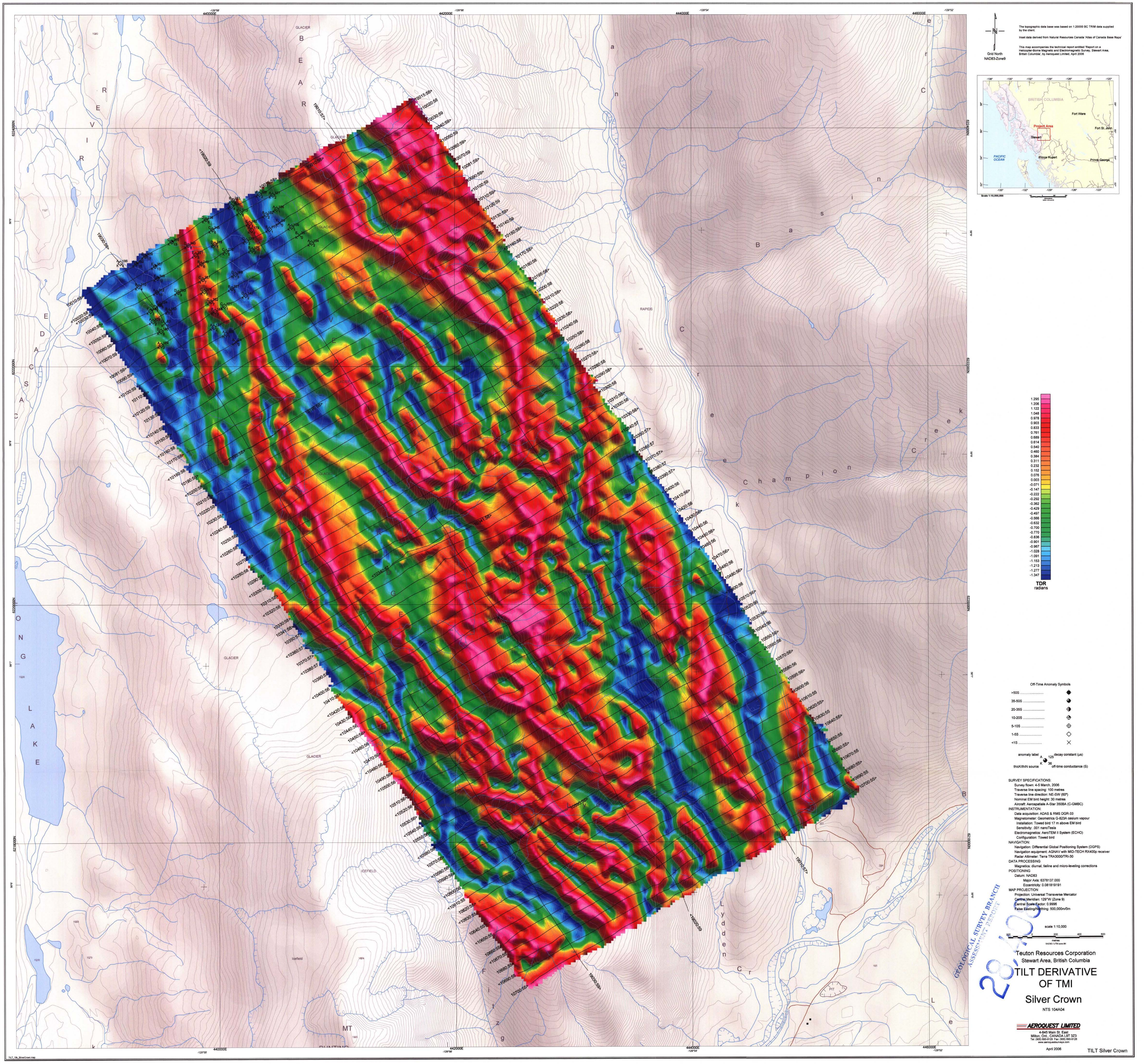
The topographic data base was based on 1:20000 BC TRIM data supplied by the client.
Inset data derived from Natural Resources Canada 'Atlas of Canada Base Maps'
This map accompanies the technical report entitled 'Report on a Helicopter-Borne Magnetic and Electromagnetic Survey, Stewart Area, British Columbia', by Aeroquest Limited, April 2006
Grid North
NAD83-Zone9
BRITISH COLUMBIA
Fort Ware
Project Area
Fort St. John
Stewart
PACIFIC OCEAN
Prince Rupert
Prince George
TDR
radians
Off-Time Anomaly Symbols
>50S
35-50S
20-35S
10-20S
5-10S
1-5S
<1S
anomaly label
decay constant (μs)
thicK/thiN source
off-time conductance (S)
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scale 1:10,000
metres
NAD83 / UTM zone 9N
GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT
Teuton Resources Corporation
Stewart Area, British Columbia
TILT DERIVATIVE OF TMI
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AEROQUEST LIMITED
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Milton, Ont., CANADA L9T 3Z3
Tel: (905) 693-9129 Fax: (905) 693-9128
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April 2006
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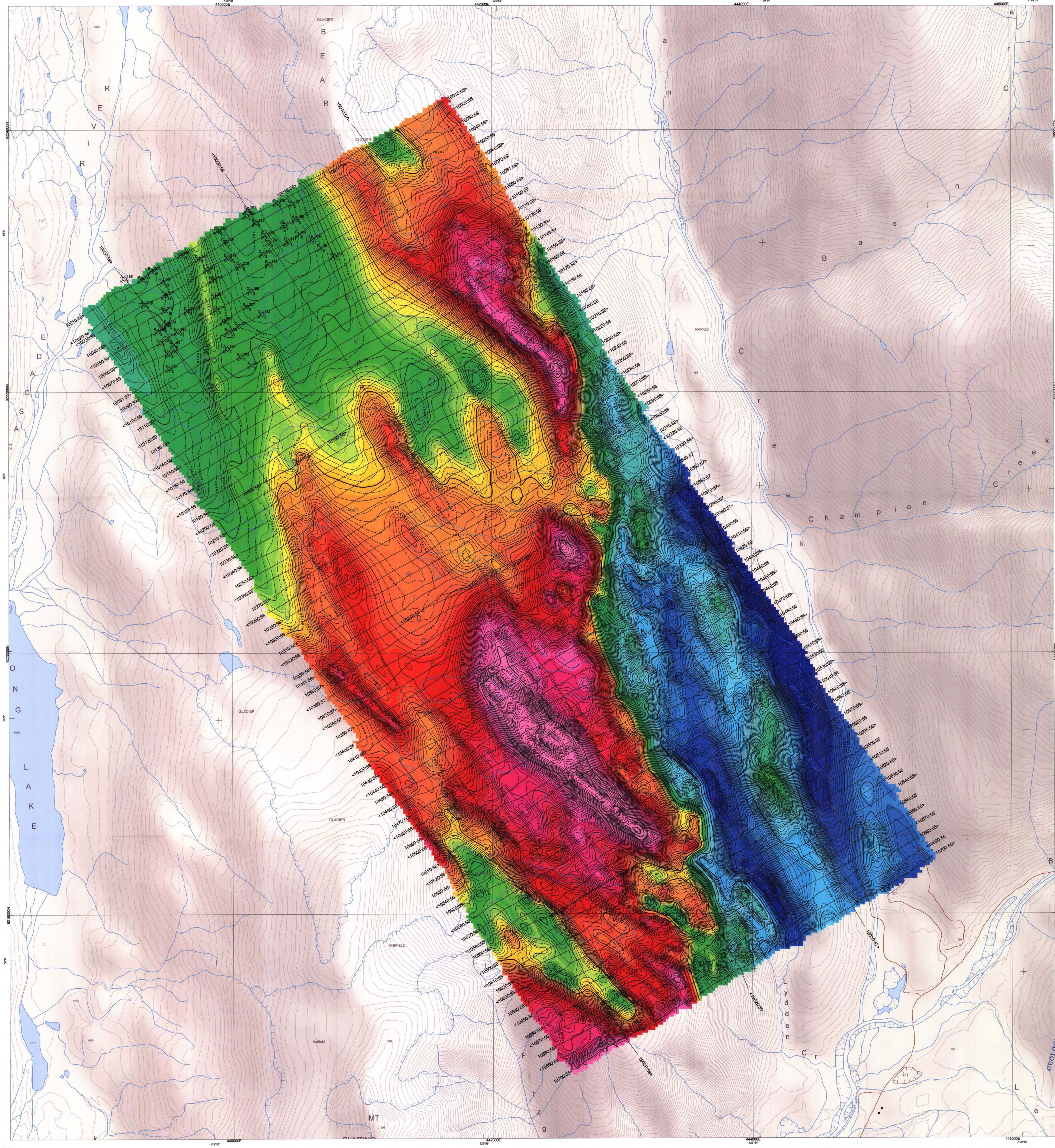

Grid North
NAD83-Zone9

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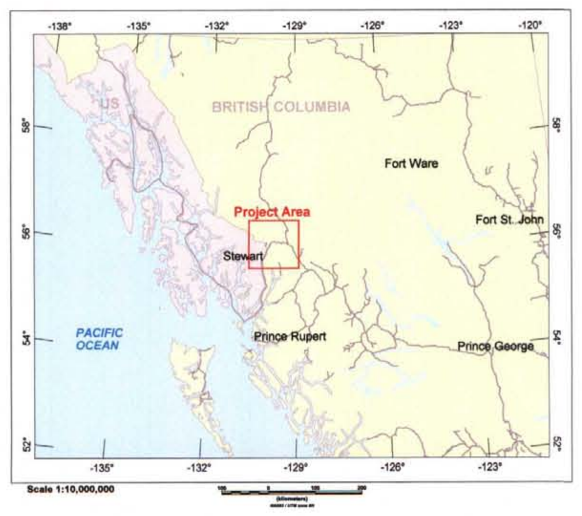

TMI Contour Interval

- 5 nT
- 10 nT
- 50 nT
- 250 nT

Off-Time Anomaly Symbols

- >50S
- 35-50S
- 20-35S
- 10-20S
- 5-10S
- 1-5S
- <1S

anomaly label A, 125 decay constant (μs)
thicK/thiN source K, 36 off-time conductance (S)

SURVEY SPECIFICATIONS:
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scale 1:10,000
-200 0 200 400 600
metres
NAD83 / UTM zone 9N

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Stewart Area, British Columbia

TOTAL MAGNETIC INTENSITY
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