REPORT ON 2007 AEROTEM SURVEY

EL TORO PROPERTY
OMINECA MINING DIVISION
BULKLEY RANGES, HAZELTON MOUNTAINS
WEST-CENTRAL BRITISH COLUMBIA
CANADA

NTS 093 L 6/11
54°27’ NORTH, 127°15’ WEST
NAD 1983, UTM ZONE 9N – APPROXIMATE CENTRE 610000E - 6035000N

EVENT NUMBER 4161638
TENURE NUMBERS:
525417, 554994, 554998, 555000, 555001 AND 555004

OWNED BY:
MR. FARSHAD SHIRVANI

PREPARED FOR:
LIONS GATE ENERGY INC.

PREPARED BY:
NEIL D. MALLEN, M.SC.PL., CCEP

NOVEMBER 19, 2007

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1.0 INTRODUCTION

This report summarizes a helicopter-borne AeroTEM system electromagnetic and magnetic survey undertaken by Aeroquest Limited of Mississauga, Ontario for Lions Gate Energy Inc. on the El Toro Property, located in the Omineca Mining Division in West-Central British Columbia.

1.1 LOCATION AND ACCESS

The northern property boundary of the EL Toro Property is situated approximately 25 km south of Smithers, BC and the eastern property boundary is situated approximately 25 km west of Houston, BC. The property straddles NTS mapsheets 093L05, 06 and 12 and is centred at approximately 610000E - 6035000N in NAD 1983 UTM Zone 9N projection. The centre of the property is at a latitude and longitude of approximately 54°27' N, and 127°15' W.

The topography is generally rugged and mountainous, with elevations range from a minimum of about 1,000 m (3,200 feet) above sea level in the low-lying valleys (around Howson Creek and the upper Thautil River) to a maximum of about 2,350 m (7,700 feet) above sea level in the Telkwa Range south of the Hunter Basin.

The property is situated approximately 25 km straight-line distance directly south of Smithers and approximately 25 km straight-line distance directly west of Houston. Highway 16 provides vehicle access to both communities. There is a regional airport in Smithers, an airstrip at Telkwa, and a float plane base on Tyhee Lake on the east side of Highway 16 at Huntington. There is also an airfield at Houston.

The property can be accessed via the Telkwa River Forest Service Road which runs east from Telkwa roughly following the north boundary of the property. The 1200 Road extends south, leading into the Hunter Basin, with several branches extending up narrow valleys onto the north-facing slopes of the Telkwa Range. Further along the Telkwa River Forest Service Road, the Howson Creek Road Trail extends south to the vicinity of Mooseskin Johnny Lake. It would also be possible to access this part of the property from the south by the Morice Forest Service Road south and then west from Houston, and the Thautil River Road or Chisholm Forest Service Road north along the Thautil River.

There are some snowmobile trails and Forest Service camp sites around the Hunter Basin, the Howson River / Thautil River valleys, and directly west of Houston on the Grizzly Lakes Road Trail.

Other than these access points, the remainder of the property is accessible only by helicopter, or on foot.

1.2 PROPERTY DEFINITION AND HISTORY

The El Toro property is comprised of a contiguous group of 15 mineral claims in good standing in the Omineca Mining Division. The El Toro comprises a total area of just over 28,000 ha. The tenure numbers, expiration dates and area in hectares are shown in Table 1 below.

Table 1:
Mineral Claims Comprising El Toro Property

Tenure Number	Good to Date	Area
525417	10-dec-2009	450.474
554953	26-mar-2009	621.821
554956	01-aug-2008	939.781
554994	01-aug-2008	3003.585
554998	01-aug-2008	2799.986
554999	01-aug-2008	2818.634
555000	01-aug-2008	3291.951
555001	01-aug-2008	3760.121
555002	01-aug-2008	2634.671
555003	01-aug-2008	3499.407
555004	01-aug-2008	1989.799
555005	01-aug-2008	2334.945
Total		**28145.175**

The mineral tenures comprising the El Toro property are currently held by Mr. Farshad Shirvani of West Vancouver, BC. Lions Gate Energy Inc. does not currently have any information with respect to previous owners of the property.

There are a total of 36 metallic mineral, industrial mineral and coal mine deposits and occurrences documented on the El Toro property in the Minfile database maintained by the BC Ministry of Energy, Mines and Petroleum Resources. These include the Colorado, Rainbow and King past-producers and the Hunter developed prospect all in the Hunter Basin area in the northeastern corner of the El Toro property, the Santa Maria past-producer just west of Mooseskin Johnny Lake in the east-central portion of the property, and 31 other prospects and showings which are widely scattered throughout the property.

The Colorado workings (Minfile No. 093L 043) consist of 2 drift adits both about 46m in length and a 15m connecting raise which were developed in 1914-15. A total of 155,515 grams of silver and 2,722 kilograms of copper were recovered from 38 tonnes of ore in 1915.

The King (Minfile No. 093L 041) and Rainbow (Minfile No. 093L 044), also collectively known as the Hunter Basin, workings include:

- 7.7 m deep shaft on the King claim developed in 1914, as well as open cuts on the Rainbow claim from the same year;
- New crosscut adits and drifting undertaken on the King Claim from 1925 to 1940-41.

Total production to 1941 from 269 tons of ore was 8,160 grams of gold, 283,366 grams of silver and 42,710 kg of copper.

In addition, 24.5 tonnes of ore from the Hunter Basin was processed in 1965, reportedly producing 8,160 grams of gold, 283,366 grams of silver, and 1,647 kg of copper (although the coincidence of the gold and silver production between this 1965 program and the totals from 1914-1941 suggests that there may be a typographic error in the Minfile report).

In addition, a 35m crosscut tunnel on the Tribune claim (Minfile No. 093L 042) hosts a mineralized quartz vein. And in 1914, open cuts and a 4.4m adit exposed localized high grade mineral lenses.

These workings occur along mineralized fracture zones with or without quartz veins, or in disseminated form along thin beds of volcanic rock in the Lower Jurassic Hazelton Group volcanics. The strike and dip of the fracture zones and thin beds hosting disseminated mineralization vary.

There are no current mineral resources or reserves on the property. Lions Gate Energy Inc. is not aware of any historic resources or reserves. Production from the property is limited to the small-scale production from 1914 – 1965 outlined above.

1.3 TENURE

This report summarizes a helicopter-borne AeroTEM system electromagnetic and magnetic survey undertaken by Aeroquest Limited of Mississauga, Ontario for Lions Gate Energy Inc. The survey covered part of six mineral claims, being nos. 525417, 554994, 554998, 555000, 555001 and 555004. The remainder of the claims listed in Table 1 are contiguous with these claims.

1.4 WORK SUMMARY

The total survey coverage was 628.8 line km, with 100 m line spacing in a north-south direction and perpendicular (east-west) control ("tie-in") lines at 1,000 m spacing.

The survey was recommended by Mr. K. Dawson, Ph.D., P.Geo., in his report dated May 2006. Mr. Dawson completed a review of historical data related to the El Toro claim block, and concluded that the potential for a economic porphyry-type molybdenum or copper-molybdenum deposit is high. Mr. Dawson recommended a helicopter-borne survey to identify porphyry plutons and related mineral deposits as well as vein, shear zone, skarn and stockwork deposits.

2.0 TECHNICAL DATA AND INTERPRETATION

The report summarizing the electromagnetic and magnetic survey is attached as Appendix I. The report provides the details of data generation, interpretation and results, including three plans at 1:10,000 scale.

The survey quantifies magnetic and conductive properties of the geologic formations throughout the survey area. Geologic contacts and other structural features can be inferred from the magnetic data. The relative abundance and strength of response is a characteristic typically attributable to magnetite, as opposed to other magnetic minerals that typically have less magnetic susceptibility, such as pyrrhotite. Electromagnetic anomalies are identified and are classified by conductance and by the thickness of the source (thick, thin or indeterminate).

3.0 DRILL LOGS AND DIAGRAMS

Not applicable.

4.0 ITEMIZED COST STATEMENT

The expenditures incurred preparing for and commissioning the survey, completing the survey, and preparing this report are summarized in the table below.

Table 2:
Summary of Expenditures

Person / Company	**Description of Work**	**Schedule**	**Cost**
Farshad Shirvani, TerraCAD GIS Services Ltd.	Determining Scope of Work, Obtaining Quotes, Facilitating Contractual Arrangements	June – July 2007	$9,965
Aeroquest International	Mobilization ($6,000), Survey ($87,735), 1 day standby ($3,500), Reporting ($4,500)	July – September 2007	$101,735.00
Neil Mallen, Project Manager & Minaz Dhanani, Controller, Lions Gate Energy Inc.	Report Preparation & Record of Expenditure: 55 hours @ $50/hour Use of Licensed Software: 20 hours @ $50 / hour	November 2007	$3,750
Lions Gate Energy Inc.	Printing & Photocopying	November 2007	$750
Samco Printers Ltd.	Printing, Photocopying & Binding	November 2007	$1,800
Total			**$118,000**

5.0 STATEMENT OF AUTHOR'S QUALIFICATIONS

The author of this report, Neil Mallen, holds Bachelors and Masters degrees in Environmental Management (B.A.) and Environmental Planning (M.Sc.Pl.) respectively from the University of Toronto, and is a Certified Canadian Environmental Practitioner (CCEP). Technical details pertaining to the magnetic and electromagnetic survey are summarized from the Aeroquest International report. The author has undertaken no analysis or geoscientific work beyond synthesizing and summarizing the results of the above-noted report. The report will be provided to a professional geoscientist for further analysis and interpretation. Mr. Mallen has served as a project development consultant to a number of Canadian resource companies, and currently serves Lions Gate Energy Inc., among other companies, in this capacity.

6.0 REFERENCES

This report has been prepared with reference to, and in general accordance with, Section 16 and Schedule A of the Mineral Tenure Act Regulation (BC Reg 529/2004) under the British Columbia *Mineral Tenure Act*. The references used in the preparation of this report are:

Aeroquest International, September 2007. *Report on a Helicopter-Borne AeroTEM System Electromagnetic & Magnetic Survey*. El Toro Project, Smithers Area, British Columbia, Canada. 27 pgs + 3 large-scale plans.

Dawson, K.M., May 2006. *A Review of Historical Data on El Toro Claims of Farshad Shirvani, 093L/5,6, 11, Telkwa, BC.*

Minfile Record Summary, Minfile No. 093L 041. King (Hunter Basin), Jackpot, Meg, Web, Hunter Basin, HB. http://minfile.gov.bc.ca/Summary.aspx?minfilno=093L 041.

Minfile Record Summary, Minfile No. 093L 042. Hunter, Riegle, HB, AJ, Hunter Basin, Tribune, View, Ptarmigan. http://minfile.gov.bc.ca/Summary.aspx?minfilno=093L 042.

Minfile Record Summary, Minfile No. 093L 043. Colorado, Hunter Basin, Silver Hill. http://minfile.gov.bc.ca/Summary.aspx?minfilno=093L 043.

Minfile Record Summary, Minfile No. 093L 044. Rainbow (Hunter Basin), Hunter Basin. http://minfile.gov.bc.ca/Summary.aspx?minfilno=093L 044.

Minfile Record Summary, Minfile No. 093L 063. Santa Maria, Footwall, S.H. http://minfile.gov.bc.ca/Summary.aspx?minfilno=093L 063.

Shirvani, F. 2007. *Technical Report on Structural Analysis, Bull Claim, Mineral Tenure 525417 and R Eye Claim, Mineral Tenure 554352*. Hunter Basin Area, Ominica Mining Division, Central British Columbia.

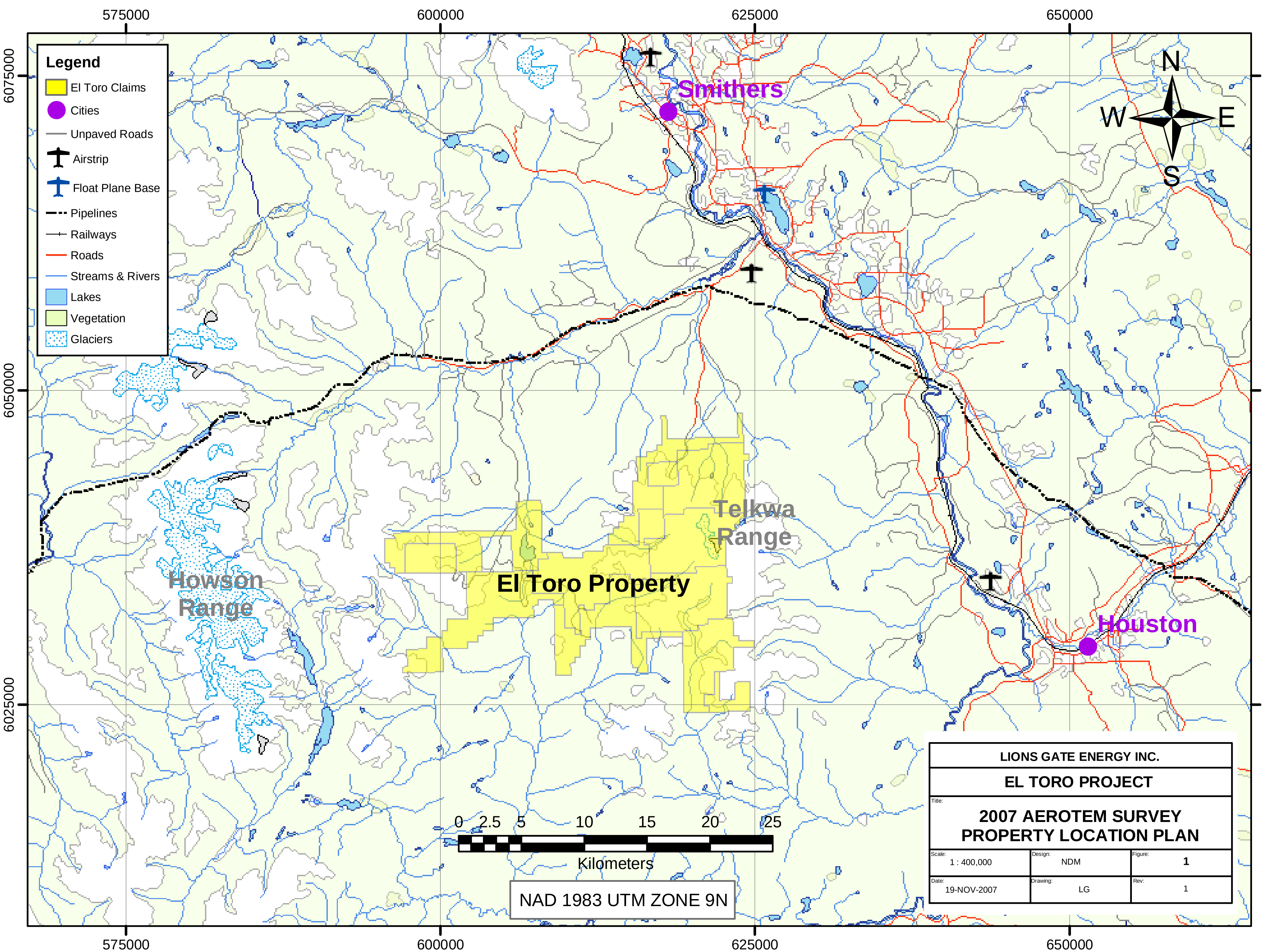
7.0 SOFTWARE

Software used in the electromagnetic and magnetic survey includes:

- The AeroDAS acquisition system (proprietary software owned by Aeroquest International)
- RMS DGR-33 6-channel data acquisition system
- AG-NAV2 GPS navigation system (Ag-Nav Incorporated)
- GeoSoft Oasis
- Adobe Acrobat

Software used in the preparation of this report and accompanying plans includes:

- Microsoft Word 2003
- ArcGIS 9.2
- Adobe Acrobat Professional 7.0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Legend
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Cities
Unpaved Roads
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Pipelines
Railways
Roads
Streams & Rivers
Lakes
Vegetation
Glaciers
Smithers
Houston
N
W
E
S
Telkwa Range
Howson Range
El Toro Property
0 2.5 5 10 15 20 25
Kilometers
NAD 1983 UTM ZONE 9N
LIONS GATE ENERGY INC.
EL TORO PROJECT
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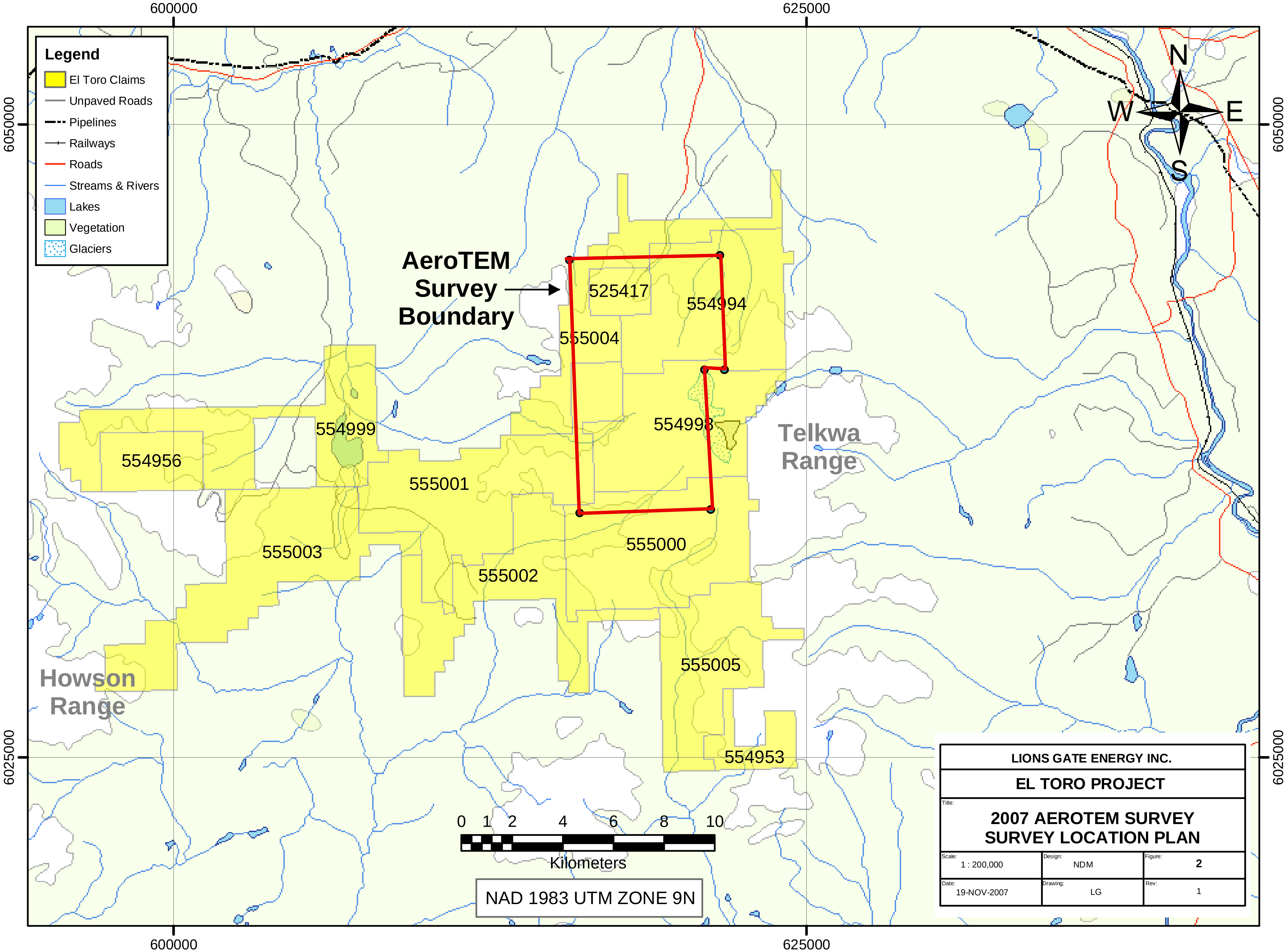
Rev: 1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Unpaved Roads
Pipelines
Railways
Roads
Streams & Rivers
Lakes
Vegetation
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AeroTEM Survey Boundary
525417
554994
555004
554998
554999
554956
555001
555000
555003
555002
555005
554953
Telkwa Range
Howson Range
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W
E
S
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Kilometers
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EL TORO PROJECT
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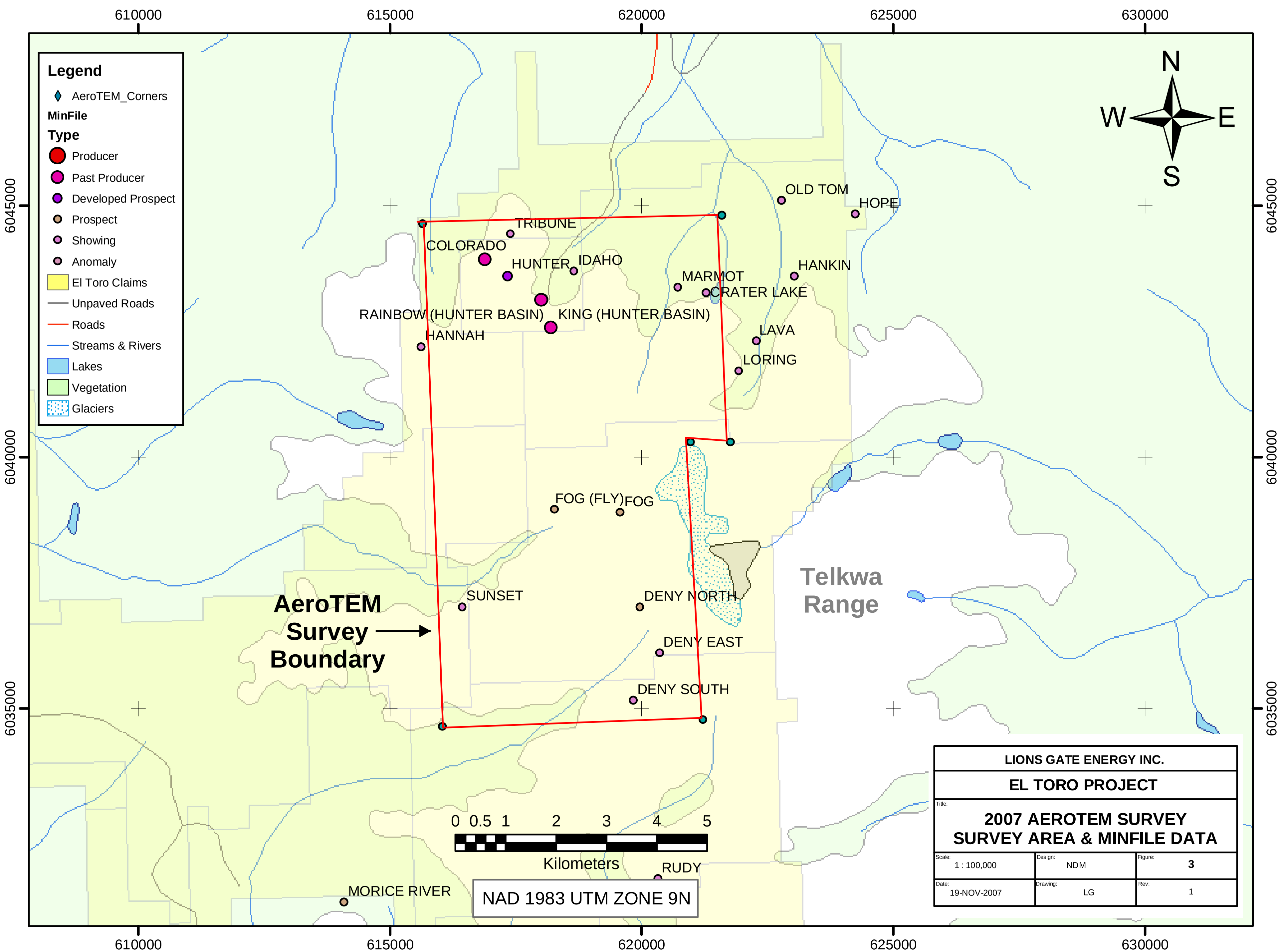

Legend
AeroTEM_Corners
MinFile
Type
Producer
Past Producer
Developed Prospect
Prospect
Showing
Anomaly
El Toro Claims
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Roads
Streams & Rivers
Lakes
Vegetation
Glaciers
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W
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OLD TOM
HOPE
TRIBUNE
COLORADO
HUNTER
IDAHO
MARMOT
CRATER LAKE
HANKIN
RAINBOW (HUNTER BASIN)
KING (HUNTER BASIN)
HANNAH
LAVA
LORING
FOG (FLY)
FOG
SUNSET
DENY NORTH
DENY EAST
DENY SOUTH
RUDY
MORICE RIVER
Telkwa Range
AeroTEM Survey Boundary
0 0.5 1 2 3 4 5
Kilometers
NAD 1983 UTM ZONE 9N
LIONS GATE ENERGY INC.
EL TORO PROJECT
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2007 AEROTEM SURVEY
SURVEY AREA & MINFILE DATA
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Rev: 1

APPENDIX I:

DAWSON, K.M., MAY 2006. *A REVIEW OF HISTORICAL DATA ON EL TORO CLAIMS OF FARSHAD SHIRVANI, 093L/5,6, 11, TELKWA, BC.*

A REVIEW OF HISTORICAL DATA ON EL TORO CLAIMS OF FARSHAD SHIRVANI, 093L/5, 6, 11, TELKWA, B.C.

Prepared for Farshad Shirvani by
Kenneth M. Dawson, Ph.D, P.Geo. ,
Terra Geological Consultants Ltd. ,
North Vancouver, B.C.
May5, 2006

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FIGURES

1. SUMMARY

- A review of historical data related to El Toro claim block south of Telkwa, British Columbia showed that the area contains over 40 significant polymetallic Au, Ag vein deposits, four of which previously produced. Several significant past producing vein deposits occur in the Smithers Map-Area.

- The potential for discovery of an economic deposit of this type, that would require underground mining, is rated at only Moderate, due to the narrow widths, short and discontinuous lengths, and inconsistent grades of known deposits.

- The potential for discovery of an economic porphyry-type Mo or Cu, Mo deposit is rated High. Whereas only two modest porphyry-type occurrences are known at El Toro, several significant porphyry Cu and Mo deposits occur in the immediate area, plutons of the porphyry-related Nanika and Bulkley Suites are abundant in the claims, and mineralized granitoid dykes are probably genetically related to the plutons.

- The recommended optimum method to explore this extensive and rugged area is a helicopter magnetic-radiometric-VLF-EM airborne survey, flown over north-south lines spaced at 50 m. This should reveal buried porphyry plutons and related mineral deposits, also vein, shear zone, skarn and stockwork deposits. Anomalies should be followed up with prospecting recce mapping sampling, grid geochemistry and geophysics as required, trenching and drilling.

- The budget for the above program is estimated to be $649,800.

2. INTRODUCTION

In early 2006, Farshad Shirvani staked an irregularly shaped claim block, El Toro group that covered some 40 showings, prospects, deposits and past producers located south and southwest of Telkwa, British Columbia. The Smithers Map- Area contains several past producer and significant vein deposits that include Silver Queen, Equity Silver, Cronin, Dome Mountain, Victory and Bob Creek. In addition, porphyry deposits in the area include the past producing Granisle porphyry Cu, Au district, Serb Creek Mo, Blue Pearl Mo(W) (Glacier Gulch), Big Onion CuMo, and Lucky Ship Mo.

The writer was asked to review the published historical data, evaluate the potential for an economic deposit or deposits from several types present, and recommend an exploration program.

3. LOCATION

The centre of El Toro claim block is 30 km southwest of Telkwa, in central B.C. It is underlain by mainly rugged topography in the Telkwa range of the Hazelton Mountains. Elevations range from 2340 m A.S.L. at the peaks to 600 m A.S.L. in the Bulkley Valley. About one-third of the claim area is above tree line.

The claim block is plotted on a 1:250 K topo base in Figure 1.

4. CLAIMS

El Toro block comprises the following claim tenure numbers. The claim block is shown in Figure 1.

Tenure Number	Tenure Type	Claim Name	Owner	Map Number	Good To Date	Status	Mining Division	Area
525417	Mineral	BULL	147352 (100%)	093L	2007/JAN/14	GOOD		450.474
525440	Mineral	THE HOOF	147352 (100%)	093L	2007/JAN/14	GOOD		75.369
528995	Mineral	TORO 1	147352 (100%)	093L	2007/FEB/27	GOOD		469.114
528997	Mineral	TORO 2	147352 (100%)	093L	2007/FEB/27	GOOD		450.528
528998	Mineral	TORO 3	147352 (100%)	093L	2007/FEB/27	GOOD		450.705
529782	Mineral	R EYE	147352 (100%)	093L	2007/MAR/09	GOOD		225.25
530549	Mineral	THE DEL	147352 (100%)	093L	2007/MAR/26	GOOD		94.194
530550	Mineral	R HOOF	147352 (100%)	093L	2007/MAR/26	GOOD		56.522
533685	Mineral	EL TORO 1	147352 (100%)	093L	2007/MAY/08	GOOD		469.425
533686	Mineral	EL TORO 2	147352 (100%)	093L	2007/MAY/08	GOOD		469.141
533687	Mineral	EL TORO 3	147352 (100%)	093L	2007/MAY/08	GOOD		469.71
533688	Mineral	EL TORO 4	147352 (100%)	093L	2007/MAY/08	GOOD		469.652
533689	Mineral	EL TORO	147352 (100%)	093L	2007/MAY/08	GOOD		469.94
533690	Mineral	EL TORO 5	147352 (100%)	093L	2007/MAY/08	GOOD		469.959
533691	Mineral	EL TORO 6	147352 (100%)	093L	2007/MAY/08	GOOD		469.912
533692	Mineral	EL TORO 7	147352 (100%)	093L	2007/MAY/08	GOOD		469.001
533693	Mineral	EL TORO 8	147352 (100%)	093L	2007/MAY/08	GOOD		469.138
533694	Mineral	EL TORO 9	147352 (100%)	093L	2007/MAY/08	GOOD		469.362
533695	Mineral	EL TORO 10	147352 (100%)	093L	2007/MAY/08	GOOD		469.488
533696	Mineral	EL TORO 11	147352 (100%)	093L	2007/MAY/08	GOOD		469.595
533697	Mineral	EL TORO 12	147352 (100%)	093L	2007/MAY/08	GOOD		469.692
533698	Mineral	EL TORO	147352 (100%)	093L	2007/MAY/08	GOOD		469.74
533699	Mineral	EL TORO 14	147352 (100%)	093L	2007/MAY/08	GOOD		469.935
533700	Mineral	EL TORO 15	147352 (100%)	093L	2007/MAY/08	GOOD		451.112
533701	Mineral	EL TORO 16	147352 (100%)	093L	2007/MAY/08	GOOD		470.101
533702	Mineral	EL TORO 17	147352 (100%)	093L	2007/MAY/08	GOOD		470.234
533703	Mineral	EL TORO18	147352 (100%)	093L	2007/MAY/08	GOOD		470.126
533704	Mineral	EL TORO 19	147352 (100%)	093L	2007/MAY/08	GOOD		470.339
533705	Mineral	EL TORO 20	147352 (100%)	093L	2007/MAY/08	GOOD		470.364
533706	Mineral	EL TOR 21	147352 (100%)	093L	2007/MAY/08	GOOD		471.062

533707	Mineral	EL TORO 22	147352 (100%)	093L	2007/MAY/08	GOOD	471.105
533708	Mineral	EL TORO 23	147352 (100%)	093L	2007/MAY/08	GOOD	470.725
533709	Mineral	EL TORO 24	147352 (100%)	093L	2007/MAY/08	GOOD	470.855
533710	Mineral	EL TORO 24	147352 (100%)	093L	2007/MAY/08	GOOD	470.54
533711	Mineral	EL TORO 26	147352 (100%)	093L	2007/MAY/08	GOOD	451.763
533712	Mineral	EL TORO 27	147352 (100%)	093L	2007/MAY/08	GOOD	470.316
533713	Mineral	EL TORO 26	147352 (100%)	093L	2007/MAY/08	GOOD	470.471
533714	Mineral	EL TORO 29	147352 (100%)	093L	2007/MAY/08	GOOD	470.306
533716	Mineral	EL TORO 29	147352 (100%)	093L	2007/MAY/08	GOOD	470.374
533717	Mineral	EL TORO 30	147352 (100%)	093L	2007/MAY/08	GOOD	470.086
533718	Mineral	EL TORO 31	147352 (100%)	093L	2007/MAY/08	GOOD	470.422
533719	Mineral	EL TORO 31	147352 (100%)	093L	2007/MAY/08	GOOD	470.522
533720	Mineral	EL TORO 25	147352 (100%)	093L	2007/MAY/08	GOOD	469.889
533721	Mineral	EL TORO 26	147352 (100%)	093L	2007/MAY/08	GOOD	469.758
533722	Mineral	EL TORO 33	147352 (100%)	093L	2007/MAY/08	GOOD	469.892
533723	Mineral	EL TORO 36	147352 (100%)	093L	2007/MAY/08	GOOD	469.62
533725	Mineral	EL TORO 37	147352 (100%)	093L	2007/MAY/08	GOOD	469.858
533726	Mineral	EL TORO	147352 (100%)	093L	2007/MAY/08	GOOD	469.678
533728	Mineral	EL TORO 39	147352 (100%)	093L	2007/MAY/08	GOOD	469.943
533729	Mineral	EL TORO 40	147352 (100%)	093L	2007/MAY/08	GOOD	469.89
533730	Mineral	EL TOR 41	147352 (100%)	093L	2007/MAY/08	GOOD	470.565
533731	Mineral	EL TORO	147352 (100%)	093L	2007/MAY/08	GOOD	470.723
533732	Mineral	EL TORO 42	147352 (100%)	093L	2007/MAY/08	GOOD	470.203
533733	Mineral	EL TORO 43	147352 (100%)	093L	2007/MAY/08	GOOD	357.45
533734	Mineral	EL TORO 44	147352 (100%)	093L	2007/MAY/08	GOOD	470.655
533736	Mineral	EL TORO 46	147352 (100%)	093L	2007/MAY/08	GOOD	470.155
533737	Mineral	EL TORO 45	147352 (100%)	093L	2007/MAY/08	GOOD	470.16
533739	Mineral	EL TORO 47	147352 (100%)	093L	2007/MAY/08	GOOD	470.126
533740	Mineral	EL TORO 48	147352 (100%)	093L	2007/MAY/08	GOOD	470.093
533741	Mineral	EL TORO 50	147352 (100%)	093L	2007/MAY/08	GOOD	470.288
533742	Mineral	EL TORO 51	147352 (100%)	093L	2007/MAY/08	GOOD	470.755
533743	Mineral	EL TORO 52	147352 (100%)	093L	2007/MAY/08	GOOD	469.83
533744	Mineral	EL TORO 53	147352 (100%)	093L	2007/MAY/08	GOOD	470.511
533745	Mineral	RIGHT HORN	147352 (100%)	093L	2007/MAY/08	GOOD	56.261
533746	Mineral	EL TORO 54	147352 (100%)	093L	2007/MAY/08	GOOD	470.285
533747	Mineral	THE HORN	147352 (100%)	093L	2007/MAY/08	GOOD	56.261
533763	Mineral	EL TORO 55	147352 (100%)	093L	2007/MAY/08	GOOD	319.9

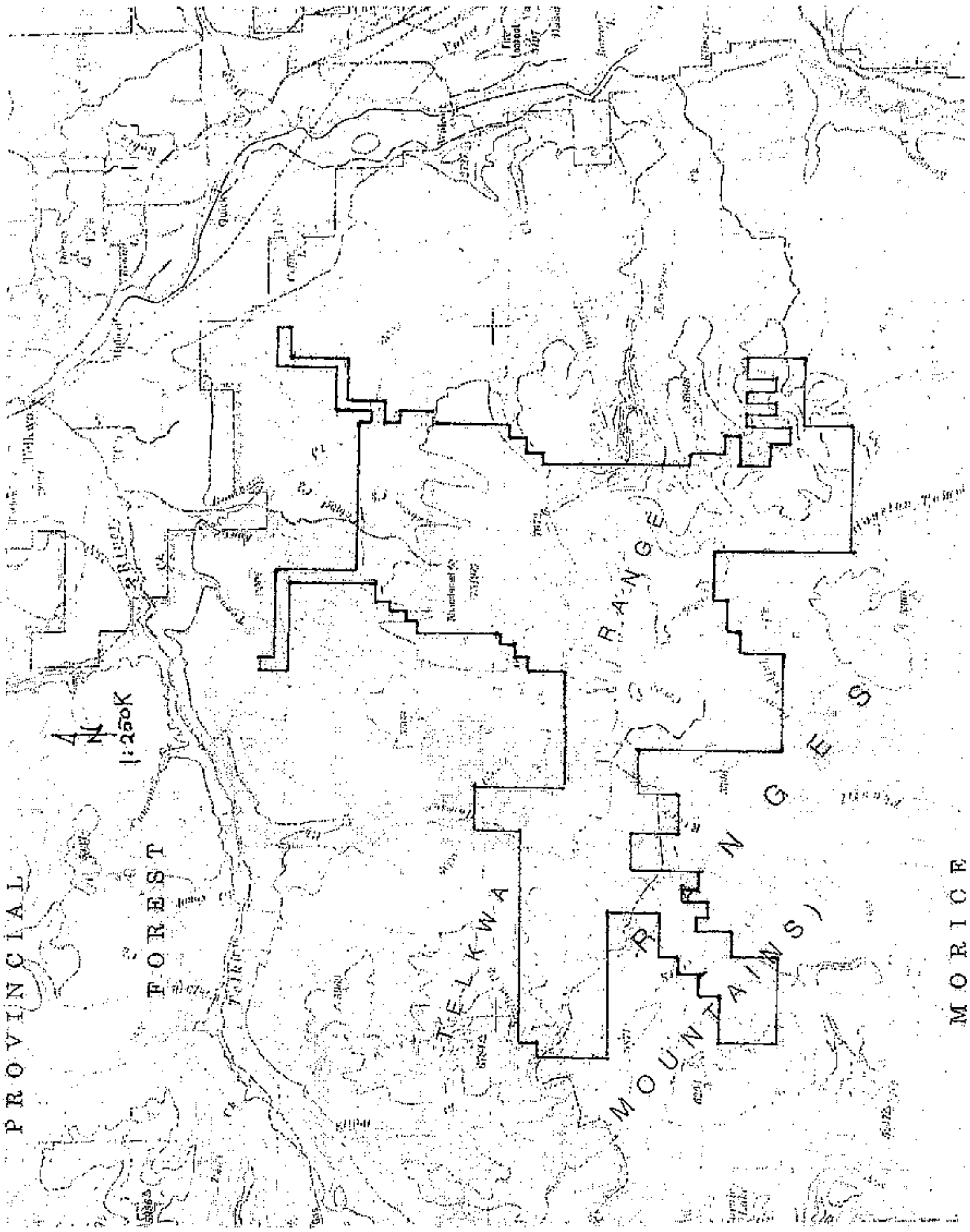

FIGURE 1   Location of El Toro claim block, Telkwa, B.C.

5. GEOLOGY

The area is underlain by dominantly arc volcanic rocks of the Stikine terrane. Oldest rocks locally are the intermediate to mafic marine volcanics and sediments of the Upper Triassic and Lower Jurassic Takla Group. Rocks of the overlying Middle and Upper Jurassic Hazelton Group include the Lower Jurassic Telkwa Formation, the host to most mineral occurrences in the claim block. Geology and mineral deposits are shown on Figure 2, after MINFILE Mineral Occurrence Map 093L. Subaerial andesitic to dacitic crystal and lithic tuffs predominate over rhyolitic flows, breccia and vesicular basalt. The Telkwa Formation is overlain by the Middle Jurassic Smithers and Ashman formations comprising marine shale, greywacke, breccia, tuff and conglomerate, and by the Upper Cretaceous Red Rose Formation comprising shale, greywacke, conglomerate and coal.

Intrusive rocks of three plutonic suites intrude the host Telkwa volcanics in and adjacent to El Toro claims. Oldest intrusions are the mainly Early Jurassic Francois Intrusions (formerly Topley Intrusions) of quartz monzonite and granodiorite stocks arrayed in a northeast-trending belt that intersects the southern part of El Toro claims. Small equant stocks and bosses of the Late Cretaceous Bulkley Intrusions are composed of quartz monzonite, granodiorite and quartz diorite and occur in a northwest-trending belt that is closely associated with vein and porphyry deposits in the eastern El Toro claim group. The most abundant intrusions are the small stocks and bosses of the Eocene Nanika Intrusions (quartz monzonite, granodiorite, quartz diorite) that form a wide northwest-trending belt across the Smithers Map-Area, coincident with that of the Bulkley Suite. Abundant dykes associated with the two latter plutonic suites, including granodiorite, quartz diorite, quartz-feldspar porphyry, and basalt, are closely associated with many of the vein, fracture-filling, shear hosted and skarn occurrences in the area.

6. MINERAL DEPOSITS

The principal deposit type present is mesothermal polymetallic Ag-Au veins of subvolcanic setting. Vein mineralogy, in approximate order of abundance, is pyrite, chalcopyrite, magnetite, bornite, hematite, tetrahedrite, sphalerite, galena and chalcocite. Gangue is quartz and lesser calcite. Veins commonly follow dyke, fracture and shear zones in the volcanic hostrocks, accompanied by an alteration assemblage that includes intense silicification plus calcite, epidote and sericite. Veins exhibit a dominant northwesterly strike, with a subordinate northeasterly trend. Previous producers include the KING, RAINBOW, COLORADO and SANTA MARIA mines, whose small production commonly peaked during the First World War. Veins were often narrow and lacking in continuity, but high grade: Au to 24g/t, Ag to 1000 g/t and Cu to 13%.

Less abundant deposit types are porphyry Mo, Cu (Low- F type) and porphyry Cu, Mo (Ag, Au). The principal Mo porphyry occurrences are the FOG and FOG, FLY hosted by an elongate Bulkley pluton immediately south of Hunter Basin in the northeastern claim group. At FOG quartz-molybdenite-minor chalcopyrite veins 2 to 5 cm wide are associated with two zones of quartz-sericite alteration, one of which is over 200 m wide.

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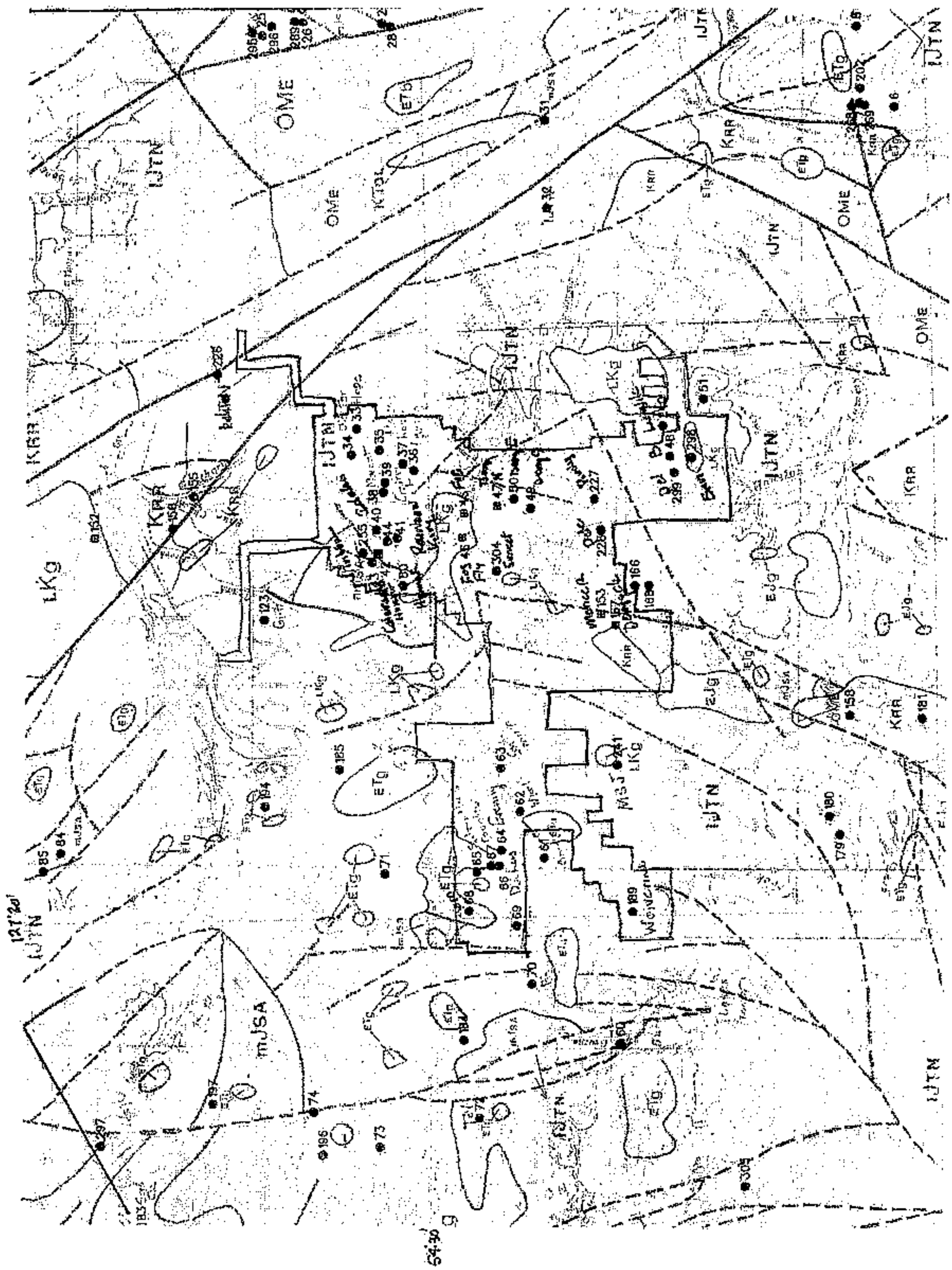

FIGURE 2: Geology and Mineral Deposits in El Toro claim area

Argillic and potassic alteration of intrusive rocks occurs between the veins, and a skarn calc-silicate assemblage is developed in volcanic rocks in contact with the stock. A 0.5 m channel sample from the eastern quartz-sericite zone assayed 0.252 % Mo and 0.01 % Cu. Plutons of both Bulkley and Nanika plutonic suites are prospective for porphyry deposits. The potential for porphyry Cu, Mo (Ag, Au) deposits exists where disseminated mineralization occurs in felsic granitoids dykes associated with veins, as at DUCHESS prospect and RAINBOW previous producer. Plutons associated with mineralized dykes are prospective for porphyry-type deposits.

Several occurrences of skarn Cu-Ag-Zn mineralization with calc-silicate-magnetite skarn assemblages are recorded adjacent to dyke and plutonic contacts, in association with vein and disseminated mineralization, e.g. DUCHESS, FOG. Host Telkwa formation rocks are lacking in carbonate members, and extensive or economic concentrations of skarn Cu-Ag-Au mineralization are not likely to occur.

7. MINERAL POTENTIAL

7.1 PRIORITY 1: Porphyry Mo (Cu) and Cu Mo (Au, Ag).

The potential for discovery of an economic porphyry Mo or porphyry Cu deposit is estimated to be HIGH. Some of the positive factors influencing this choice are:

- Several other economic porphyry deposits occur in the area, e.g. Granisle, Blue Pearl.
- Plutons of two known porphyry-mineralized suites, e.g. Bulkley and Nanika, crop out in El Toro claim group.
- Several showings include disseminated, porphyry-style Cu and Mo mineralization within the host pluton, e.g. FOG.
- Several vein deposits show disseminated Cu-Ag-Au mineralization in associated felsic granitoid dykes probably related to adjacent plutons, e.g. RAINBOW, DUCHESS.
- Limited historic geophysical data indicates numerous chargeability and gravity anomalies may overlie shallowly buried mineralized plutons.

Exploration targets for porphyry-type, open-pittable deposits are estimated as follows:
Mo ore at 0.1% Mo would have a gross value of US$50/t, and a deposit of about 50 million t may be economic, all other conditions being favourable.
Cu ore at 0.5% Cu would have a gross value of US$35/t plus about $5 credits for Au and Ag, and a deposit of about 100 million t may be economic, all other conditions being favourable. These model tonnage and grade criteria are deemed reasonable for this area.

7.2 PRIORITY 2: Polymetallic Au Ag vein.

The potential for discovery of a vein deposit of dimension and grade sufficient to support an underground mining operation is estimated to be MODERATE. Some of the factors influencing this rating are:

- Four vein deposits in El Toro area have produced ore in the early 20th century, e.g. KING, RAINBOW, COLORADO and SANTA MARIA.
- At least 10 other vein deposits of similar mineralogy and elevated Cu-Ag-Au grade in El Toro area have the potential to contain limited tonnages i.e. 300-500 t, of high-grade ore.
- Several past producing and near-producing vein deposits of similar type in the Smithers area include Silver Queen, Equity Silver, Cronin, Dome Mountain, Victory and Bob Creek

Whereas numerous vein deposits are known in the region, the probability of discovering one whose economics would support an underground operation is deemed to be moderate. For veins other than SANTA MARIA, the average of 13 published assay widths is 1-2 m and lengths is less than 100 m. An exploration target for a vein deposit of grades and dimensions similar to those encountered at El Toro may be taken as a gross metal value of US$200/t, reserve of 1 million t, and dimensions of about 50 m long, 2 m wide and 25 m deep. Minimum grades for these dimensions would be in the order of 1% Cu, 100 g/t Ag and 5 g/t Au.

7.3 **PRIORITY 3**: Stockwork, disseminated Au, Ag deposit.

Potential for discovery is deemed to be LOW to MODERATE.

- The possibility of bulk tonnage, open-pittable precious metal deposits in El Toro area is supported by disseminated and/or stockwork mineralization of limited extent adjacent to veins and shear zones at LEFTY (WOLVERINE), WAR EAGLE and DUCHESS.
- El Toro area is one of intersection of regional northwest and northeast fractures, emplacement of equant to cylindrical intrusions along intersection zones of high-angle fractures, and doming of host volcanics over intrusive stocks. This structural setting is permissive for stockwork development.
- Historical exploration data define numerous areas of hydothermal alteration in fractured rocks and anomalous Cu, Ag, Zn and Au geochemical response in soils. Most of these anomalies have been inadequately tested.

A realistic target grade for a bulk-tonnage low-grade precious metal deposit is estimated to be about 1 g/t Au equivalent, which would necessitate an ore volume of at least 100 Mt.

8. PROPOSED EXPLORATION

8.1 Airborne Survey

Historical exploration for at least a century has been successful in the discovery of vein deposits, mainly by classical prospecting, and subsequent application of geochemical and geophysical exploration methods has been largely localized by vein discoveries. The rugged topography has limited the extent of regional surveys. To effectively explore the potential for buried porphyry-type deposits (Priority 1) a departure from ground-based methods is recommended. A helicopter-borne combined magnetometer-scintillometer-VLF-EM survey is recommended as a cost effective way of covering this large and rugged area.

Figure 3 gives the outline of the proposed area to be covered by an airborne survey. The irregular outline of El Toro claim block creates problems for detailed airborne coverage, and the proposed survey area represents compromises. If north-south lines spaced at 100 m were flown across the area, a total of 3710 line- km would be flown. At an estimated contract cost of $120/line-km, the program would cost $445,200. A 100 m line spacing is deemed the optimum to reveal porphyry copper targets, and selected areas could be flown later at 50 m line spacing to better define the larger targets but also to reveal targets of the size recorded in El Toro area. The magnetic survey will be particularly useful in detecting contacts of concealed plutons and magnetite-bearing mineralization, and assisting in mapping of known intrusive contacts. The radiometric survey allows identification and discrimination of plutonic suites and petrographic types on the bases of U/Th ratios and K content, and is particularly useful in detecting zones of potassic alteration. The airborne VLF-EM survey should reveal sulphide-rich conductors, particularly large veins and mineralized shear zones.

8.2 Follow-Up Surveys

Anomalies generated by the airborne survey may include magnetic highs over buried plutons, contacts and magnetic mineralization, potassium-rich alteration zones, and linear EM conductors. These and other anomalies should be followed up by first carrying out conventional prospecting, recce mapping and sampling, then doing grid geochemical and geophysical surveys as warranted. Developed anomalies should be first trenched by hand or excavator, and then drilled. The results of the airborne and ground follow-up surveys will dictate the scope of the drilling program.

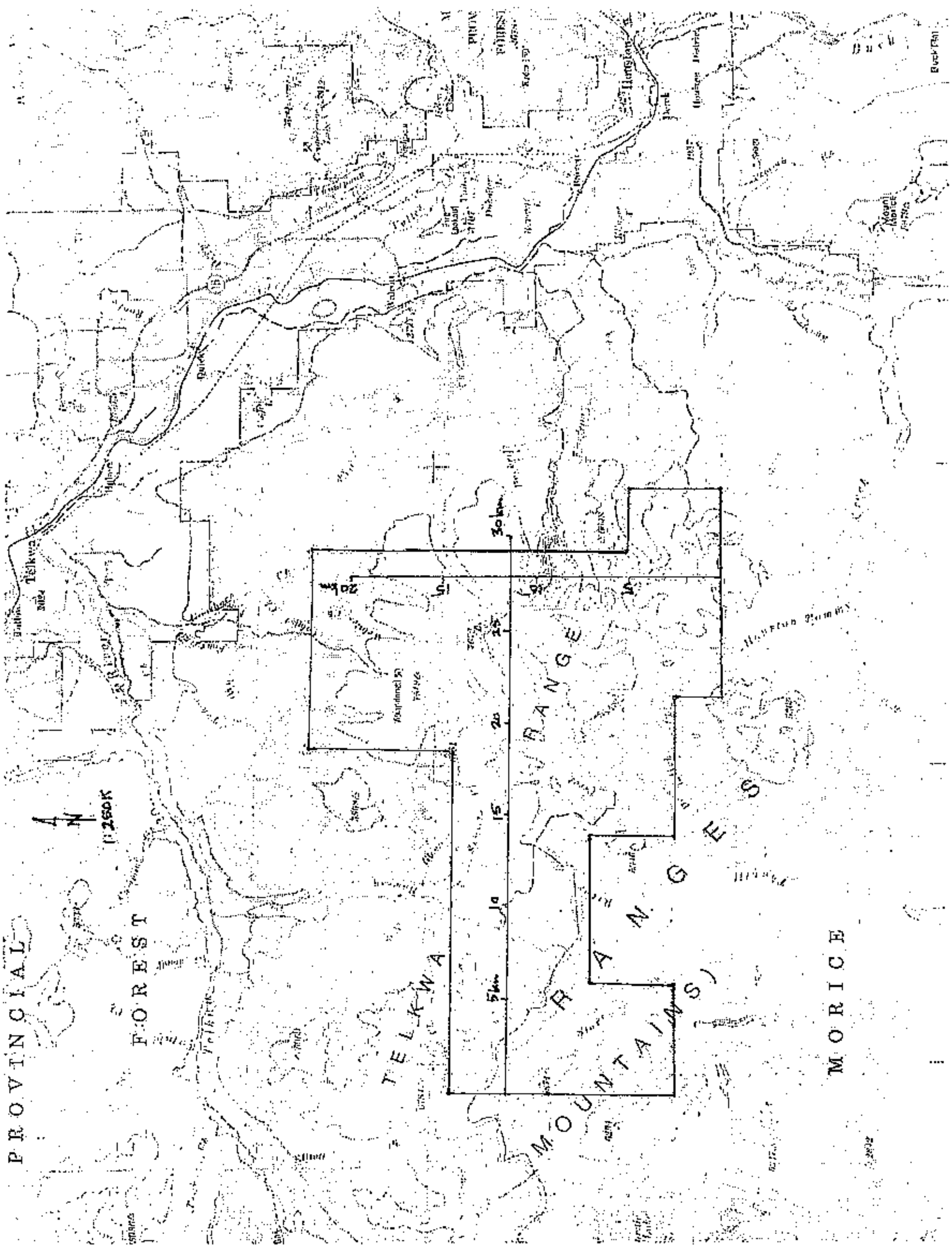

FIGURE 3: Outline of Proposed Helicopter Airborne Survey Area, El Toro Claims

9. CONCLUSIONS

- El Toro claim block overlies a well- mineralized area south of Telkwa that includes over 40 past producers, deposits, prospects and occurrences.

- Whereas four previous producing polymetallic Au, Ag vein deposits are located within El Toro claims, and several past producing mines are located in the Smithers Map-Area, the potential for discovery of an economic underground mine of this type is rated as only Moderate. The narrow widths, short and/or discontinuous lengths, and inconsistent grades of most vein deposits are negative factors in their economic potential

- Whereas only two modest porphyry-type occurrences are recorded at El Toro, the potential for discovery of at least one economic porphyry Mo (Cu) or porphyry Cu (Mo, Au, Ag) deposit is rated as High. Plutons of two suites (Bulkley and Nanika) that host significant porphyry-type deposits elsewhere in the region are common in the claim area. Some plutons appear to be genetically related to mineralized granitoid dykes.

- An airborne magnetic-radiometric-VLF-EM survey, flown on north-south lines at 50 m spacing, is recommended to reveal the presence of buried plutons and accompanying porphyry-style mineralization. The presence of vein, mineralized shear zone, stockwork and skarn mineralization should also be detected by an airborne multi-channel survey.

10. BUDGET

Airborne survey: multi-channel helicopter borne survey that covers
3710 line- km at an estimated contract price of $120/line- km......................$445,200.

Follow-up prospecting, recce mapping and sampling of anomalies, trenching, grid geochemical and geophysical surveys, crew of 4 for 1 month:

Salaries: geologist $500/day, assistants $350/day	46,500
R&B	12,000
Trucks (2), fuel	5,000
Assays	7,500
Supplies	1,000
Excavator, est. 7 days@$2000	14,000
Incidentals@10%	8,600

Diamond drilling, est. 1000 m@$100	100,000
Reporting, data handling	10,000

Total...$649,800

11. REFERENCES

MINFILE Map 093L Smithers, Scale 1:250,000, 1989.

ARIS Reports for 093 L, B.C. Ministry of Energy Mines and Petroleum Resources

12. STATEMENT OF QUALIFICATIONS

I, Kenneth Murray Dawson, Ph.D., P.Geo. do hereby certify that;

I am President of Terra Geological Consultants Ltd., 3687 Loraine Ave., North Vancouver, B.C. V7R 4B9;
I graduated with a Ph.D. in Economic Geology from the University of British Columbia in 1972, and a Bachelor of Science degree in Honours Geology from the University of British Columbia in 1964;
I am a Member of the Professional Engineers and Geoscientists of British Columbia, a Fellow of the Geological Association of Canada, a Life Member of the Canadian Institute of Mining and Metallurgy, a Member of the Mineralogical Association of Canada, and a Corresponding Member of the Russian Academy of Science;
I have worked as an exploration, research and mining geologist for over forty-one years since my graduation from university;
I am responsible for the entire report titled "A Review of Historical Data on El Toro Claims of Farshad Shirvani, 093L/5,6,11, Telkwa, B.C.";
I have not visited nor had prior involvement with the property that is the subject of this report;
I am independent of Farshad Shirvani, applying the tests set out in Section 1.5 of NI 43-101;
I consent to the filing of this technical report with any stock exchange or other regulatory authority and any publication by them.

Dated May 7, 2006

Kenneth M. Dawson

BRITISH COLUMBIA
The Best Place on Earth

Mineral Titles Branch
Information Update

No. 25 – Physical Exploration and Development Work

Revision Date: April 2, 2007

The work activities outlined below are the only types of work that may be claimed as stand-alone physical exploration and development work on a mineral or placer claim. This is set out in the definition of "physical exploration and development" in section 1 of the Mineral Tenure Act Regulation.

1. **Trenching, open cuts, adits, pits, shafts and other underground activity** for the purposes of collecting samples or other geological or technical information. Shallow drill holes for the purpose of blasting are also considered physical work.

   These details must be included in the report:

   - the metric dimensions of the trench, open cut, adit, pit, shaft or drill hole
   - the amount, in metric measurement, of material removed
   - the method of extraction (hand work with shovel and/or pick axe, specific machinery, number of people, etc)
   - a cost statement that details the value for the method, and
   - a map at a scale of 1:10,000 or greater detail showing the work sites within the claim boundaries.

2. **Reclamation related to completed work.** Detail what was done and how, and provide the value in the cost statement.

3. **Ground control surveys, line cutting and grids** that are part of a proposed technical work program such as geological sampling, geochemical sampling, geophysical (airborne) surveys, or diamond drilling. This survey and line cutting does **not** include any claim boundary surveying or marking. A map of the ground control or grid lines, at a scale of 1:5,000 or more detail, must be provided in the report.

4. **Precision surveys** such as a legal survey. A copy of the survey must be provided.

5. **For placer claims only,** in addition to any of the above, the panning, digging or washing of gravels to recover placer mineral. The report must include the amount (in metric measurement) of material processed, the method used (panning, sluice, rocker box, trommel, etc), and how it was done (labourers, machinery) with the values.

Activities such as walking around the claim, picking up rocks, planning out or surveying for work sites or roads, and marking the claim boundaries, are not allowable for work credits, and should not be included in physical or technical reports.

"Prospecting" or "exploring" is technical work in the Regulation, and must include assay results or geological data included in the technical report. This type of work cannot be claimed as physical.

Road and trail work and site preparation/clearing can only be claimed as part of a technical work program in a technical report.

Refer to Information Update No. 8, *Guide to the Evaluation of Physical Work for Assessment Purposes*, for information on determining the value for physical work.

Ministry of
Energy, Mines and
Petroleum Resources

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APPENDIX II:

REPORT ON A HELICOPTER-BORNE AEROTEM SYSTEM ELECTROMAGNETIC AND MAGNETIC SURVEY
AEROQUEST INTERNATIONAL
SEPTEMBER 2007

Report on a Helicopter-Borne AeroTEM System Electromagnetic & Magnetic Survey

Aeroquest Job # 08034

El Toro Project

Smithers Area, British Columbia, Canada
NTS 093L06, 11

For

LIONS GATE ENERGY INC.

by

AEROQUEST INTERNATIONAL
ADVANCED AIRBORNE GEOPHYSICS

7687 Bath Road,
Mississauga, ON, L4T 3T1
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Report date: September 2007

Report on a Helicopter-Borne AeroTEM System Electromagnetic & Magnetic Survey

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LIST OF MAPS (1:10,000)

- TMI – Coloured Total Magnetic Intensity (TMI) with line contours and EM anomaly symbols.
- ZOFF1 – AeroTEM Z1 Off-time with line contours and EM anomaly symbols.
- EM – AeroTEM off-time profiles Z1 – Z11 and EM anomaly symbols.

1. INTRODUCTION

This report describes a helicopter-borne geophysical survey carried out on behalf of Lions Gate Energy Inc. their El Toro project, near Smithers, British Columbia.

The principal geophysical sensor is Aeroquest's exclusive AeroTEM II (Bravo) time domain helicopter electromagnetic system which is employed in conjunction with a high-sensitivity caesium vapour magnetometer. Ancillary equipment includes a real-time differential GPS navigation system, radar altimeter, video recorder, and a base station magnetometer. Full-waveform streaming EM data is recorded at 36,000 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 survey coverage is 628.8 line-km, of which 614.9 line-km fell within the defined project area (Appendix 1). The survey was flown at 100 metre line spacing and in a North-South survey flight direction. The survey flying described in this report took place from July 21st to August 2nd, 2007. This report describes the survey logistics, the data processing, presentation, and provides the specifications of the survey.

2. SURVEY AREA

The Project area (Figure 1) is located in central British Columbia approximately 30 km south of Smithers. The survey consisted of a single block of covering approximately 56 km² and can be located on NTS sheets 093L06 and 093L11. Survey terrain was mountainous (Figure 2) with elevations ranging from 1,150 – 2,350 m above sea level. The property has good local road access (Figure 1). The survey block boundary co-ordinates are tabulated in Appendix 1.

There are 5 mining claims either partially or wholly covered by the survey. Claim ownership is tabulated in Appendix 2.

The base of survey operations was in the town of Smithers. The survey crew was accommodated at the Stork nest Inn, Smithers. A fuel cache was positioned at N54° 34' 49.8" / W127° 05' 12.5" for the duration of the survey work.

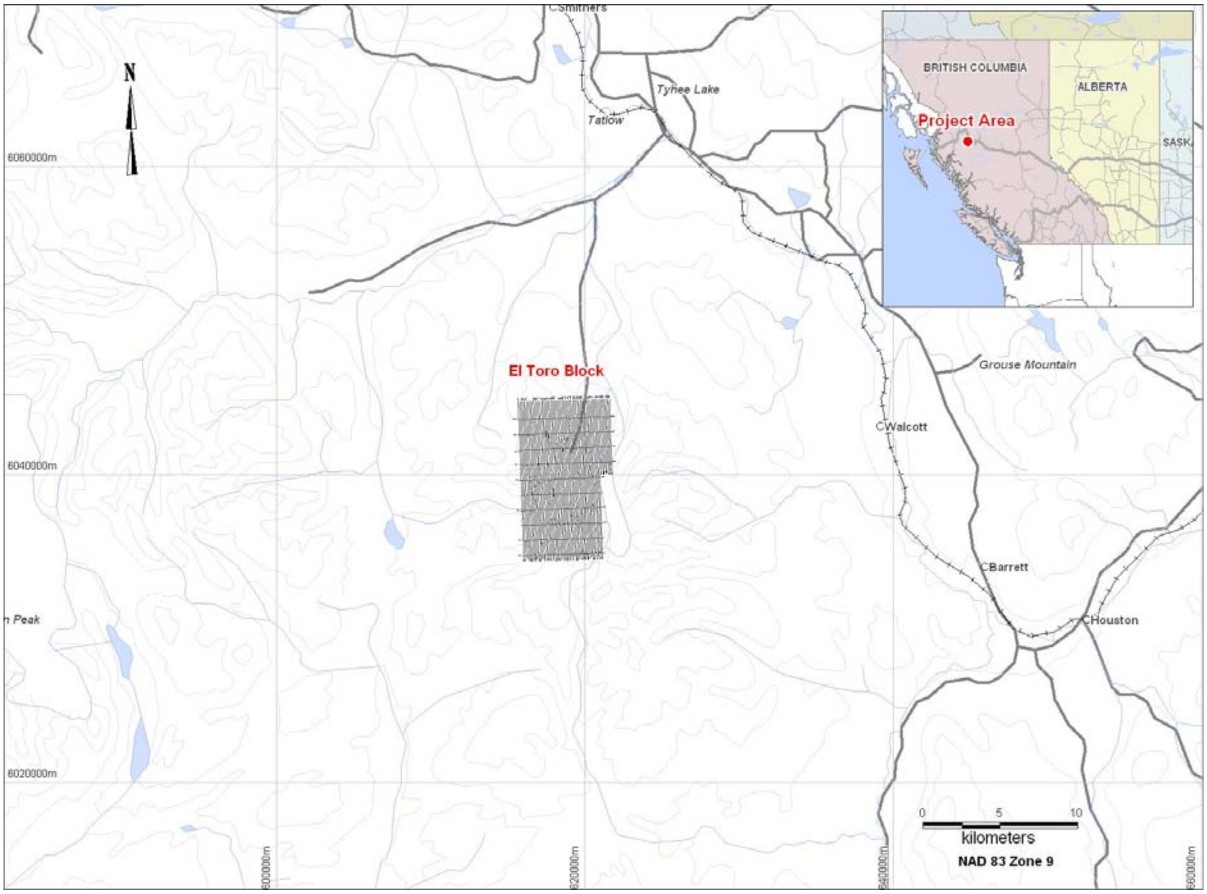

Figure 1. Project Area

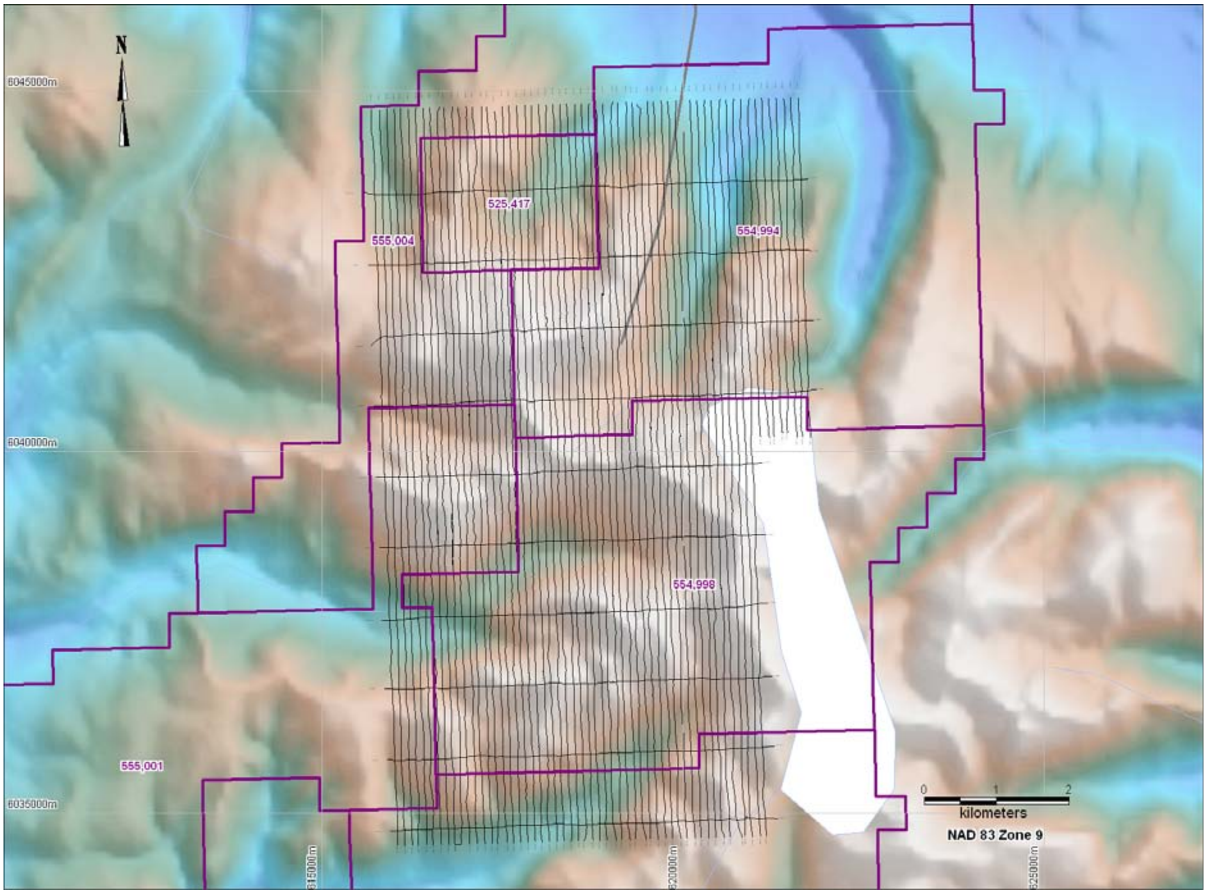

Figure 2. Project flight path and mining claims and shaded topography

3. SURVEY SPECIFICATIONS AND PROCEDURES

The survey specifications are summarised in the following table:

Project Name	Line Spacing (metres)	Line Direction	Survey Coverage (line-km)	Date flown
Taseko	100	N-S (358º)	628.8	July 21st to August 2nd, 2007

Table 1. Survey specifications summary

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 metres. The control (tie) lines were flown perpendicular to the survey lines with a spacing of 1000 metres.

The nominal EM bird terrain clearance is 30 metres, but can be higher in more rugged terrain due to safety considerations and the capabilities of the aircraft. The magnetometer sensor is mounted in a smaller bird connected to the tow rope 17 metres above the EM bird and 21 metres below the helicopter (Figure 4). A second magnetometer is installed on the tail of the EM bird. 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 36,000 samples per second and is processed to generate final data at 10 samples per second. The 10 samples per second translate to a geophysical reading about every 1.5 to 2.5 metres along the flight path.

3.1. 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.

3.2. 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.

3.3. Field QA/QC Procedures

On return of the pilot and operator to the base, usually after each flight, the AeroDAS streaming EM data and the RMS data are carried on removable hard drives and FlashCards, respectively and transferred to the data processing work station. At the end of each 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.

4. AIRCRAFT AND EQUIPMENT

4.1. Aircraft

A Eurocopter (Aerospatiale) AS350B2 "A-Star" helicopter - registration C-FPTG was used as survey platform. The helicopter was owned and operated by Hi-Wood Helicopters, Calgary, Alberta. Installation of the geophysical and ancillary equipment was carried out by Aeroquest Limited personnel in conjunction with a licensed aircraft. The survey aircraft was flown at a nominal terrain clearance of 220 ft (65 metres).

Figure 3. Helicopter registration number C-FPTG

4.2. MAGNETOMETER

The AeroTEM II airborne survey system employs the Geometrics G-823A caesium vapour magnetometer sensor installed in a two metre towed bird airfoil attached to the main tow line, 21 metres below the helicopter (Figure 4). 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 51 metres (170 ft.). The magnetic data is recorded at 10 Hz by the RMS DGR-33.

4.3. MAGNETOMETER II

In addition to the main magnetometer bird on the main tow line, the AeroTEM II system includes an additional G-828A magnetometer installed on the tail of the EM bird (Figure 4). The sensor is located 37 metres below the helicopter and has a superior nominal terrain clearance of 31 m. Data is recorded at 300 samples a second and down sampled to 10 Hz by the AeroDAS acquisition system.

Figure 4. AeroTEM II EM bird. Arrow indicates the location of the second cesium magnetometer sensor.

4.4. ELECTROMAGNETIC SYSTEM

The electromagnetic system is an Aeroquest AeroTEM II time domain towed-bird system (Figure 4, Figure 5). The current AeroTEM II transmitter dipole moment is 38.8 kNIA. The AeroTEM bird is towed 38 metres (125 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 1.10 ms and a base frequency of 150 Hz (Figure 5). The current alternates polarity every on-time pulse. During every Tx on-off cycle (300 per second), 120 contiguous channels of raw X and Z component (and a transmitter current monitor, itx) of the received waveform are measured. Each channel width is 27.78 microseconds starting at the beginning of the transmitter pulse. This 120 channel data is referred to as the raw streaming data. The AeroTEM system has two separate EM data recording streams, the conventional RMS DGR-33 and the AeroDAS system which records the full waveform (Figure 6).

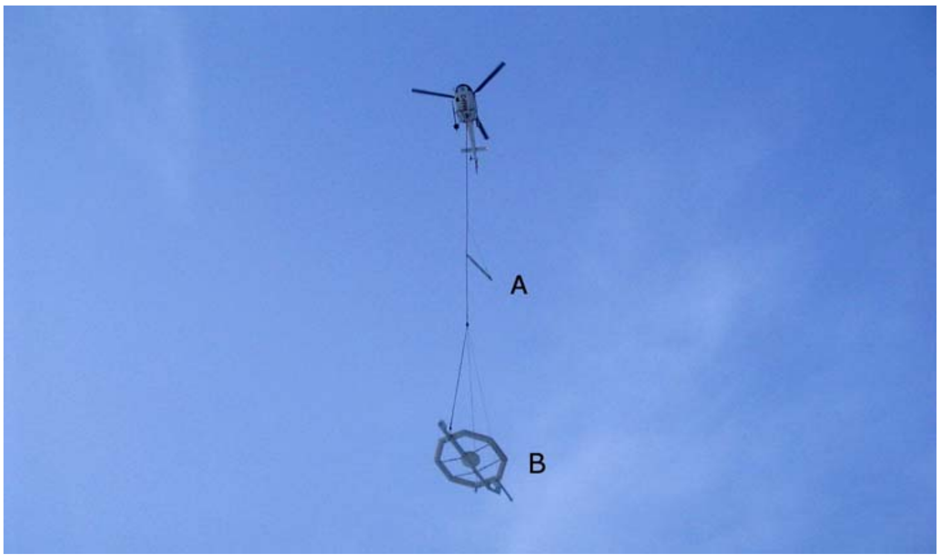

Figure 5. The magnetometer bird (A) and AeroTEM II EM bird (B)

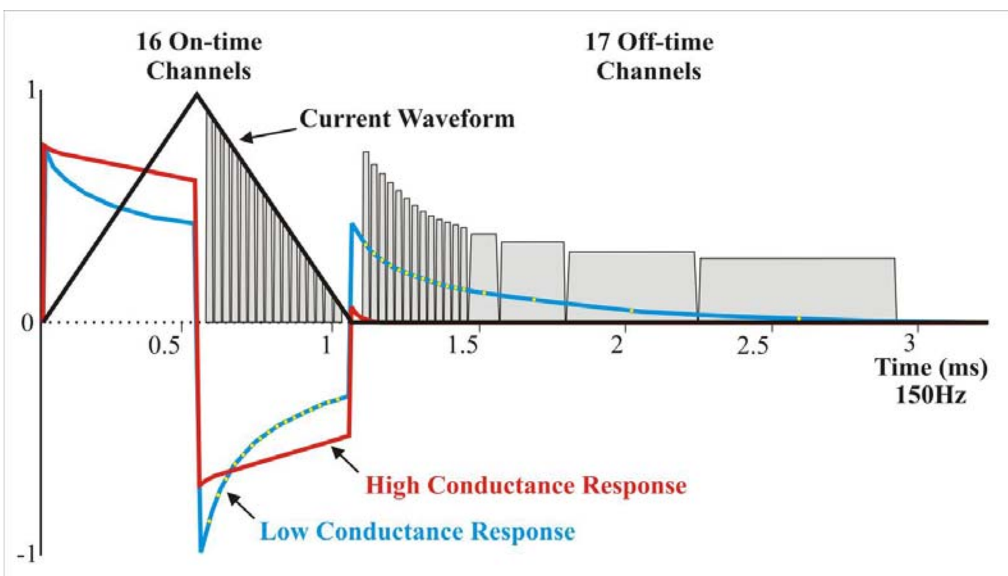

Figure 6. Schematic of Transmitter and Receiver waveforms

4.5. AERODAS ACQUISITION SYSTEM

The 120 channels of raw streaming data are recorded by the AeroDAS acquisition system (Figure 7) 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:

```
Average TxOn      9.4804 us
Average TxOff     1137.9103 us
```

Channel	Sample Range	Time Width (us)	Time Center (us)	Time After TxOn (us)
On1	3 - 3	27.778	69.444	59.964
On2	4 - 4	27.778	97.222	87.742
On3	5 - 5	27.778	125.000	115.520
On4	6 - 6	27.778	152.778	143.297
On5	7 - 7	27.778	180.556	171.075
On6	8 - 8	27.778	208.333	198.853
On7	9 - 9	27.778	236.111	226.631
On8	10 - 10	27.778	263.889	254.409
On9	11 - 11	27.778	291.667	282.186
On10	12 - 12	27.778	319.444	309.964
On11	13 - 13	27.778	347.222	337.742
On12	14 - 14	27.778	375.000	365.520
On13	15 - 15	27.778	402.778	393.297
On14	16 - 16	27.778	430.556	421.075
On15	17 - 17	27.778	458.333	448.853
On16	18 - 18	27.778	486.111	476.631

Channel	Sample Range	Time Width (us)	Time Center (us)	Time After TxOff (us)
Off0	44 - 44	27.778	1208.333	70.423
Off1	45 - 45	27.778	1236.111	98.201
Off2	46 - 46	27.778	1263.889	125.979
Off3	47 - 47	27.778	1291.667	153.756
Off4	48 - 48	27.778	1319.444	181.534
Off5	49 - 49	27.778	1347.222	209.312
Off6	50 - 51	55.556	1388.889	250.979
Off7	52 - 53	55.556	1444.444	306.534
Off8	54 - 55	55.556	1500.000	362.090
Off9	56 - 57	55.556	1555.556	417.645
Off10	58 - 60	83.333	1625.000	487.090
Off11	61 - 63	83.333	1708.333	570.423
Off12	64 - 67	111.111	1805.556	667.645
Off13	68 - 72	138.889	1930.556	792.645
Off14	73 - 80	222.222	2111.111	973.201
Off15	81 - 93	361.111	2402.778	1264.868
Off16	94 - 113	555.556	2861.111	1723.201

4.6. RMS DGR-33 ACQUISITION SYSTEM

In addition to the magnetics, altimeter and position data, six channels of real time processed off-time EM decay 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 (µs)	End time (µs)	Width (µs)	Streaming Channels
Z1, X1	1269.8	1322.8	52.9	48-50
Z2	1322.8	1455.0	132.2	50-54
Z3	1428.6	1587.3	158.7	54-59
Z4	1587.3	1746.0	158.7	60-65
Z5	1746.0	2063.5	317.5	66-77
Z6	2063.5	2698.4	634.9	78-101

Figure 7. AeroTEM II Instrument Rack., including AeroDAS and RMS DGR-33 systems, AeroTEM power supply, data acquisition computer and AG-NAV2 navigation system.

4.7. MAGNETOMETER BASE STATION

The base magnetometer was a Geometrics G-859 cesium vapour magnetometer system with integrated GPS. Data logging and UTC time synchronisation 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.

4.8. 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.

4.9. VIDEO TRACKING AND RECORDING SYSTEM

A high resolution digital colour 8 mm 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.

Figure 8. Digital video camera typical mounting location.

4.10. GPS NAVIGATION SYSTEM

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

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.

4.11. DIGITAL ACQUISITION SYSTEM

The AeroTEM received waveform sampled during on and off-time at 120 channels per decay, 300 times per second, was logged by the proprietary AeroDAS data acquisition system. The channel sampling commences at the start of the Tx cycle and the width of each channel is 26.04 microseconds. The streaming data was recorded on a removable hard-drive and was later backed-up onto DVD-ROM from the field-processing computer.

The RMS Instruments DGR33A data acquisition system was used to collect and record the analogue data stream, i.e. the positional and secondary geophysical data, including processed

6 channel EM, magnetics, radar altimeter, GPS position, and time. The data was recorded on 128 Mb capacity FlashCard. The RMS output was also directed to a thermal chart recorder.

5. PERSONNEL

The following Aeroquest personnel were involved in the project:

- Manager of Operations: Bert Simon
- Manager of Data Processing: Jonathan Rudd
- Field Data Processor(s): Emilio Schein, Eicka Alinee Solano
- Field Operator: Gabriel Genier
- Data Interpretation and Reporting: Matt Pozza, Eric Steffler

The survey pilot, Paul Kendall, was employed directly by the helicopter operator – Hi-Wood Hellicopters.

6. DELIVERABLES

6.1. HARDCOPY DELIVERABLES

The report includes a set of six (3) 1:10,000 maps. The survey area is covered by a single map plate and three geophysical data products are delivered as listed below:

- TMI – Coloured Total Magnetic Intensity (TMI) with line contours and EM anomaly symbols.
- ZOFF1 – AeroTEM Z1 Off-time with line contours and EM anomaly symbols.
- EM – AeroTEM off-time profiles Z1 – Z11 and EM anomaly symbols.

The coordinate/projection system for the maps is NAD83 – UTM Zone 10N. For reference, the latitude and longitude in WGS84 are also noted on the maps.

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 and survey specifications are displayed on the left margin of the maps.

6.2. DIGITAL DELIVERABLES

6.2.1. Final Database of Survey Data (.GDB, .XYZ)

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 2. A copy of this digital data is archived at the Aeroquest head office in Mississauga.

6.2.2. Geosoft Grid files (.GRD)

Levelled Grid products used to generate the geophysical map images. Cell size for all grid files is 20 metres.

- Total Magnetic Intensity from Mag sensor on the tow cable (MagU_TMI)
- Total Magnetic Intensity from Mag sensor on EM bird (MagL_TMI)

- AeroTEM Z Offtime Channel 1 (ZOFF1)
- Calculated 3D analyitic signal (3DAS)

6.2.3. Digital Versions of Final Maps (.MAP, .PDF)

Map files in Geosoft .map and Adobe PDF format.

6.2.4. Google Earth Survey Navigation Files (.KML)

Flight navigation lines in Google earth KML format. Double click to view flight lines in Google Earth.

6.2.5. Free Viewing Software (.EXE)

- Geosoft Oasis Montaj Viewing Software
- Adobe Acrobat Reader
- Google Earth Viewer

6.2.6. Digital Copy of this Document (.PDF)

Adobe PDF format of this document.

7. 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 36-inch wide Hewlett Packard ink-jet plotters.

7.1. 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 WGS84 are also noted on the maps.

The background vector topography derived from Natural Resources Canada 1:50000 National Topographic Data Base data and the background shading was derived from NASA Shuttle Radar Topography Mission (SRTM) 90 metre resolution DEM data.

7.2. 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 (5 Hz) 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. These high elevation checks are to ensure that the gain of the system remained constant and within specifications.

7.3. Electromagnetic Data

The raw streaming data, sampled at a rate of 36,000 Hz (120 channels, 300 times per second) was reprocessed using a proprietary software algorithm developed and owned by Aeroquest Limited. Processing involves the compensation of the X and Z component data for the primary field waveform. Coefficients for this compensation for the system transient are determined and applied to the stream data. The stream data are then pre-filtered, stacked, binned to the 33 on and off-time channels and checked for the effectiveness of the compensation and stacking processes. The stacked data is then filtered, levelled and split up into the individual line segments. Further base level adjustments may be carried out at this stage. The filtering of the stacked data is designed to remove or minimize high frequency noise that can not be sourced from the geology.

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 merged into 'array format; channels in the final Geosoft 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 off-time Z channel responses correlated with X channel responses. The auto-picked anomalies were reviewed and edited by a geophysicist on a line by line basis to discriminate between thin and thick conductor types. Anomaly picks locations were migrated and removed as required. This process ensures the optimal representation of the conductor centres on the maps.

At each conductor pick, estimates of the off-time conductance have been generated based on a horizontal plate source model for those data points along the line where the response amplitude is sufficient to yield an acceptable estimate. Some of the EM anomaly picks do not display a Tau value; this is due to the inability to properly define the decay of the conductor usually because of low signal amplitudes. Each conductor pick was then classified according to a set of seven ranges of calculated off-time conductance values. For high conductance sources, the on-time conductance values may be used, since it provides a more accurate measure of high-conductance sources. 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 due to a low amplitude response were classified as a low conductance source. Please refer to the anomaly symbol legend located in the margin of the maps.

7.4. Magnetic Data

Prior to any levelling 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 bi-directional grid technique with a grid cell size of 20 metres. The final levelled grid provided the basis for threading the presented contours which have a minimum contour interval of 10 nT.

8. GENERAL COMMENTS

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

8.1. Magnetic Response

The magnetic data provide a high resolution map of the distribution of the magnetic mineral content of the survey area. This data can be used to interpret the location of geological contacts and other structural features such as faults and zones of magnetic alteration. The sources for anomalous magnetic responses are generally thought to be predominantly magnetite because of the relative abundance and strength of response (high magnetic susceptibility) of magnetite over other magnetic minerals such as pyrrhotite.

8.2. EM Anomalies

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 8). For a vertically orientated thick source (say, greater than 10 metres), the response is a single peak in the z-component response and a negative to positive crossover in the x-component response (Figure 9). 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 10). In these cases both possible source types may be indicated by picking both thick and thin response styles. For shallow dipping conductors the 'thin' pick will be located over the edge of the source, whereas the 'thick' pick will fall over the downdip 'heart' of the anomaly.

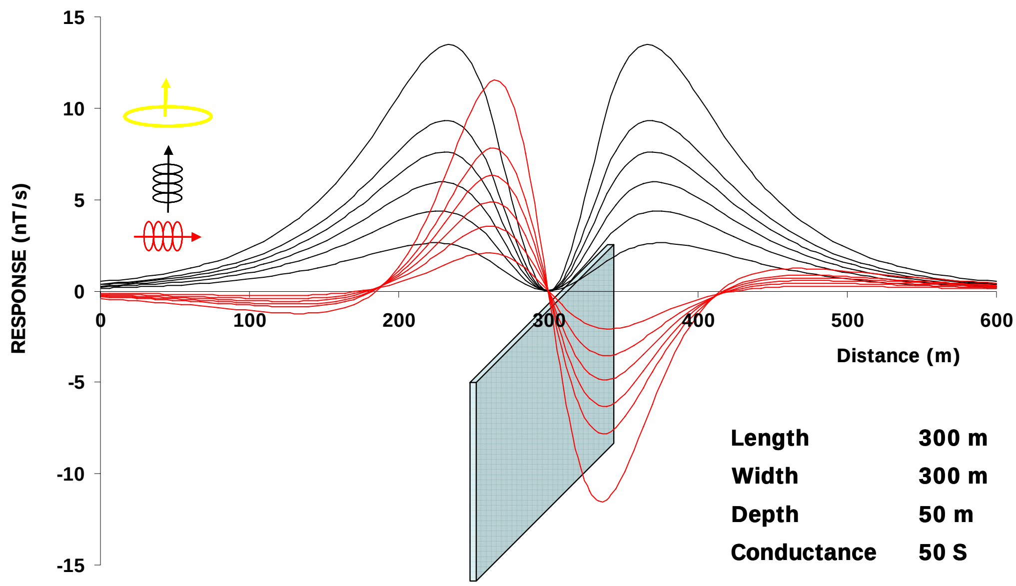

Figure 9. AeroTEM response to a 'thin' vertical conductor.

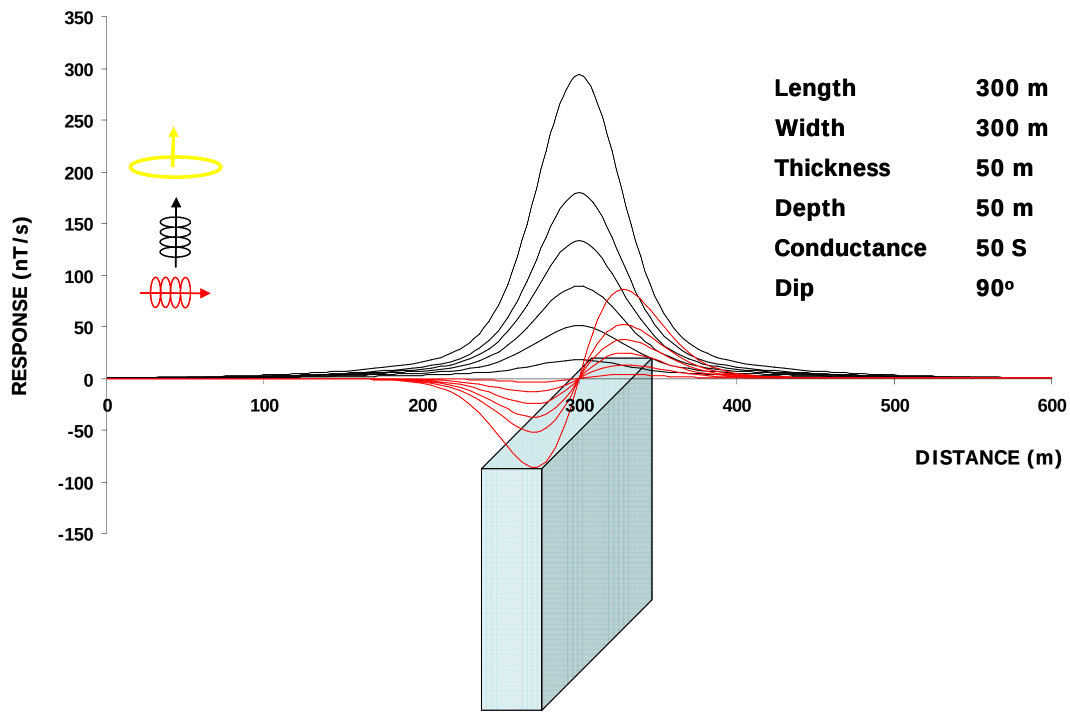

Figure 10. AeroTEM response for a 'thick' vertical conductor.

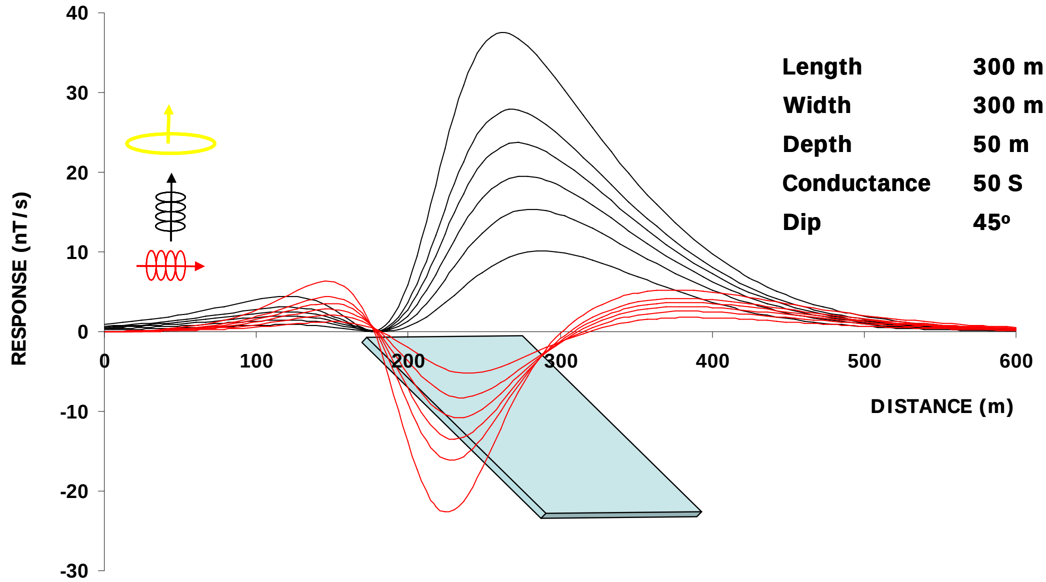

Figure 11. AeroTEM response over a ‘thin’ dipping conductor.

All cases should be considered when analyzing the interpreted picks and prioritizing for follow-up. Specific anomalous responses which remain as high priority should be subjected to numerical modeling prior to drill testing to determine the dip, depth and probable geometry of the source.

Respectfully submitted,

Matt Pozza, M.Sc.

Geophysicist

Aeroquest Limited

August, 2007

Reviewed By:

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Doug Garrie

QA/QC Geophysicist

Aeroquest Limited

August, 2007

APPENDIX 1: SURVEY BOUNDARIES

The following table presents the Taseko block boundaries. All geophysical data presented in this report have been windowed to these outlines. X and Y positions are in metres: NAD83 UTM Zone 9N.

X	Y	
615654.92	6044643.7	AREA CORNER 1
621599.97	6044815.33	AREA CORNER 2
621767.68	6040301.85	AREA CORNER 3
620983.51	6040296.37	AREA CORNER 4
621222.87	6034775.27	AREA CORNER 5
616047.72	6034641.45	AREA CORNER 6

APPENDIX 2: MINING CLAIMS

From Government of British Columbia Mineral Titles Online (September 2007)

Tenure Number	Claim Name	Owner	Good To Date	Area (Ha)	Block
525417	Bull	Shirvani, Farshad	2009/dec/10	450.47	El Toro
554994	R Eye	Shirvani, Farshad	2008/Aug/01	3003.58	El Toro
554998	Mouth	Shirvani, Farshad	2008/Aug/01	2799.98	El Toro
555000	Chest	Shirvani, Farshad	2008/Aug/01	3291.95	El Toro
555004	Ear & Horns	Shirvani, Farshad	2008/Aug/01	1989.79	El Toro
555001	Guts	Shirvani, Farshad	2008/Aug/01	3760.12	El Toro

APPENDIX 3: 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".

COLUMN	UNITS	DESCRIPTOR
Line		Line number
Flight		Flight #
emfid		AERODAS Fiducial
utctime	hh:mm:ss.ss	UTC time
x	m	UTM Easting (NAD83, Zone 09N)
y	m	UTM Northing (NAD83, Zone 09N)
Galtf	M	GPS altitude of Mag bird
bheight	m	Terrain clearance of EM bird
dtm	m	Digital Terrain Model
magUf	nT	Final levelled total magnetic intensity from upper mag sensor installed in a bird 17 m above the EM bird.
magLf	nT	Final levelled total magnetic intensity from lower mag sensor installed on the tail of the EM bird.
Basemagf	nT	Base station total magnetic intensity
Zon	nT/s	Processed Streaming On-Time Z component Channels 1-16
Zoff	nT/s	Processed Streaming Off-Time Z component Channels 0-16
Xon	nT/s	Processed Streaming On-Time X component Channels 1-16
Xoff	nT/s	Processed Streaming Off-Time X component Channels 0-16
Anom_labels		Alphanumeric label of conductor pick
Off_Con	S	Off-time conductance at conductor pick
Off_Tau	µs	Off-time decay constant at conductor pick
Anom_ID		Anomaly Character (K= thicK, N = thiN)
grade		Classification from 1-7 based on conductance of conductor pick
pwrline		powrline monitor data channel
Off_allcon	S	Off-time conductance
Off_AllTau	µs	Off-time decay constant

APPENDIX 4: AEROTEM ANOMALY LISTING

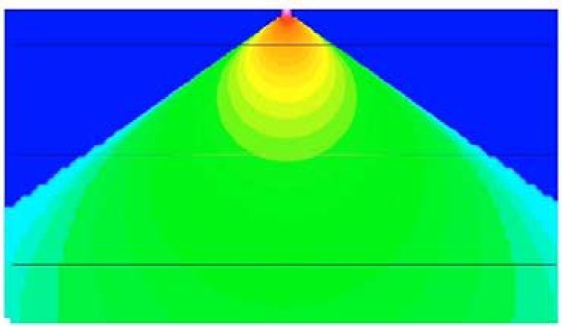
Line	Anom	ID	Cond	Tau	Flight #	UTC TIME	Height	x	y
10250	A	K	1.2	108.7	7	18:05:12	46.7	618224.2	6041381.2
10260	A	K	1.1	105.1	7	18:13:45	74.0	618319.3	6041377.0
10480	A	K	1.5	123.6	8	20:40:47	51.9	620548.9	6040507.1
10490	A	N	0.5	69.7	8	20:28:59	62.3	620629.7	6040667.1
10490	B	K	0.5	69.7	8	20:29:05	65.1	620635.6	6040552.6
10500	A	K	0.9	96.0	8	20:20:17	47.7	620738.6	6040569.1
10500	B	K	0.3	52.0	8	20:20:28	52.4	620733.1	6040796.1
10530	A	K	0.5	67.7	103	0:17:18	39.0	621040.4	6040935.6
10530	B	N	0.6	76.8	103	0:17:34	36.1	621045.5	6040667.3
10530	C	K	0.6	76.8	103	0:17:38	40.7	621041.6	6040614.8
10540	A	K	0.7	83.7	103	0:09:03	57.3	621147.2	6040665.7
10540	B	N	0.7	83.7	103	0:09:06	56.0	621137.7	6040727.9
10540	C	K	0.3	57.9	103	0:09:20	51.6	621127.9	6041040.7
10550	A	N	1.8	135.1	103	0:07:18	45.3	621235.8	6040759.3
10550	B	K	1.8	135.1	103	0:07:22	46.7	621239.3	6040700.4
10570	A	K	0.3	51.1	103	23:54:13	50.7	621429.4	6041049.6
10590	A	K	2.8	167.7	103	23:39:23	49.4	621634.5	6041008.7

APPENDIX 5: AEROTEM DESIGN CONSIDERATIONS

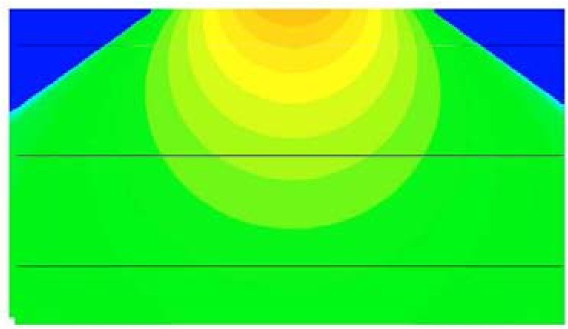
Helicopter-borne EM systems offer an advantage that cannot be matched from a fixed-wing platform. The ability to fly at slower speed and collect data with high spatial resolution, and with great accuracy, means the helicopter EM systems provide more detail than any other EM configuration, airborne or 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.



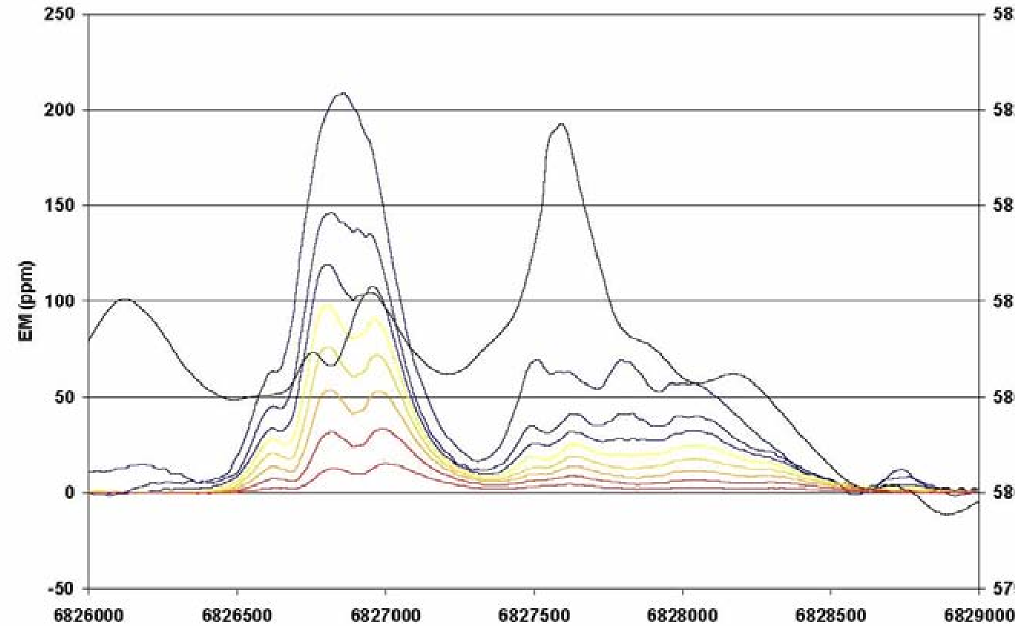
The footprint of AeroTEM at the earth's surface is roughly 50m on either side of transmitter



The footprint of a fixed-wing system is roughly 150 m 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 favour 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.



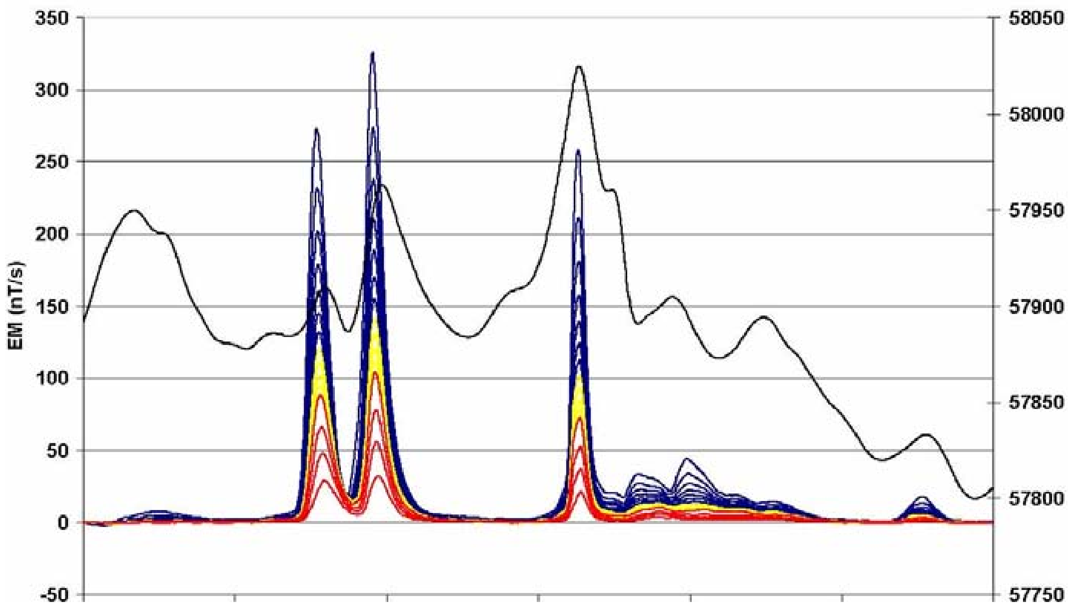


Figure 2. Fixed-wing (upper) and AeroTEM (lower) comparison over the eastern limit of the Mesamax Deposit, a Ni-Cu-PGE zone located in the Raglan nickel belt and owned by Canadian Royalties. Both systems detected the Deposit further to the west where it is closer to surface.

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.

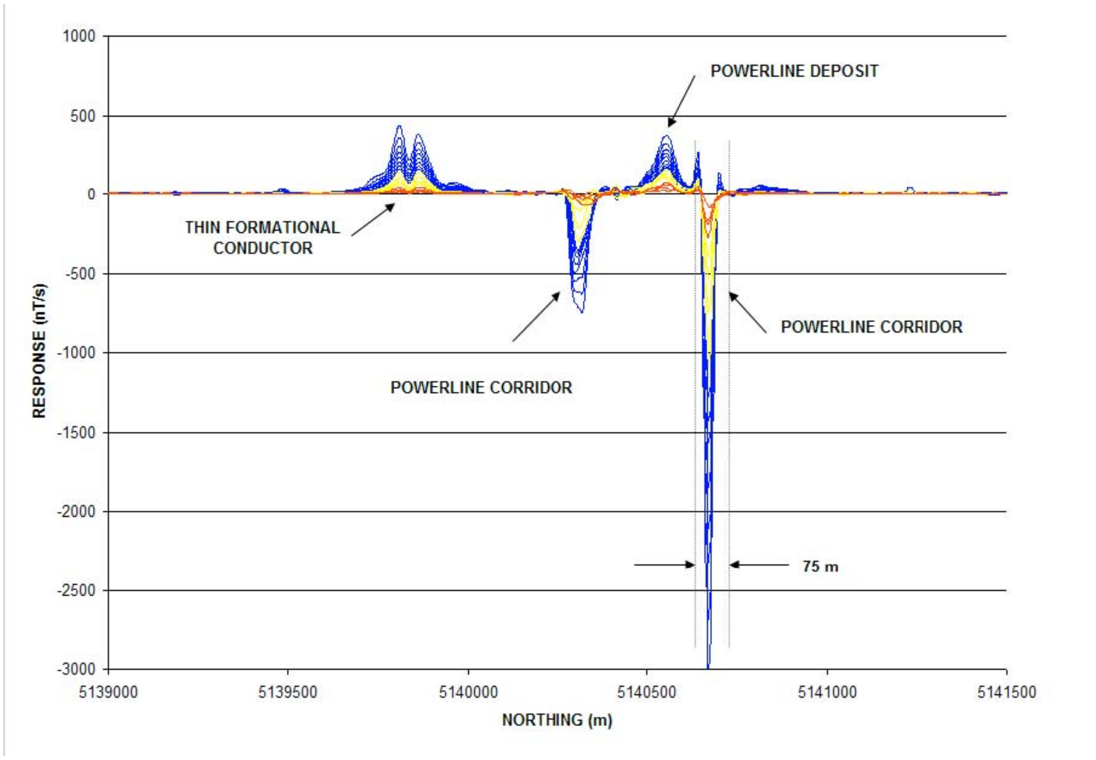


Figure 3. The Powerline Deposit is located between two major power line corridors, which make EM surveying problematic. Despite the strong response from the power line, the anomaly from the Deposit is clearly detected. Note the thin formational conductor located to the south. The only way to distinguish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

Advantage 2 – Conductance Discrimination

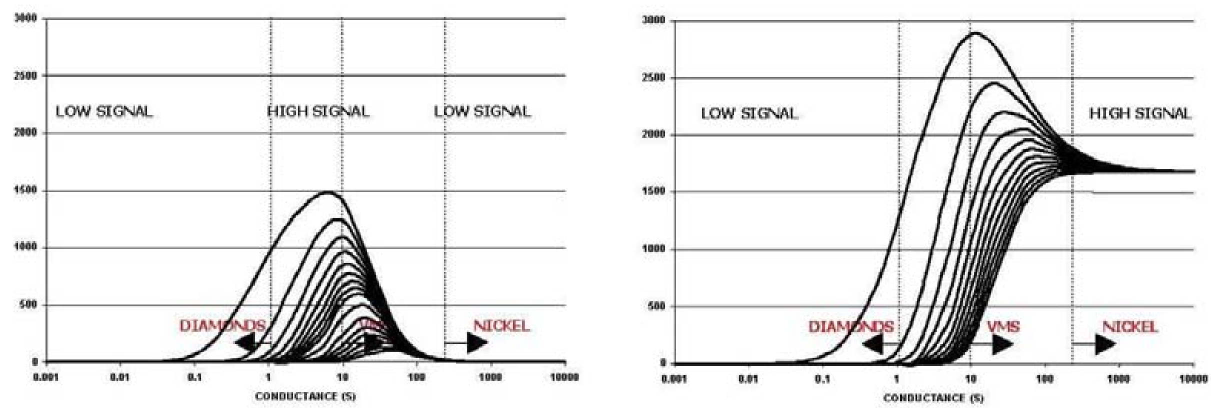
The AeroTEM system features full waveform recording and as such is able to measure the on-time response due to high conductance targets. Due to the processing method (primary field removal), there is attenuation of the response with increasing conductance, but the AeroTEM on-time measurement is still 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 in-phase 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:

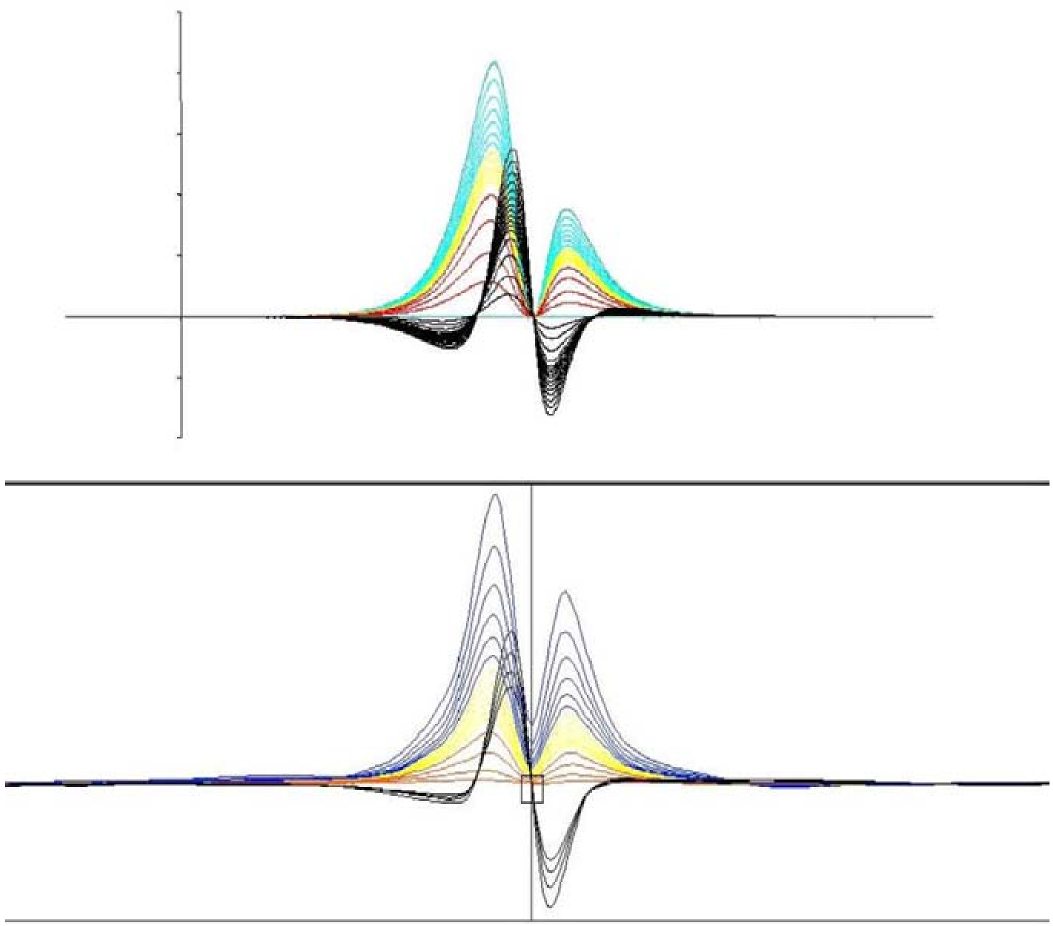


Figure 5. Measured (lower) and modeled (upper) AeroTEM responses are compared for a thin steeply dipping conductor. The response is characterized by two peaks in the Z-axis coil, and a cross-over in the X-axis coil that is centered between the two Z-axis peaks. The conductor dips toward the higher amplitude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

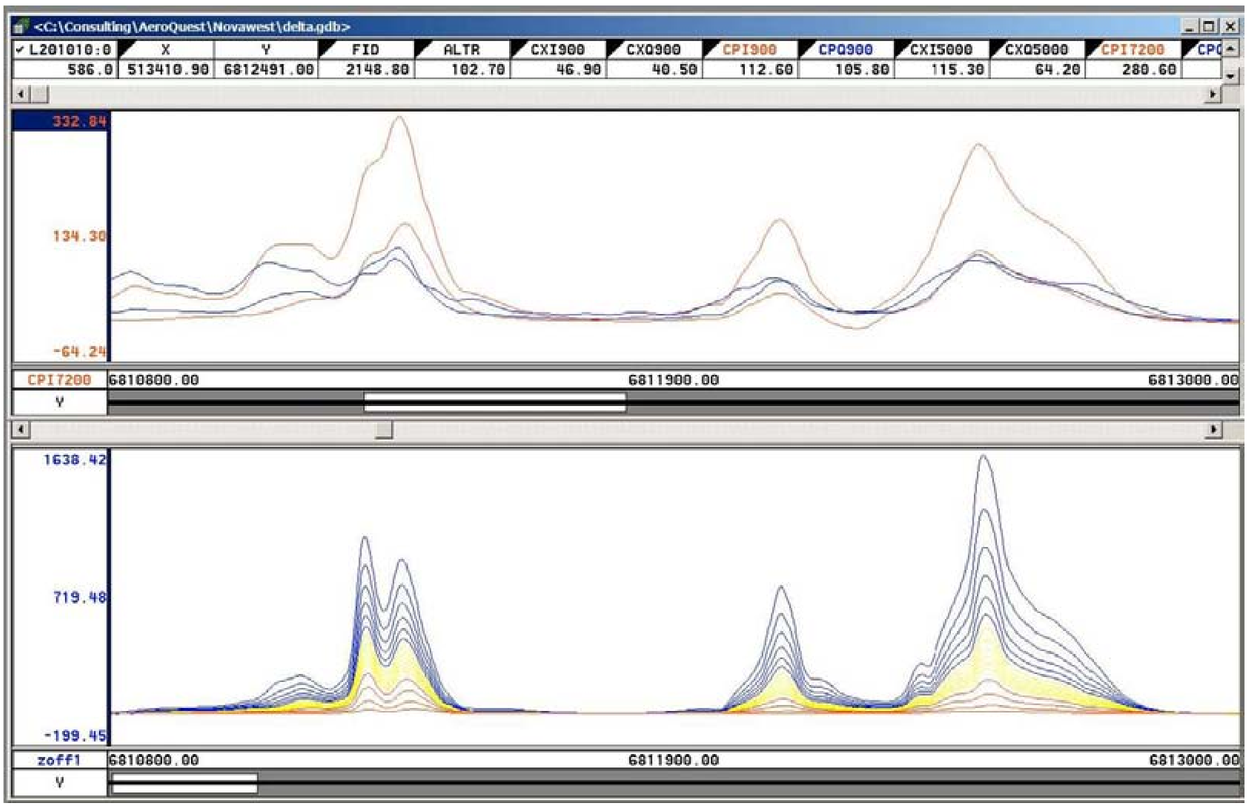


Figure 6. Comparison between Dighem HEM (upper) and AeroTEM (lower) surveys flown in the Raglan area. The AeroTEM responses appear to be more discrete, suggesting that the data is not as heavily filtered as the HEM data. The S/N advantage of AeroTEM over HEM is about 5:1.

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 6: AEROTEM INSTRUMENTATION SPECIFICATION SHEET

AEROTEM Helicopter Electromagnetic System

System Characteristics

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

Receiver

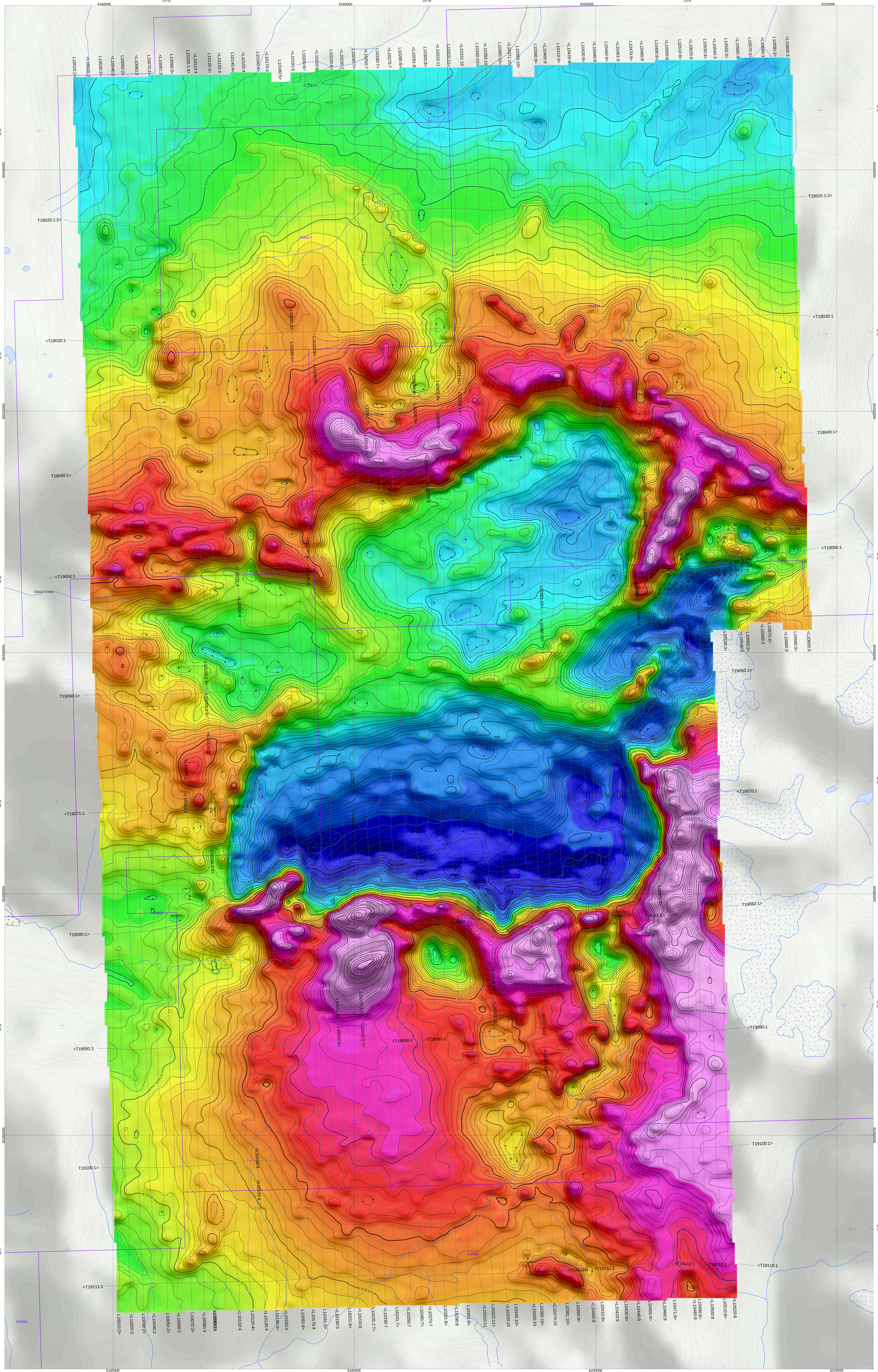
- Two Axis Receiver Coils (x, z) positioned at centre of transmitter loop
- Selectable Time Delay to start of first channel 21.3 , 42.7, or 64.0 ms

Display & Acquisition

- AERODAS Digital recording at 120 samples per decay curve at a maximum of 300 curves per second (27.778µs 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.



Grid North
NAD83-Zone9

The topographic data base was derived from 1:50000 NRC (Natural Resources Canada) NTDB data.
Topo contours derived from NASA SRTM (Shuttle Radar Topography Mission) data
Inset data derived from Natural Resources Canada 'Atlas of Canada Base Maps'

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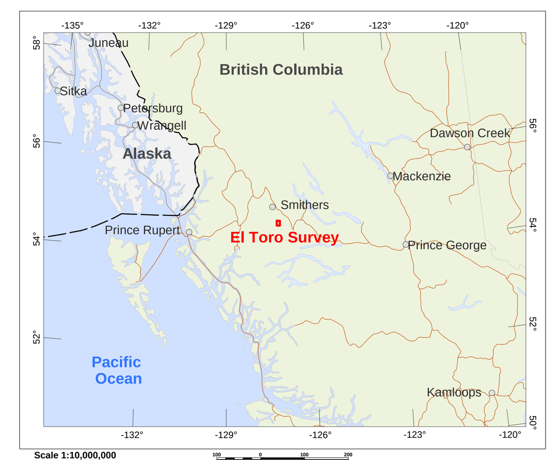
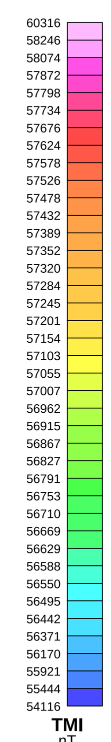




TMI Contour Interval

- Minimum 10nT
- 100 & 500nT
- 1000nT

Off-Time Anomaly Symbols

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

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

SURVEY SPECIFICATIONS:
- Survey flown: July 21 to August 2, 2007
- Traverse line spacing: 100 metres
- Traverse line direction: 358° Azimuth (N-S)
- Nominal EM bird height: 30 metres
- Aircraft: Aerospatiale A-Star 350B2 (C-FPTG)

INSTRUMENTATION:
- Data acquisition: ADAS & RMS DGR-33
- Magnetometer: Geometrics G-823A cesium vapour
  - Installation: MOB - mounted on EM bird
  - Sensitivity: .001 nanoTesla
- Electromagnetics: AeroTEM II System (BRAVO)
  - 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

Lions Gate Energy Ltd.
Smithers Area, British Columbia

TOTAL MAGNETIC INTENSITY
El Toro Block

NTS 093L06, 11

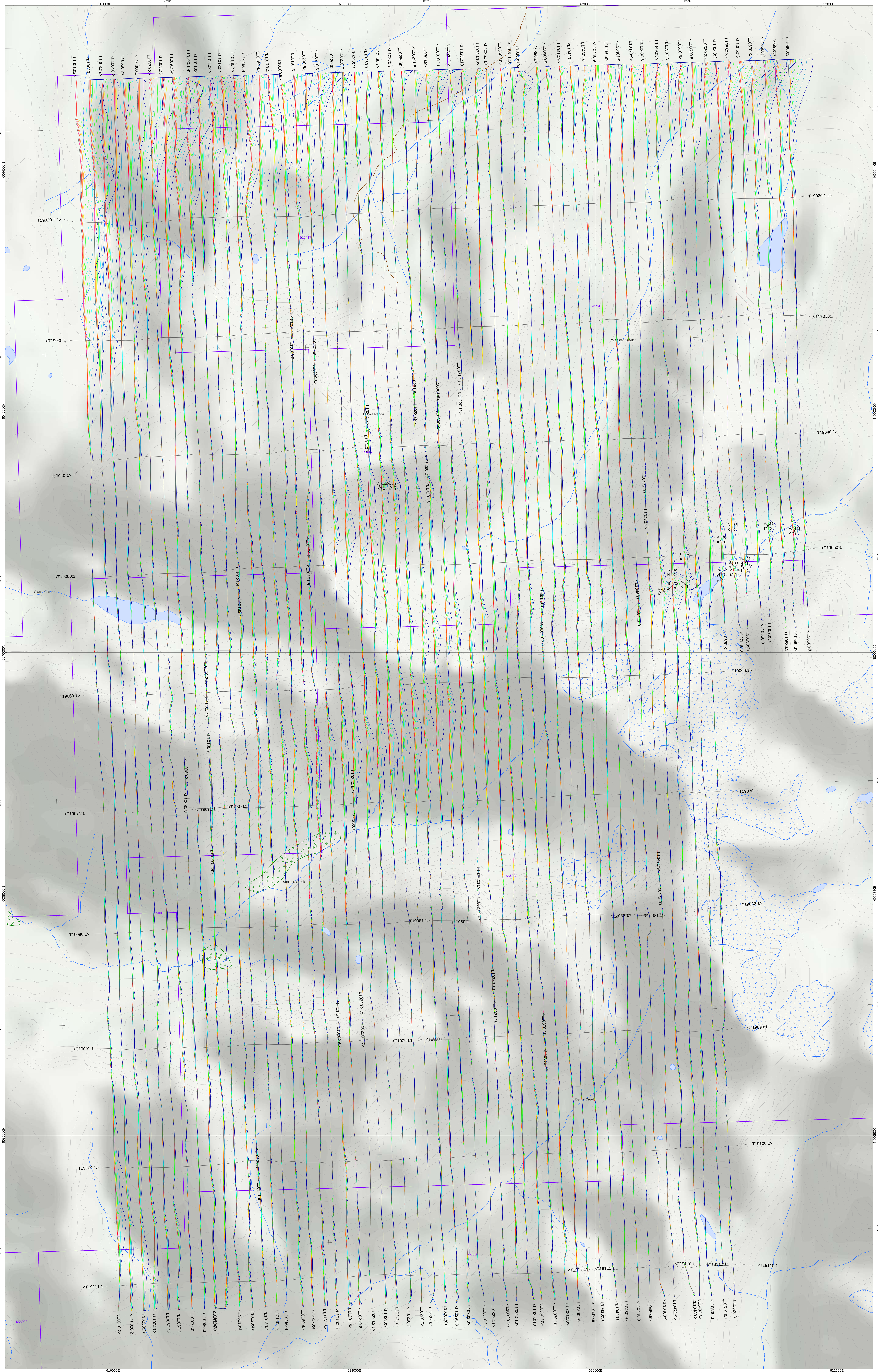
Survey flown by:

AEROQUEST INTERNATIONAL
ADVANCED AIRBORNE GEOPHYSICS

7687 Bath Road, Mississauga, ON, CANADA L4T 3T1
Tel: (905) 672-9129 Fax: (905) 672-7083
www.aeroquest.ca

September 2007

TMI El Toro



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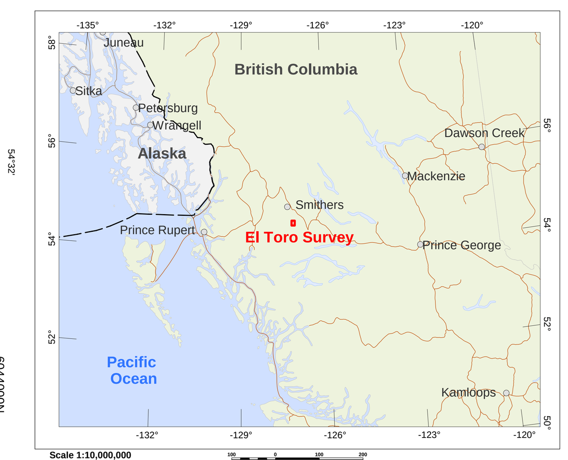

Scale 1:10,000,000
(kilometers)
NAD83 / UTM zone 9N

AeroTEM Profiles

positive excursion to top and right, 1mm=50nT/s

- Z1 Off-Time Channel
- Z2 Off-Time Channel
- Z3 Off-Time Channel
- Z4 Off-Time Channel
- Z5 Off-Time Channel
- Z6 Off-Time Channel
- Z7 Off-Time Channel
- Z8 Off-Time Channel
- Z9 Off-Time Channel
- Z10 Off-Time Channel
- Z11 Off-Time Channel

Off-Time Anomaly Symbols

- >50S
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- Cultural Sources

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Configuration: Towed bird
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Navigation equipment: AGNAV with MID-TECH RX400p receiver
Radar Altimeter: Terra TRA3000/TRI-30
DATA PROCESSING
Magnetics: diurnal, tieline and micro-leveling corrections
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Major Axis: 6378137.000
Eccentricity: 0.081819191
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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

Lions Gate Energy Ltd.
Smithers Area, British Columbia

AEROTEM OFF-TIME PROFILES

El Toro Block

NTS 093L06, 11

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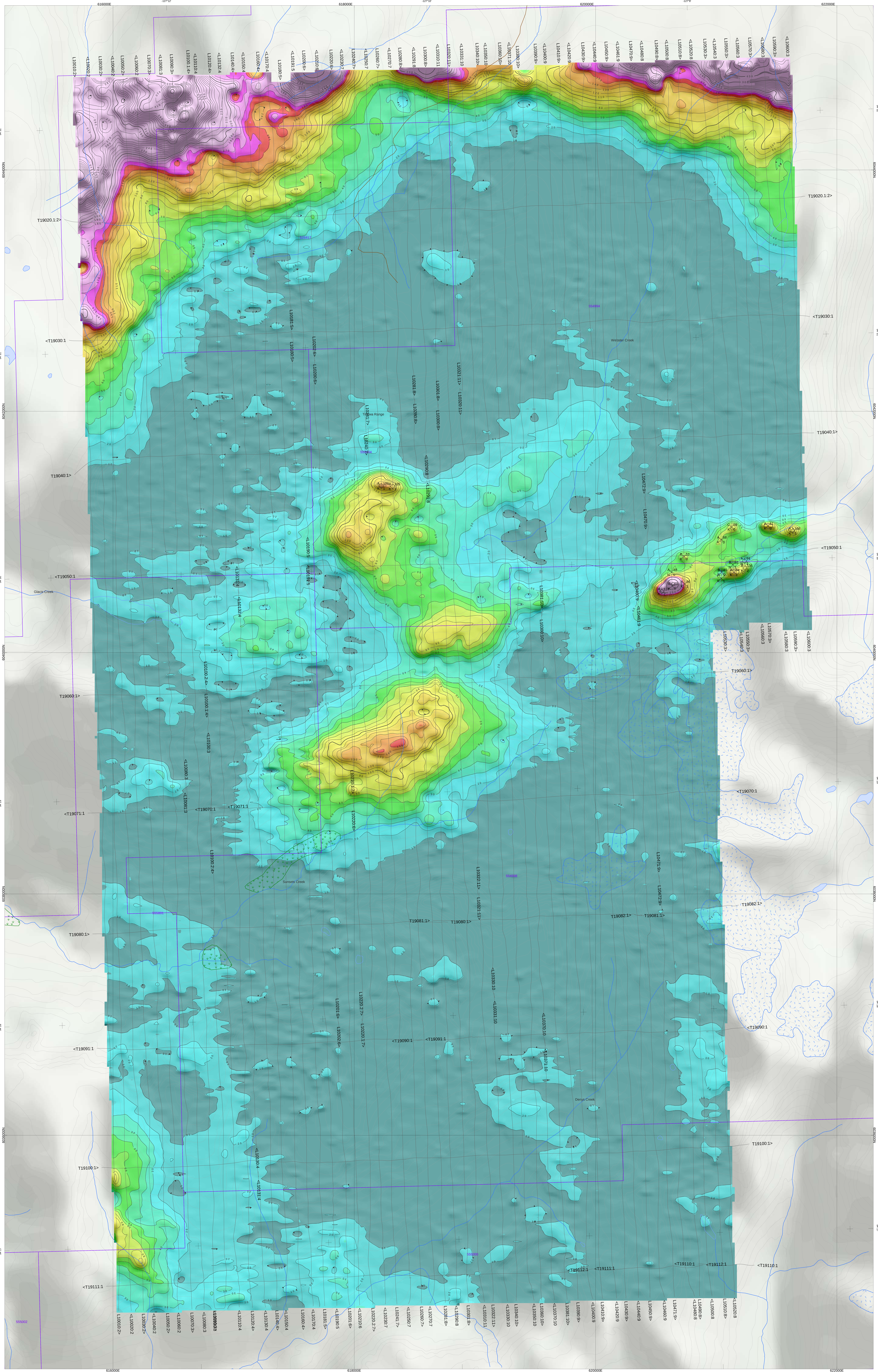
September 2007

EM El Toro



Grid North
NAD83-Zone9

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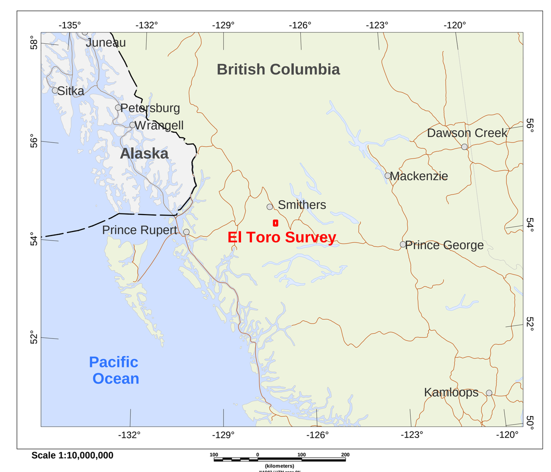

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scale 1:10,000
metres
NAD83 / UTM zone 9N

Lions Gate Energy Ltd.
Smithers Area, British Columbia

AEROTEM Z1 OFF-TIME

El Toro Block

NTS 093L06, 11

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September 2007

ZOFF El Toro